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|                            TomeNET Guide                                     |
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| Latest update: 5. October 2025 - written by C. Blue (c_blue@gmx.net)     |
| for TomeNET version v4.9.3a - official websites are:                     :
| https://www.tomenet.eu/ (official main site, formerly www.tomenet.net)
| https://muuttuja.org/tomenet/ (Mikael's TomeNET site)
| Runes & Runemastery sections by Kurzel (kurzel.tomenet@gmail.com)
|
| You should always keep this guide up to date, three possible ways:
| - In-game press = for options menu, then C to check or U to update.
| - Run the TomeNET-Updater app in your TomeNET installation folder
|   (or use the desktop shortcut if available) and click "Update Guide".
| - Go to the www.tomenet.eu website and download it manually, place
|   it into your TomeNET folder and overwrite the existing file
|   'TomeNET-Guide.txt' with your downloaded one.
|
| If your text editor cannot display the guide properly (needs fixed-width
| font like for example Courier), simply open it in any web browser instead.
+---
| Welcome to this guide!
| Although I'm trying, I give no guarantee that this guide
| a) contains really every detail/issue about TomeNET and
| b) is all the time 100% accurate on every occasion.
| Don't blame me if something differs or is missing; it shouldn't though.
|
| If you have any suggestions about the guide or the game, please use the
| /rfe command in the game or write to the official forum on www.tomenet.eu.
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Contents

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(0) Quickstart
==============
This chapter is basically the heavily compressed version of chapters (2) which
are about installing and chapters (3) which are about logging on and creating a
character. If you like to read in more detail, maybe switch to (2) now instead.

(0.1) Start & play (the basics)

A warning first, about character timeout:
If you do not log in a character at least once every 365 days the system will
automatically delete it along with its houses, to keep the database clean.
So make sure you don't let your characters time out this way!

(There will be an expiry warning about 60 days before this happens when you log on with any of your characters, to remind you.)
Depending on the server settings, there might be a backup that allows restoration of deleted characters and their house contents to some extent.
More information about character and account timeout at (3.12).

If you are using Linux, you will find additional information about how to compile the game under
 '(2.1) Installing/updating TomeNET (Windows/Linux/Mac OS X)'.

For Windows clients:
If you use a foreign IME setting, eg korean or japanese, switch it to US-EN IME (compare problem 54 in the troubleshooting section (9.8)) or you might not be able to use most keys aside from arrow keys for basic movement.
If you are using an asian CJK system (chiense/japanese/korean) and find the game window's focus is odd or alt-tabbing isn't behaving as expected, you can turn off the automatic IME setting, one way is to press =E in the game, for more details see "PROBLEM 77".

-Get the latest client from the project's main official site www.tomenet.eu.
 or from https://muuttuja.org/tomenet/ (Mikael's site, which features a
 monster-search and other stuff).
 If you're on Microsoft Windows, it is recommended to get the installer package
 instead of the zip archives.

 Note that the Nullsoft Installer framework (NSIS) TomeNET uses is an open
 source project (https://sourceforge.net/projects/nsis/), yet annoyingly there
 are a few badly maintained virus scanners that may give a wrong positive
 warnings for NSIS. In the past Avira was notorious for it but it seems they
 fixed it, nowadays it seems to be Acronis instead, at least at the time of
 writing these lines. Anyway, you can safely ignore those *ahem*.
 A fun fact: The TomeNET Windows version has never seen an actual Windows
 system but was created purely on Linux.

-If you used the installer you will have a TomeNET icon on your desktop to
 start the game (and another icon for the TomeNET Updater).

 If you used the ZIP archive instead of the installer, you can run TomeNET
 from the unzipped folder by either double-clicking 'TomeNET.exe' or (this is a
 safe-fail in case your internet provider ever has DNS problems and you cannot
 connect to the server) by double-clicking 'TomeNET-direct.bat' to directly
 connect to official main server's IP address (37.187.75.24).

 NOTE: The official main server's hostname is "europe.tomenet.eu".
 In 2022, an official server located in the APAC (Asia-Pacific) region was
 added, its hostname is "apac.tomenet.eu" (92.38.178.77).
 In 2024, another official server located in North America (NA) region was
 added, its hostname is "na.tomenet.eu" (68.71.132.101).

-You should now see a list of available TomeNET servers (except if you used
 TomeNET-direct.bat, which will always connect you directly to the first main
 server).
 Pick the first official server by pressing the 'a' key (or instead choose the
 APAC or NA region server if your latency is better for one of these regions).
 Now you are prompted to enter your account information: Name and password.
 Since you are a new player, you don't have these yet. There is no separate
 'registration' process, just type in a name and a password of your choice!
 Make sure you remember your password and enter it carefully so you don't
 make a typo. The TomeNET client will, however, automatically store these
 crecedentials so next time you log in you can just hit ENTER key to confirm
 the saved name and password which will be automatically filled in for you.

-Now you are presented with the account overview screen. It's just the list of
 all your existing characters. Since you don't have any yet, it's empty.
 Press 'N' (shift+n) to create a new character.

-In this example we create a Half-Troll warrior, as it is easy for beginners:
 It can take a lot of punishment and at the same time dish out a lot of it too!
 The server should now allow you to manually choose your stats.
 In case you chose a (Half-Troll) warrior, try this:
  STR _at least_ 18/30 (to get a high number of attacks per round - the game
  client will even suggest 18/40 for minimum STR),
  CON as high as possible, INT as low as possible,
  spare points into DEX (especially!), WIS or CHR.
 If you decided to play a paladin make sure you have at least DEX 10.
  In case you can't reach STR 18/30, go for STR 18/20 instead, which should
  give you 2 attacks with a war hammer, your starting weapon. Then increase
  CON and WIS as high as possible, INT as low as possible, spare points (you
  shouldn't have any ;)) into CHR. (Paladins use WIS for casting spells.)
  If for some reason you can't even reach STR 18/20, at least go for STR 18/10,
  again DEX not below 10, then right after spawning in town discard the war
  hammer you start with and instead go buy a whip from store '3' (weaponsmith)
  or '4' (temple). This should give you a solid 2 attacks per round.
 If you decided to create a rogue, ensure that you have at least a STR of 15,
  and a pretty high DEX (the rogue's main stat) of 18/10. This will give you
  3 attacks per round when dual-wielding your light starter weapons.
  Rest goes into CON or INT (rogue's main stat for spell-casting).
 If you made a druid, put couple of points into all, DEX, STR and CON, and keep
  your WIS relatively high since it's important for druidic spell-casting.
  Some druids might value high starting WIS more than any of the other stats
  for that reason.
 Explanation:
  CON affects your hit points, more CON -> more HP.
  STR (and DEX) determine your number of attacks per round. 18/30 in STR is
  enough for warriors to get 3 attacks per round with very light weapons
  (daggers or whips) regardless of how you modify your DEX.
  To get the 3 blows per round (BpR) you'll need to sell your heavy sword and
  buy a light weapon (3.0 lb or less) like a dagger or whip. That is more
  efficient than 1 or 2 BpR with your original sword! Later on when your
  character becomes more powerful you can switch back to heavier weaponry.
  Warriors don't really need INT so you should reduce it to spend the points
  on other attributes. WIS isn't really needed either, but it can be useful
  to endure sanity-reducing effects and increase your saving throw against
  certain detrimental effects.
 Details about how STR and DEX affect startup blows/round are given in (7.5a).)

  ---- PLEASE NOTE: ----
  If you are new to the game, it is NOT recommended to choose one of these:
   Istar, Priest, Shaman, Adventurer, Runemaster.
  The reason is that these classes are hard to play in the beginning -
   compare introductory explanation in (7.5)!
  Recommended for new players are:
   Warrior, Rogue, Paladin, Druid and maybe Archer.

-Make sure you DO NOT chose PvP mode. It's a restricted special thing that
 has nothing to do with the normal gameplay at all! (See (7.13) for info).

-It's strongly recommended to not choose 'fruit bat' body either :).

 Now you're in the game and should see the town of Bree.

 Note that all following keys mentioned assume that you use the normal

(aka non-roguelike) key set! If you use rogue-like key set, refer to (0.2) for
a full list of command keys under that setting.

-To chat, press the colon key ':' . Don't hesitate to ask other players
 if you have any problems with getting started.
 (For details about chat features see (3.3).)

-To run, press SHIFT + <direction key> where direction keys are on
 the number pad 7,8,9, 4,6, 1,2,3. Running often requires that
 Numlock is turned off (press the 'Num' key above your number key pad on the
 right side of your keyboard, so the green light is off).
 If SHIFT+<direction> doesn't work on your system, you can press the dot '.'
 followed by a direction key. (If you use rogue-like keys, see section (0.2)!)
 You can also use the arrow keys to move, but the numpad is better since it
 allows you to move diagonally too, which is very important.

-You can wear/wield your armour/weapons by pressing 'w' and choosing them
 from your inventory which is displayed in the bottom right window.
 To take off an equipped item, press 't'. The item will be returned to your
 backpack (aka your inventory).

-You can pick up items if you stand on them and press 'g'. Items that are
 especially valuable in the beginning are magic wands and staves, so make sure
 to pick those up, identify them with a scroll of identify, and sell them to
 the magic shop in town.

-You can drop items with 'd' or destroy items with 'k'.

-You can enter stairs down/upwards by standing on them and pressing the
 corresponding key '<' or '>'.

-You can press '?' to get a short in-game help. The actual list of commands
 and further info are contained in this guide.

-Nearby the starter town (Bree) there's often a 'training tower' which is a
 good place to start because if you die there nothing will happen except a
 slight loss of experience and gold. Ask people where the dark-green '<' symbol
 (the tower entrance) is found. Usually to the lower-right of the town centre.

-If you die outside of the training tower you will usually turn into a ghost.
 This ghost cant wear any items, so it's a good idea to care about being
 revived. To get revived, either visit the temple in town (it's a green '4')
 or ask another player to read a 'Scroll of Life' while standing next to you.
 While you're a ghost you can freely float up/down by pressing '<' and '>'.

-If you have any parchments like 'Guide to Middle Earth' or 'The Gazette' in
 your inventory (bottom right window) you can read those by pressing 'r' to
 read. They don't do anything, just a short read containing some information.

-If your character gains a new level it also gains skill points. To distribute
 those, invoke the skill screen with SHIFT+G. (See (3.10), (7.2) and (8.5).)

-If you don't like your character and want to delete it, you may commit suicide
 by pressing SHIFT+q and double-confirming the following safety questions
 with 'y' and '@'.

-Press '@' key to see a list of players who're currently online.

 A grey '(O)' is in front of a player name, it means that player is using an
 outdated client. It's very important to keep your client up to date!

 If another player's character level is displayed in light blue colour, that

means he is within sensible level range of you to form a party! Press SHIFT+P
for party menu. One of you has to create the party and add the other one.

A name displayed in dark blue is an admin.
A name displayed in purple is a 'winner', ie a player who managed to beat the
game boss, Morgoth, the Lord of Darkness (and hasn't died since).
A name displayed in red is a ghost, ie a player who died. :(
A name displayed in dark grey is a player who is currently inside the special
'Ironman Deep Dive Challenge' dungeon.

-A few other important keys are:
~   knowledge menu (all of your character's knowledge, plus artifact/monster
      spoilers under ~6 and ~7 respectively.) Or type "/know" in chat.
=   game options menu.
%   macro menu ('macros' are hotkeys, allowing you to bind certain actions to
      a single key press). (More about macros in (3.6) up to (3.9b).)
SHIFT+P form a party with your buddies. You share experience in a party and
         you can always see each other on the map and your team mates' current
         world location in the player list (accessed with '@' key).
         (SHIFT+O if you are using rogue-like key set.)
SHIFT+L look around the map. Very useful to locate team mates ;).
         (CTRL+W if you are using rogue-like key set.)
CTRL+U   the audio mixer menu (the hotkeys for toggling master/music work
         outside of this menu too).
         (CTRL+F if you are using rogue-like key set.)
CTRL+Q   quit the game. Safest way is to quit in a town, not in the dungeon!

-Note that your character's "speed" may change. Speed is the factor telling you
 how fast your character can move, fight or perform any other kind of action.
 If your character's speed gets increased (for example by drinking a potion of
 speed) you will see a green indicator (for example 'Fast +10') at the bottom
 line of the main window.
 If your character loses speed, for example by carrying around too many heavy
 items in your inventory, you will see a light brown indicator (for example
 'Slow -3') at the bottom line instead.

(0.1a) Character validation

When you create a new account, it will always start out as "invalid". This just
means that it is in a trial phase and needs to be approved by an admin or
another player who has validation privileges. This is done to prevent spam.

Invalid characters cannot drop items, privately chat with other players, or
advance beyond level 25.

Usually, all you have to do is to keep playing/stay online for a bit until an
admin or someone else who possesses validation powers logs in, notices that you
are new, apparently not a spammer or duplicate, and validates your account.
If that doesn't seem to happen, just ask in chat openly.

Pressing '@' key will show the list of logged in players. A yellow '(I)' before
a name will indicate an 'invalid' account.

You could continue reading at (3.2) now, which explains the user interface,
or glance at (8.1), (8.2) or (8.3) first which explain some basic strategy.

If you ever get stuck in a problematic situation where you feel you either
cannot defeat a certain monster or you cannot advance your character the way
you'd like to, check out (8.3a)!

(0.1b) Colours and colour blindness

The easiest way to modify colours and to switch between predefined palette sets
for certain colour blindness types (deuteranopia, protanopia, tritanopia) is to
go to the = C options screen where you can set all of this.
Don't forget to press 's' to save your changes.

You probably want to turn off the option 'palette_animation' in =2 if you use
any colourblind mode or your own customized colours, because palette animation
will override colours with interpolations of the 'normal' palette scheme.
(palette_animation only has effect on colours while you are outdoors though.)

Alternatively you can modify the colours by editing the game's config file:
On Windows OS that is TomeNET.ini (in your TomeNET folder) and on Linux and
Mac OS X that is .tomenetrc (in your user's home folder).

The settings in these files are called 'Colormap_N=#xxxxxx' in TomeNET.ini and
'colormap_N #xxxxxx' in .tomenetrc, where N is an index from 0 to 15 as TomeNET
uses 16 different colours, and xxxxxx is a hexadecimal code where the first two
digits determine the amount of 'red', the middle two the amount of 'green' and
the last two the amount of 'blue'.

Two-digit hexadecimal numbers go from 00 to ff instead of the decimal numbers'
range which goes from 00 to 99. Basically, hex doesn't stop at 9 but at '15';
'a' = 10, 'b' = 11, 'c' = 12, 'd' = 13, 'e' = 14, 'f' = 15.
Also, '10' in hex does not mean ten, but sixteen (in our decimal system)!
So a hex number #00001c means: 1 x 16 + 12 = 28.
However, you don't really need to know all of this just to modify the colour
values. Just now that after 99 the next higher step is 9a, up to 9f, and then
the next is a0, with the maximum value being ff (which is 255 in decimal).

When modifying the colour table in the config file, you can test the results in
the game by logging in and typing the "/col" command in chat. It will display
a table of all colours for you to check how they look like.

Note that the colourmap entry #0 is fixed and cannot be changed, it is always
#000000 aka black (no red + no green + no blue).

(0.1c) Photosensitivity / Epilepsy issues

If you are especially photosensitive, the screen-lighting effect used for
thunderstorm weather might impact you. There are also a few minor especially
fast-flickering effects. You can disable all of these in the game options by
pressing the following keys in game to access the various options pages (0-9):

 =2 view_animated_lite (fire-based lamps will flicker in yellow/orange)
 =2 no_weather (disables all weather particles: raindrops and snowflakes)
 =2 disable_lightning (the aforementioned thunderstorm flash)
 =4 flash_player (your '@' flickers brightly whenever you change location
      rapidly to make it easier spotting yourself on the screen)
 =2 recall_flicker (show animated colours in the various game windows)
 =4 flash_insane (your '@' flickers rapidly when your sanity is very low
      to alert you of impending no-ghost-death by sanity)
 =2 no_flicker (disables all fast-flickering colour animations. This can
      make it quite hard to distinguish monsters though.)

(0.1d) Readability improvements

If the dark blue colour is not well readable on your screen, you can edit it
like all other colours in = c or alternatively by editing your config file
(TomeNET.ini on Windows, .tomenetrc on Linux and Mac OS X) and find the line
'lighterDarkBlue'.
In TomeNET.ini set it to 1 instead of 0, in .tomenetrc uncomment the line by
removing the leading '#' symbol. Restart your game client.

If you have trouble deciphering long price tags or experience point amounts,
press =3 and try the option 'colourize_bignum' at the bottom of that options
page. It will colour prices and XP alternatingly in 3-digit columns.

(0.1e) Sinew/joint taxation issues

Should you have issues with your finger joints or sinews, eg RSI or Arthritis,
classes least taxing to play are probably in this order:
Warrior, Mimic, Druid, Archer, to some extent Rogue and Ranger (if you don't
pick spells or only a few spells to manage).

The reason is that these require less different macros/keys to press and/or at
lower frequency than other classs, to manage and coordinate gameplay.
In general, the more magic spells and abilities a class possesses, the more
key presses in terms of both number and frequency are required.

(0.2) Command reference & key sets

Can be different depending on OS / configuration.

If you use a foreign IME setting, eg korean or japanese, switch it to US-EN IME
(compare problem 54 in the troubleshooting section (9.8)) or you might not be
able to use most keys aside from arrow keys for basic movement.

This chapter consists of three subsections:
Command keys, Text editing keys, Slash commands.

Command keys

Key combinations with CTRL key can be entered in the macro menu by prefixing
the key with a '^' symbol. For example, a macro to force-stack an item in
normal key set could be 'K0', but in rogue-like key set (where force-stack
is CTRL+C instead of K) it will be '^c0' instead (or you can use a capital
letter: '^c0', it's actually the same when using ^ codes).

Keys:
The first key is of the 'original Angband key set', the second key is of the
'rogue-like' key set. Some people prefer to use that one. You can change it
in the options menu, which you invoke with '=' key.

Walk into a direction:
    Original key set   Rogue-like key set   Rogue-like (running)
        7   8   9   y   k   u   Y   K   U
        4   6   h   l   H   L
        1   2   3   b   j   n   B   J   N

In addition, the rogue-like key set has tunneling on the movement keys if
the CTRL key is pressed together with one. CTRL is expressed by prefixing
the key with '^', so the rogue-like key set for tunneling is:

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                ^y  ^k  ^u
                ^h      ^l
                ^b  ^j  ^n
(The normal key set has no directional keys for tunneling, so you'd have
to create macros if you want that.)
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You can also use the arrow keys instead of the Numpad keys for movement.
(Pressing '5' will make your character try and pick up an item, same as
pressing 'g').

SHIFT+<direction key>
          runs into that direction. Numlock must probably be turned off,
          depending on your system. (Numlock is the key labeled 'Num' above the
          number key pad on the right side of your keyboard. A green lamp
          usually indicates whether it is on or off.)
          You can also run by pressing the dot '.' followed by a direction key.

.   .   Allows you to run (same as SHIFT+direction key).

;   ;   The 'walk' command, it allows you to walk one step. This is not
                really needed for anything usually, since you can just press
                the directional keys given above instead for walking.
                NOTE: The ';' key is by default overridden with a macro
                to provide a quick guide search instead of its normal function.

i   i   display your inventory. You can then press SHIFT + inventory
                slot letter to paste that item name into chat.
                You can also type \\<slot letter> shortcut in chat to paste an
                item right into some text you are writing, eg "\\a" for the
                item in your inventory slot 'a)'.
                To paste items from a container (bag) eg a potion belt,
                use \\\<uppercase bag letter><lowercase bag slot> eg "\\\Ae".

e   e   display your equipment. You can then press SHIFT + equipment
                slot letter to paste that item name into chat.
                You can also type \\<capital slot letter> shortcut in chat to
                paste an item right into some text you are writing, eg "\\A"
                for the item in your equipment slot 'a)'.

I   I   inspects an item, showing its special abilities in case it
                has some. To examine an item you must either have bought it
                from a shop or *identified* it. Mages can learn *ID* spell
                "Greater Identify", some shops offer *ID* service (see (4.5a)),
                or you can use a scroll of *identify*. If the item hasn't been
                identified yet, you will only see basic information.
                If the item could in theory have powers that will only be clear
                after *identification* then inspecting the item will tell you:
                "It may have hidden powers.". In this case you should always go
                and *identify* it because its selling value will also increase
                greatly in case it turns out to indeed have hidden powers.
                See (5.7) for more information about ID, *ID* and shops!
                If you examine weapons, it always tells you the weapon class
                (sword/blunt/axe/polearm) as well as if it's 1-, 2- or
                1,5-handed.

w   w   wear/wield an item from your inventory (weapons, rings,
                amulets, light sources, armour, ammunition, tools).

W   W   wear/wield an item, same as 'w', but tries to use the second
                available slot in case two inventory slots are both egligible.

                Starting in 4.8.0 this can also be used to wield a digging
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tool as a weapon. You will still use it for digging too.
If you try to dig while having a digging tool equipped in the
weapon slot and another one in the tool slot, the better one of
the two will be used automatically.

You won't get weapon-skill specific boni applied in combat
though, as digging tools count as neither of any of the four
weapon classes.

t        T        take off an item. (Note: Item inscription must still be @t)

x        S        swap an item. This is basically like both "wear/wield" and
"take off" in one command. This makes only sense if it is used
with an item that has been _inscribed_ accordingly, for example
"@x4":
When the item is currently in the inventory, it will be
equipped. If it already is equipped though, then it will be
taken off.
Note for rogue-like key set:
Although the key is 'S', the actual item inscriptions must
still use 'x', eg '@x0' when the macro is 'S0'!

q        q        quaff a potion.
If you enable the 'keep_bottle' option (it's in =0 at the time
of writing this) your character will retain an empty bottle
which you can fill at a fountain.

r        r        read a scroll.
There is a special mechanism for certain scrolls that can be
used on other items: Scrolls of Identify and Scrolls of Enchant
Weapon/Armour. If you read your last scroll of these but do not
select an item to use with the scroll, the scroll will not
vanish completely but remain in your inventory with an 'amount'
of zero, stating "no more Scrolls of...". You can then use this
'scroll' later, whenever you choose to.
If you want to get rid of this remnant scroll, press 'k' (or if
you use rogue-like key set it's CTRL+D) to destroy it finally.

E        E        eat food. Hunger can kill you, if you don't eat for a longer
while, depending on your character. You will see a yellow
'Hungry' appear below the status bar on the left side in the
main window, then it will change gradually to 'Starved' in
orange/red colour (or 'Weak' in game version <= 4.8.0) and
you will start getting paralyzed by the lack of food!
Finally you will start losing hit points and eventually die
from starvation.
(Draconians can eat firestones to gain temporary special
abilities, see (5.9). Players in dragon form can eat them too.)

F        F        fuel your light source.
Use oil for lanterns, and torches to fuel another torch.

f        t        fire ammo from your quiver.

v        v        throw an item from your inventory.

b        P        browse (peruse) a book.

m        m        use an ability/skill (ie cast a magic spell, lay a trap, use a
technique, polymorph into a monster form or back to normal,
cast a monster-spell while polymorphed, enter a combat stance).

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a       z       use (aim) a magic wand.

z       a       use (zap) a magic rod.

u       Z       use a magic staff.

,       ,       or..
g       g       pick up an item from the floor. You have to stand on the item
                to do that. You can also pick up an item by pressing '5' on
                the number pad while numlock is turned off. Gold is always
                picked up automatically.
                If you stand on a pile of different items, the top-most type of
                item will be picked.
                NOTE: The ',' key has by default a "reply to last private chat"
                macro on it, so you'll have to use 'g' key instead or delete
                the macro from the comma key, if you want to use it to pick up
                items.

CTRL+G  CTRL+Z  pick up exactly one piece from a stack of same type of items.

K       CTRL+C  Force-stack or split-stack (alternative function):
                Forcibly combines a level 0 item in your inventory with other
                items of the same type that aren't level 0 ('force-stack').
                Be warned, that this will change the level of all the items
                involved to 0 so they will become untradable.

                Also forcibly combines items inscribed "!G" which usually
                inhibits any stacking behaviour, overriding that inscription.

                Force-stack will also partially transfer stacks if the
                destination stack maxes out (ie at 99 items).
                Note that you have to choose the 2nd (ie downmost) slot in your
                inventory of the two slots you want to stack.

                For both, normal and rogue-like key sets, this command is also
                available while in inventory screen ('i') by pressing 'CTRL+K'
                and while in a subinventory (bag) by pressing 'K'.

                This command has a special alternative mode:
                If, when selecting an item, SHIFT + item slot letter is pressed
                it will split that item stack instead of stacking anything,
                similar to how the "/split" command works.

C       C       see a character overview.

L       CTRL+W  look around your current sector/floor, using direction keys.
                Hit ESC to exit this 'locate' mode again.

M       M       display either the world map if you're not in a town or in a
                dungeon, otherwise display a minimap of the town or of your
                currentl dungeon level.
                If you want to see the world map while you're in town or in
                the dungeon, press ~ and choose "Wilderness map" there.
                You can scroll around the map via directional keys.

s       s       search adjacent fields, objects or walls for hidden traps or
                doors.

S       #       enter 'searching mode'. You will search your adjacent fields
                once each turn. If you stand next to a room and you want to
                find its hidden door, turn this on and run along its walls
                until you find it.
```

Being in searching mode will slow you down so you will want to turn it off as soon as you found what you searched for.
Another useful thing it does however is prioritizing traps over items visually. Turn it on if there are already detected traps nearby that are currently covered by items, to clearly spot the traps underneath.

V   V   enter/leave 'cloaking mode'. This can only be used by rogues.
It will take a couple of turns to perfectly cloak your physical appearance and body warmth pattern, after which you will be completely invisible to monsters who use normal sight or infra-vision.
Only a few monsters who are able to utilize ESP (telepathy) or have especially powerful detection will still notice you.
Those are eyes, angels, Nazgul, nether guards, and those unique monsters which are both SMART and POWERFUL at once.

Taking damage (HP/sanity/experience), attacking, and some other actions will immediately break cloaking.
Damage or drain from floor terrain, items or monster form will not affect cloaking, but suffering from black breath will.

Auto-retaliation is disabled while cloaked, except for the Stormbringer (which will break the effect of course).
If you attack a monster while cloaked, it'll count as backstab, making full use of your 'Backstabbing' skill if you have trained it. See (7.2) for 'Backstabbing' details!

Some 'noisy' actions such as drinking a potion will only temporarily weaken your cloaking: Your colour will go from dark grey to normal grey for a short time, during which you are not effectively cloaked. If you avoid taking damage or performing any action that breaks cloaking during this time, you will go back to being perfectly cloaked.
The duration of cloaking being weakened will vary depending on which action you performed.

Cloaking will always reduce your light radius to 1. Darkvision however is not affected by this and retains its normal radius.
Cloaking will in turn increase your searching, greatly increase your stealth, but decrease your speed. Sneakiness skill may very slightly reduce the speed decrease.

Note: Cloaking has no effect on shoplifting; it breaks on entering any shop.
Note: Although ESP is supposed to detect cloaked targets, for now cloaking still overrides ESP of other _players_ for the sake of PvP usage, similar to invisibility.
(Also see (5.14) for details on 'normal' invisibility.)

A   A   activate an item. Usually an artifact, a dragon scale mail or a ring of polymorphing (shapechanging).

T
+   +   tunnel (dig) through an obstacle or a wall.

R   R   rest. Your hit points, mana and stamina will regenerate faster while resting. Note that you cannot rest while being afflicted by any continuous damage effect (eg while poisoned).

o   o   open something.

```
c       c       close something.
c    while in a store:
                Paste an item name, its price and the store symbol into chat,
                in case you want to tell other players about it.
                You can also type \\\<slot letter> shortcut in chat to paste an
                item right into some text you are writing, eg "\\\a" for the
                first item on the store page you are currently looking at.
                Also see \\x, \\X and \\\x further below.

d       d       drop an item.

$       $       drop some gold. You can use 'k' and 'm' for thousands or
                millions, example: 3k -> drops 3000. 2m -> drops 2000000.
                You can also do things like 2m43 to drop 2430000 gold pieces or
                k6 to drop 600.

D       D       disarm a trap. This yields experience points, depending on the
                trap type. (Note that you won't get experience points for
                disarming traps via magic spells or magic devices.)
                Also see (4.7) for details about traps.

k       CTRL+D  destroy an item. (Note that artifacts cannot be destroyed this
                way.)

G       G       skills screen.

B       f       1) bash/force something (ie a stuck door).
                If the door crashes open, it softens the sleep of nearby asleep
                monsters somewhat (similar in effect to the /cough command).

                2) use the fighting technique "Bash", if learnt, to shield-bash
                an enemy. This action costs 6 stamina and requires a shield.
                It will inflict damage depending on shield weight and your
                strength and a stun effect (modified by Combat skill) on your
                target. For details, see (7.12).

                3) depending on server settings you can also bash a non-hostile
                player in order to try and push past him, effectively switching
                places with him.
                Use it if someone is blocking a dungeon staircase by standing
                around afk on it for example.

l       x       look at a player/monster/object (use direction keys for
                targetting). Similar to targetting, while looking you can press
                'p' to switch to manual cursor positioning, allowing you to
                look at a specific grid, then press 'l' again to confirm.

j       CTRL+A  attempt to steal from players (not recommended!).

U       CTRL+X  use Ghost powers. These are only usable by player-ghosts ie by
                players who died and because of that turned into a ghost.
                Using these will drain your experience (XP points) permanently.
                So using up too much XP may reduce your character's level
                permanently in turn.
                If you run out of XP points, your ghost fades away and cannot
                be resurrected again, which means your character will be
                permanently erased, same as on a ghost-death or an unworldy
                character's death.
                NOTE: Ghost powers are currently not available.

CTRL+S          spike a door (using iron spikes, the door will be jammed).
```

```
p       p       Concentrate on opening your mind for telekinesis.
                ("You open your mind.." and "You close your mind.")
                You need to open your mind in order to receive items from
                other players by telekinesis. If you are not concentrating,
                they will receive an according message, telling them that
                using telekinesis on you is currently not possible.
                Hit 'p' again to stop concentrating and close your mind.
                Certain spells of the mindcrafter class might also require
                players in the same party to open their minds in order to work
                or to affect them as intended.
                Having an open mind can make it easier for psi/confuse effects
                to affect you.

h       CTRL+E  sell/buy a house or change house parameters. See (4.10).

P       O       party screen. Form/disband/modify a party with other players
                here. In a party you will share experience points if you are
                within 7 character levels to each other and on the same
                dungeon/tower level respectively the same worldmap/wilderness
                sector. See (7.9) for details!
                For winners (queens/kings/empresses/emperors) the range is 11
                levels instead of 7.

H       CTRL+G  re-apply client-side and (if 'auto_inscr_server' option is
                enabled) server-side auto-inscriptions to an item.

CTRL+U  CTRL+F  Displays/exits the audio mixer settings. (Also see (2.2).)
                Note: Mixer settings are saved automatically, provided you use
                CTRL+Q to quit.
                (Compare troubleshooting section (9.8), PROBLEM 22.)

                Here you can set audio volume for sound effects and music or
                mute them separately. The hotkeys for muting work outside of
                the mixer screen too, during normal gameplay.

                If you haven't installed a sound or music pack, you can do
                that by running the TomeNET-Updater or by downloading packs
                manually (for download links see the 'download' page on the
                TomeNET homepage for official packs, or look in the forum for
                user-made packs).

CTRL+N  CTRL+V  Toggles audio. Shortcut for master toggle in the mixer
                settings. This hotkey works outside of the mixer screen too.

                Note: If you press this while in chat prompt, you will instead
                cycle forwards through lines you previously typed - also see
                CTRL+P key, which cycles backwards.

CTRL+C          Toggles music. Shortcut for toggling it in the mixer settings.
                This hotkey works outside of the mixer screen too.
                NOT AVAILABLE IN ROGUE-LIKE KEY SET.


SPACE   Stop executing repeatable actions such as searching, tunnelling or
        disarming traps. Also stops active fire-till-kill shooting and any
        preparations for a shooting technique (flare missile, precision shot,
        barrage).

< or >  go upstairs/downstairs. Press '>' to use a void gate (violet '+').
        Void jump gates teleport you to their counterpart and vice versa giving
        you a message "You fall into the void. Brrrr! It's deadly cold.".
        Draconians can get harmed by using void jump gates, see (7.4).
```

If you take staircases up/down, you'll receive the 'stair GoI' buff,
see (0.4) for details on that.

{   inscribe an item.

           If the first character is a backslash '\', then instead of overwriting
           an existing inscription the new inscription will either replace a part
           of the current one or otherwise be appended at its end.
           Replacing happens if the backslash is followed by either @<letter> or !
           or # which indicate special inscription "parts".
           Examples:
           An inscription "abc !k @S- xyz" that is inscribed "\@S50k" will turn
           out "abc !k @S50k xyz". If it is instead inscribed "\!ds" then it will
           turn out "abc !ds @S- xyz".
           When replacing the # part or an @P part, the whole rest of the
           inscription is replaced. For @P this is so because player names may
           contain spaces, so those cannot be used as reliable delimiters.

           Instead of replacing a tag, you can also remove it by doubling the tag
           type character, examples:
           "\@@S" will remove the price tag from an item.
           "\@@" will remove the first @-tag of any type.
           "\!!" will remove an "!" tag.
           "\##" will remove the whole part that follows after the '#' character.

           To simply append a new inscription to an existing inscription, enter
           '\\' at the beginning of the new inscription.

           To learn more about functional inscriptions, see (0.3).

}   remove inscription from an item.

/   in general, use an item (combines q,r, etc..).
           This can be useful if you run out of macros for a specific action,
           for example if you already use @m0...@m9 and still have more spell
           books/scrolls in your inventory, you can inscribe the remaining ones
           @/0...@/9. Or you could create a macro *t/0- and bind it to a certain
           key, and then inscribe a useful wand or staff @/0 without having to pay
           attention to whether you're currently using a wand or staff there (or
           rod, of course), as a sort of 'special power button', for example a
           staff of slow monsters (very handy at low levels) or a wand of light
           to kill orcs, jellies, and other light-sensitive critters.
           Note that in the spell book example above, you could of course just use
           call-by-name instead so you won't need any inscriptions at all (3.9b) !

~   display further information of your (character's) knowledge.
           Point (2) and (7) here are especially helpful for mimics:
           In ~2, the number shown in round brackets before each monster name is
           the same they have to enter for their ability:
             'Polymorph self into a specific form'
           In ~7 you can check out all features of a monster.
           You can also enter the slash command "/know" in chat to access the
           knowledge menu (without quotes).

@   displays a list of players currently on the server.
           Note that a yellow '(I)' before a name stands for 'invalid', and means
           that this player is still awaiting account validation by an admin.
           Also, if a grey '(O)' is in front of a player name, it means that
           player is using an outdated client. It's very important to keep your
           client up to date! (Same command as ~a)
           If another player's character level is displayed in light blue colour,
           that means he is within sensible level range of you to form a party!

Press SHIFT+P for party menu. One of you has to create the party and
add the other one.

Additional info that may be shown in @ screen:
'Silent mode'   Means the player has enabled the 'limit_chat' option,
                 which restricts chat to players on the same dungeon
                 floor as him, except for private/party/guild messages.
'Private mode'   The player has used the '/ic' command to ignore all
                 chat except for private or party messages.
'*Private* mode'
                 The player has used the '/ic *' (or alias /dnd) command
                 to ignore all chat except for party messages and
                 private messages from party members.
(Note that none of these chat restrictions will prevent you from seeing
administrative broadcasts or messages – those are always visible.)

If the server has specific PK-rules enabled, there are additionally:
'PK'   Player participates in player-killing.
'SAFE'   Player does not participate in player-killing.
'Newbie'   Player cannot participate in player-killing.
'Killable'   Player can get killed by other players.
To modify the PK status of your character, use the '/pkill' command.
Note: PK is disabled by default on our official main servers.

%   edit your macros (see from (3.6) to (3.9b)).

&   edit your auto-inscriptions (see (0.3a)).

=   edit your preferences.
         Some important entries here are..

         User Interface Options 1:
             "Rogue-like keyset" will change your keyboard layout to
                 the original Rogue key definitions.
             "Scroll the screen further away from the edges" helps to avoid
                 death by attacks that came from off-screen.

         Audio Options 2:
             "Use audio system for page/alert, if available"
             On systems where the /page command won't produce a native beep
             sound, you can enable sound system paging instead here (Of course
             you can also enable it on all osther systems too, which might be
             nicer than the system beep anyway).

         Gameplay Options 1:
             "Set 'AFK' mode automatically" will set you afk after some
                 minutes of inactivity.

:   type a chat message. To whisper privately, enter <player>:<text>
         eg: Johnjohn:hi! – actually the first few letters of the target
         player's name are enough, as long as it's distinct from anyone else
         who is currently online, like: Joh:hi!
         You can also use a player's account name instead of his character name
         to send him a private message, makes it easier if he keeps relogging
         between characters a lot.
         You can also enter a slash command here, for example "/afk".
         Press TAB to cycle between different chat modes, such as party-chat.
         For details about chat features see (3.3).
         For details about slash commands, see further below in this paragraph.
         There is also a /say command for talking to players nearby, and a
         /shout command for waking up monsters! See further below.
         To copy/paste text from and to chat, see CTRL+K/CTRL+L keys under

subchapter (0.2a) further below.

'   lets you peek at the equipment of party members or players within
         sight.

displays the high scores (same as ˜c). See (9.2c) for details.
         (Note: If you press this while browsing any text you can jump to a
         line number of your choice.)

| displays the unique monster list (same as ˜1).

X   this key carries a predefined macro:
         Quickly swap between two equippable items. They must be inscribed
         '@x0'. (It's basically just the macro 'x0' bound to shift+x key.)
         You can remove this macro in the macro menu, just like any other macro,
         if you don't like it.

,   This key carries a predefined macro:
         Reply to the last private message you received. It's simply the macro
         ':+:' bound to a key.
         You can remove this macro in the macro menu, just like any other macro,
         if you don't like it.

_   Two uses, regarding a) fountains or b) item piles:

         a) Main: Drink from a fountain. You must be standing on the fountain.
         Fountains can have good/bad/no effects. There is no fountain of death,
         neither one of detonations, so you won't get instakilled.
         If you see a message 'You feel less thirsty' that means the fountain
         was just plain water. A message 'You have quenched your thirst' means
         that the fountain had no effect on you, although it wasn't water.
         (Same as /sip command.)
         Fountains cannot have effects of potions which are of higher level than
         the dungeon level where the fountain is. The duration of the effect is
         also the same as the actual potion would last.

         b) Secondary: If you press _ while standing on an item or a pile of
         items, you will get a message what item is currently below your feet.

?   invoke an in-game help screen

!   look at the in-game bulletin board. Players can write lines of text to
         it by using the /bbs <text> command.

CTRL+P   view previous messages.
         Note: You can also press this when in chat prompt, to cycle backward
         through lines that you previously typed (also see CTRL+N, which cycles
         forwards).
         Press CTRL+K in here to copy the bottom-most line to the OS clipboard.
         On Linux/Mac OS X this requires 'xclip' to be installed.
         Tip: Tapping CTRL+K twice will try to extract an URL from the bottom-
         most line and copy that to the OS clipboard instead, if it finds one.
         Note that the search function here works in reverse from bottom to top.

CTRL+O   view previous chat messages.
         Press CTRL+K in here to copy the bottom-most line to the OS clipboard
         (or double-tap to try and extract a URL and copy that one instead).
         On Linux/Mac OS X this requires 'xclip' to be installed.
         Note that the search function here works in reverse from bottom to top.

CTRL+Q   save your character & quit the game. (You should do this in town!)
         This also automatically saves some settings, like window layout (the

windows' positions and sizes) and mixer settings (CTRL+U to change,
CTRL+F on rogue-like key set), and you will be asked if you want to
save the chat log to a text file.
Note that if you exit the game just by clicking on the 'x' button in
the game window's titlebar, these extra features will be skipped, and
any changes in settings or window layout will be discarded.

If instead you want to quit and also delete your character permanently,
then..

Suicide/Retirement:
Q   lets your character commit suicide (use this to permanently delete a
        character, but remember that it cannot be restored once suicided)!
        Characters who suicide won't drop items except for (non-zero) artifacts
        (if the server has ANTI_ARTS_HOARD enabled then no item at all will be
        dropped), nor will they keep the level static as it happens on a
        normal 'final death' (see (3.11) for details about static levels).
        If your character has 'winner' status (king, queen, emperor, empress)
        it will instead be dubbed a retirement instead of suicide, with the
        same result of your character being deleted from the game permanently
        though. The in-game message and highscore list entry will say 'retired'
        instead of 'suicide' though. :)

CTRL+R redraw the screen (do this if it's messed up for some reason).
  (/refresh, /ref)

CTRL+T take a screenshot. See /screenshot command below.
SHIFT+CTRL+T
        Takes a screenshot in PNG format. To work properly, this requires:
        A) On Linux/OSX clients the package 'imagemagick' to be installed, as
           it utilizes its 'import' command.
        B) On Windows clients the .NET framework to be installed.

TAB or CTRL+I
        displays lag-o-meter.

^   Allows to enter a CTRL character as command.

\   Enter a command, bypassing the client's keymap.
        Also allows to enter ^ next to enter a CTRL character as command.

)   Clears the command buffer of pending key presses (used in macros).

*   Initiates targetting a monster, hostile player or location
        (used in macros).

(Initiates targetting a friendly player (used in macros).
        Prioritizes the most wounded player, if any, otherwise the closest
        friendly player.

[Predefined "repeat last message/slash command" macro.

(0.2a) Text editing keys

When typing in a line of text (eg to chat), the following control keys are
available for text editing:

CTRL+P/N   Cycle through your message history.

CTRL+V/B   Move cursor to beginning/end of line.

```
CTRL+Q/W    Move cursor back/forward by one word.
CTRL+E      Delete word before the cursor.
     ..and a special function:
     Whenever a text input prompt appears which suggests a default text, you may
     press CTRL+E as the first key you hit. Then the default text will actually
     be used as if you entered it and it becomes editable.
     The main purpose of this functionality is in the macro menu when manually
     editing macro actions: You can edit a previously defined action without
     having to completely retype it.

CTRL+A/S    Move cursor back/forward by one character.
CTRL+D      Delete character under the cursor.

CTRL+C      Search history of chat messages you typed. Press CTRL+C again for
            next match. Press ENTER to choose or ESC to cancel.
            Entering an asterisk '*' will be interpreted as wild card.
            Eg entering the search string "h*w*4" will search for all messages
            that contained an 'h' which was followed at some point by an 'w'
            which in turn was followed at some point by a '4', such as:
            "oh wow, found 4 arts!".
            To jump back to the previous search result, press CTRL+F.

CTRL+K      Copies currently typed chat line to clipboard.
            Note that CTRL+K can also be used inside message recall screen,
            which is invoked by CTRL+O/P (important/all messages). There it
            will copy the bottom-most displayed line to the clipboard, or - if
            double-tapped - tries to extract a URL and copy that one instead.
CTRL+L      Pastes current OS clipboard as chat line (erasing any existing
            text you might have been typing in).
            On Linux/Mac OS X this requires 'xclip' to be installed.


(0.2b) Slash commands
---------------------
There are also some commands that can be entered with ':' like a chat line.
They all start with a slash '/' hence they're called slash commands:

/acolours
/acolors
/acol       Display a table of all animated colours.
            To see a table of the normal colours, use /col.

/adestroy   This toggles the client option 'auto_destroy'.
            The option controls destroying items (on the floor) if matching
            auto-destroy rules. See that option's explanation for more info.
            Also see slash command '/apickup' and '/daunmatched' which
            go with this one.
            Auto-destroying does not trigger inside houses.

/afk        toggle AFK (away from keyboard) mode if you have to take a
            quick break from playing.
            Note that your character won't need to consume food while afk _IF_
            you are not already 'hungry' or even 'starved' ('weak' in game
            versions <= 4.8.0) from a lack of food!
            All other timed effects will continue to be processed (like
            magical effects such as haste/slowness/hallucination, pseudo-ID or
            wearing off of temporary stat drain from traps) and eventually
            wear off.
            Also, other players cannot switch places with you by moving into
            you, use teleportation or Word of Recall on you, infect you with
            black breath by bumping into you, steal from you, form a blood bond
            with you or attempt to polymorph you while you are afk.
```

```
                    An exception are grids in front of stores: If you block those,
                    other players can switch places with you even when you're afk.

/afk <msg>    You can specify a reason that will be displayed to the other
                    players, so they know why you are currently AFK or when you will
                    be back.

/apickup      This toggles the client option 'auto_pickup' manually.
                    This will toggle the characters behaviour when seeing
                    an item under character: Whether it will automatically attempt to
                    pick it up or not. See that option's explanation for more info.
                    Also see slash command '/adestroy' which goes with this one.
                    Auto-pickup does not trigger inside houses.

/autotag
/at           Apply auto-inscription settings to current inventory.

/autoret
/ar           Sets up auto-retaliation for melee.
                    Enter            /ar help          for this info in-game.
                    Usage:           /ar [t]+
                    or to disable:   /ar -
                    To enable any melee auto-retaliation in general, '+' has to be
                    specified. This can be combined with 't' if desired:
                    't': town-only? (optional)
                    Example:         /ar t+
                       This will enable auto-retaliation, but restrict it to town.
                    For more info about auto-retaliation, see (4.1).

/autoretm
/arm          Sets up auto-retaliation with a mimic power.
                    Enter            /arm help          for this information in-game.
                    Usage:           /arm [q][t]<power>
                    or to disable:   /arm -
                    'q': fallback to melee if you cannot cast right now.
                    't': town-only? (optional).
                    Example:         /arm tg
                       This will auto-retaliate with mimic power 'g)', but only while in
                       town.
                    For more info about mimic powers see (7.8a).

                    (Note that you cannot auto-retaliate with
                       'Polymorph Self into a specific form'
                    power aka 'c)', instead it will be treated like power 'b)' aka
                       'Polymorph Self into next form with fitting extremities'.
                    Then again using this kind of power for auto-ret doesn't make much
                    sense anyway..)

/autoretr
/arr          Sets up auto-retaliation with runecraft.
                    Enter            /arr help          for this info in-game.
                    Usage:           /arr [q][t]<a-f><a-f><a-h><a-f>
                    or to disable:   /arr -
                    'q': fallback to melee if you cannot cast right now.
                    't': town-only? (optional).
                    and then mandatory: rune, rune, mode, type
                    Example:         /arr saabc
                       Casts a lengthened ball of light, but only against a target that
                       isn't sleeping.
                    For more info see (7.8b), paragraph Auto-Retaliation.

/bbs <text>
```

Add a line of text to the in-game bulletin board system. Players
                    can look at the board by pressing the '!' key.
                    (You can verify or compare the date with the /time command.)
                    If <text> is omitted, the current BBS contents will be shown, same
                    as using the '!' key.

/bed [*|<inscription>]
/naked   Opposite of /dress.
             If no parameter is given, the character takes off everything from
             body slot to feet slot.
             If '*' is given as parameter, the character will take off all
             equipped items.
             If another parameter is given, the character will take off all
             items that have this parameter occur in their inscription.

/bug   Report a bug to the admin(s).

/bye
/exit
/leave
/logout
/quit   Leaves the game, same as pressing CTRL+Q.
             If any parameter is added (eg just a dot '.') it will terminate the
             client, instead of throwing us just back to the account screen.

/characters
/charlist
/chars   Lists all your existing characters, including their locations.

/chem   Same as client option 'autopickup_chemicals':
             Enable/disable automatic picking-up of freshly dropped chemicals
             for characters with 'Demolitionist' perk from 'Digging' skill,
             by simply walking over them with your character.

/convertexclusive   Attempts to convert your current character into a
                       slot-exclusive character (either PvP mode or IDDC aka
                       Ironman Deep Dive Challenge / Halls of Mandos).
                       Warning: This process is NOT REVERSIBLE!
                       To attempt to convert your character, type:
                       /convertexclusive <your-character-name>
                       for example:
                       /convertexclusive Gandalf

                       If you still have a free exclusive character slot
                       available then your character is moved to that slot,
                       freeing up a generic character slot again.

                       This command can also be used on the Ironman server.

/coin
/flip   Flip a coin to get either heads or tails.
             The result is random and can be seen by other players who stand
             nearby.

/colours
/colors
/col   Display all available colours for testing purpose, for example when
             you are editing your Colormap_ entries in TomeNET.ini or colormap_
             entries in .tomenetrc respectively and want to test how it looks.
             There is also /acol to display all animated colours.

/cough   You cough noisily. Will disturb the sleep of monsters or at least

```
                    make it less deep..

/ctime          Tells you your local time (this command is executed locally on your
                client, actually). Also see /stime and /time.

/cversion
/cver           Displays the client's version information in detail.

/destroy_all_unmatched
                Toggles the client option 'destroy_all_unmatched'.
                See that option's explanation for more information.
                Auto-destroying does not trigger inside houses.

/shuffle [32│52 <jokers>]
                Prepares a new deck of cards.
                If you specify no arguments it will shuffle a deck of 52 cards
                without any jokers as default setting.
                Valid arguments are either 32 or 52 to pick a deck size. When you
                specifiy a deck size you may optionally specify an amount of jokers
                to be added to the deck, which may range from 0 (default) to 12.
/deal [<name>]
                Deals a random card from the player's current deck. (Use /shuffle
                to actually prepare a deck first.)
                The card dealt can be seen by other players who stand nearby.
                If you specify a player name the message will tell the others to
                whom you dealt that card.
                If it's the final card of the deck, everyone around will be
                notified of that fact.

/dealer <name>
                Hand over your current deck of cards to someone else. If that
                player already shuffled a deck of his own, that one will be erased
                aka overwritten by the one he receives from you.

/roll           Same as /dice.
/dice           Roll some dice (same as /roll), you must at least specify a number
                of dice or a number of sides, each from 1 to 100.
                The result is random and can be seen by other players who stand
                nearby.
                Examples of possible usage variants:
                  /dice 2    - rolls two 6-sided dice
                  /dice d20  - rolls a 20-sided die
                  /dice 3d6  - rolls three 6-sided dice
/die            Rolls one die, shortcut for "/dice 1" or "/dice 1d".
                Examples of possible usage variants:
                  /die 20     - rolls a 20-sided die
                  /die d12    - rolls a 12-sided die
/r              Same as /d.
/d              Rolls two 6-sided dice, shortcut for "/dice 2".
/dN             Shortcut to roll one N-sided die. Eg: "/d20".

/dispose
/dis            DESTROYS every item in your inventory that has one of these
                inscriptions: terrible, cursed, uncursed, broken, worthless,
                average, good. Works only on items that actually can be destroyed.
                Skips 'flavoured' items that are not known to you yet (example:
                'a blue potion {+,?}' or 'a malachite ring {+,?}').
                Skips items which inscription contains more than a pseudo-ID tag.
                Also see /tag and /untag. Note that artifacts cannot be destroyed
                this way.
                As a specialty, /dis (without parameters) will also destroy cheap
                (leather/metal) shield types that do not posses any special powers.
```

As another specialty, /dis (without parameters) will skip dragon
scale mails, leaving them intact.

Tip: If you want to keep {good} items too, press '&' to open the
auto-inscriptions menu and add a new auto-inscription there:
Press 'f' to toggle force-inscribe: The index number at the
beginning of the line should change from white colour to orange.
For search string, enter: "good" (without quotes)
and for inscription, enter: "-good-" (without quotes)
What this does is to look for any item that is inscribed {good} and
immediately inscribe it {-good-} instead. Thanks to the slight
modification (adding the two dashes around the 'good') the /dis
command will no longer recognize it as {good} pseudo-inscription
and therefore not attempt to destroy this item.
The force-toggle was needed to force re-inscribing an already
inscribed item, without it the inscription would only be applied
to items that do not carry an inscription yet.

/dis a   DESTROYS items like '/dis', and additionally destroys all items
            that have no inscription at all or just a price discount tag
            (discount tags don't count as real inscriptions).
            Also see /tag and /untag.

/dis b   DESTROYS items like '/dis a' does, but skips identified ego items,
            provided they aren't cursed.
            It also skips (non-cursed) exploding ammo, although it isn't really
            an ego item.

/dis i <inscription>
            DESTROYS all items in your inventory inscribed exactly like the
            text specified as the <inscription>.

/dis f   DESTROYS the item on the floor you're standing on provided it is
            not inscribed in any way, and tells you about the next item below
            that.

/dis fa   DESTROYS an item like '/dis f', even if it has an inscription.

/dis fb   DESTROYS an item like '/dis fa', but skips identified ego items,
            provided they aren't cursed.
            It also skips (non-cursed) exploding ammo, although it isn't really
            an ego item.

/dis fi <inscription>
            DESTROYS the top-most item on the floor where you are standing,
            that has a specific inscription matched exactly.

/dis F[a|b] Same as '/dis f', also accepts optional parameters a or b, but this
            command destroys the whole ITEM PILE you're standing on.

/dis Fi <inscription>
            DESTROYS all items in a pile on the floor you are standing on that
            have an inscription exactly matching <inscription>.

/draw <name>
            Draws a random card from another player's deck. Basicall same as
            the /deal command, except for who actually picks the card (the
            dealer himself or one of the other participants).
            If it's the final card of the deck, everyone around will be
            notified of that fact.

/dress [tag]

```
/dr          Without tag it equips all items in your inventory that are: not
             cursed, not {worthless}, not {broken}, not {terrible}, and that are
             known to you. Also it will only equip an item if the fitting
             equipment slot is empty yet.
             With tag it just equips all items that contain that tag in their
             name or inscription somewhere (even if they are cursed). It will
             equip items even if the respective equipment slot is not empty.
             This can for example be used to equip an item into the wield-slot
             and another into the arm-slot with a single command, just inscribe
             them both with the same tag.
             Opposite of /bed.

/dun         Displays the name of the dungeon you're currently in.

/edmt        This toggles the client option 'easy_disarm_montraps' manually.
             (Note that this will not change the option in =9 if you enter that
             menu, the option state will be reset to what it is in there.)
             This will toggle the characters behaviour when walking into a
             monster trap: Whether it will automatically attempt to disarm it or
             not. Use it as a trapper for convenience to disarm all remaining
             traps on the field faster after a battle has ended, instead of
             having to press the disarm-key for every trap.

/empty <a..w|+>
             Empty a potion from your inventory (slot specified or '+' for
             the newest item), leaving an empty bottle.
             Example: /empty c   (if you have 'c) 3 potions of boldness', one
             will be emptied and 2 remain at 'c) 2 potions of boldness'.))
             You can also empty brass lanterns with this command.

/evinfo      Displays information about all ongoing events.

/evinfo <#>
             Displays information about the specific event number #.
             Note: If you log out, your sign-up is cancelled automatically.

/evsign <#>
             Signs you up for the event number #.
             Depending on the event, you might need to specify additional
             parameters after the number. If that is the case, you'll see
             a message telling you so and about which details what's missing.
             NOTE: If you log out, your sign-up is cancelled automatically,
                   so after logging back in you will have to sign up again.
/evunsign <#>
             Signs you off from that event number #.

/extra
/ex          Gives you detailed information about your character's status, such
             as how many actions you may perform per turn.

             A turn is a basic server timing unit, which for example is used to
             display the amount of fuel in your light source, or which will make
             you suffer poison damage each on each turn that passes if you're
             poisoned.
             Turns pass slower on deeper dungeon levels to make up for increased
             monster and player speed, keeping the game playable in real-time,
             see (4.14) for details.
             (Note that the server also has a type of internal turn counter,
             which counts a different sort of turns, one each frame. Usually,
             the server will run at 60 fps, so these turns pass much faster.
             It might be a bit confusing that both these units are just called
             'turns' although they don't correlate, but you won't really have to
```

worry about internal turns at any point, only the 'character turns' are of any importance and noticable by your character, for example, as mentioned above, when you're poisoned, suffering from a cut, waiting for your blacklist to run out, or any other matters.)

Additionally to your actions per turn, /ex will also display the following information:
- how many resurrections you have left, if you are a normal-mode character;
- which of your auras are currently active (if you have points in the corresponding aura skills);
- extremities your current monster form possesses (if you're transformed into a monster form at the moment). This can be helpful to figure out what types of items you may equip while in this form.
- forms you have learned if you're a druid, and their according polymorph codes so you don't have to look them up in (7.7c) if you forgot them;
- pvp kills;
- the in-game time and date, and whether it is day or night. (Note: If you want to know the server real-life time, use /time.)
- An indicator if instant resurrection is enabled, and also tell you your fee for the current dungeon level (red if you don't have sufficient funds) or, if not in a dungeon, display the maximum dungeon level your funds would suffice for.
- How many houses you own and how many more you may own.
- Your chance of parrying and blocking.
- how much more gold you may pick up before your character will automatically receive 1 experience point (to limit the amount of cash you can pick up before participating in certain events, such as Highlander Tournament or Ironman Deep Dive Challenge).
- whether you still have an active item oder and in which store in which town.

And for Maiar who aren't initiated yet it will display the current status of their initiation career, see 'Maia' in (7.4).

/exit
/bye
/leave
/logout
/quit   Leaves the game, same as pressing CTRL+Q.
             If any parameter is added (eg just a dot '.') it will terminate the
             client, instead of throwing us just back to the account screen.

/feeling
/fe   Repeat the level feeling. See (4.8) for more information.
             If you aren't eligible for receiving a floor feeling, you will
             instead get the message "You feel nothing special.".

/fill   Fill an 'Empty Bottle' in your inventory with the liquid from a
             fountain or water from the ground. You must stand on the fountain
             or the water map tile to do this.

/flip   Same as /coin.

/forms [min level]
             Mimicry-users only: Shows all monster forms you have learned.
             A minimum monster level can be specified optionally.
             (This is a convenient shortcut for pressing ~ 2 @ ESC .)

/ftkon   Enables, and respectively..

```
/ftkoff      Disables fire-till-kill mode (see (5.2a)).
             Alternatively, you can toggle it in 'm' menu.

/gbbs <text>    Same usage as /bbs, but only readable/writable for guild
                members. So it's a guild-internal BBS.
                To read its contents, type /gbbs without any <text>.

/gleave
/gquit       Leaves your guild. Same as pressing 'SHIFT+P' and then 'd'.

/gnote <text>
             Leave a note to the guild you own.
             If <text> is omitted, it will display the current note.
             If <text> is just an '*' char, it will erase the current note.

/gpage       Will toggle paging you when you're AFK and a guild member joins the
             server. (Also see /ppage.)

/gquit       Same as /gleave.

/guide       Displays short instructions where to find the TomeNET Guide (this
             document) and how to update it.

/guild_adder <name of another player>
             Allows that player permanently to add other players to the guild
             too. Use the command a second time to revoke his rights again.
             Instead of using this command, you can also go to the party menu
             (SHIFT+P) and there choose 'e', for a comfortable GUI.
/guild_adders
             Displays all currently set guild-adder characters of your guild.
             (See /guild_adder above for more details about guild-adding.)

/guild_cfg [<flag> [<value]]
             Shows you your current guild configuration and allows you to change
             it.
             Instead of using this command, you can also go to the party menu
             (SHIFT+P) and there choose 'e', for a comfortable GUI.

/guildmembers   Displays a list of all members of your guild.

/help [topic]
/he
/?
             Without 'topic' parameter, /help shows a list of all command keys
             (same as pressing '?' key) and additionally lists a few most
             commonly used slash commands.
             Without 'topic' parameter, /? invokes the guide.

             Optionally, a topic can be specified - in this case a guide search
             will be conducted on that topic. For example enter:   /? ac
             Press 'd' to jump to subsequent results (if any). If that still
             won't find what you're looking for, press 's' to switch from topic
             search mode to basic text search, and press ENTER to initiate it.

             To quickly access your guide bookmarks, just specify the bookmark's
             index character as topic, eg "/? a" for the first bookmark a).

             To access not a chapter, but a "header" of some subparagraph, try
             searching for all uppercase, eg "CONFUSION" instead of "confusion".
             Basically this searches for occurances specifically at the
             beginning of lines. Another example: "events" vs "EVENTS".
```

```
            If a search initiated by this command wraps around once, it will
            drop the search tier to basic text search, resulting in potentially
            many more hits.

/?c         Shortcut to your character's class description in the guide.
/?r         Shortcut to your character's race description in the guide.
/?t         Shortcut to your character's race trait in the guide.


/houses
/hou        Displays your houses, same as ~9, but offers two optional
            parameters to refine the search results:
            /hou o    will only show your own houses.
            /hou l    will only show houses in your current worldmap sector.
            /hou ol   both of the above.


/ignore <player name>
/ig         Ignores all chat messages from the specified player. (Toggle)
            Also silences all paging attempts from that player.
            To un-mute the target again, retype the command with its name.
            The blocked player will see a message about you ignoring him when
            he tries to send you any private message or page you.


/ic
/ignchat    Ignore all normal chat messages which are neither private messages
            nor party messages. ('Private mode' will be displayed after
            the player's name in the player overview screen which can be
            invoked by pressing '@', indicating that this player currently
            cannot read normal chat messages.)
            (This is similar to 'limit_chat' option, which however still allows
            all floor-chat occurring on the same dungeon floor and guild chat.)
/ic *
/dnd        Same as above, but also disables all private messages except from
            party members! (Will display '*Private* mode' after the player's
            name in the @ screen.)


/info <msg>
            Sets an informative message that is displayed to other players in
            '@' screen, similar to an afk-message, except this message is
            displayed when you're not afk.
            For example do:  /info Want to team up for Mordor!
            If you type /info without a message, it clears your info message.


/ing
/ingredients
            Disable (and reenable) any ingredient drops for demolitionist perk
            and for the "Apply Poison" fighting technique used by rogues (and
            possibly death knights).
            This setting is saved between logins. When you login on a character
            that has drops disabled you will see a message reminding you of it:
            "Ingredient drops [...] are currently suppressed."


/kifu <email>    (japanese name)
/gibo <email>    (korean name)
            Use this command after you played Go in the casino in Minas Anor.
            It will send all your new Go game records as SGF files to the email
            specified. If you're using a Microsoft-related email address, eg
            outlook.com, note that Microsoft is notorious for blocking email
            from the email-provider used by TomeNET, so you might not get it.
            This command works per character name, not per account name, so you
            only get those kifus emailed that the character played on which you
            used the command. (SGF is the 'Smart Game Format'.)
```

```
/know       Client-side command that invokes the knowledge menu, same as if the
            user pressed '~' key.


/leave
/logout
/bye
/exit
/quit       Leaves the game, same as pressing CTRL+Q.
            If any parameter is added (eg just a dot '.') it will terminate the
            client, instead of throwing us just back to the account screen.


/light <a..w|+>
            Refills your light source with an item from your inventory (slot
            specified or '+' for newest item).
            Usually it's easier to just press 'F' instead.


/martyr
/mar        Tells a holy-defense-user if he may use the prayer 'Martyrdom'.


/me         Write an emote. Example: /me hides.


/mix <tag numbers 'n' of chemicals inscribed '@Cn'> [<'*' to self-activate>]
            Mixes chemicals and/or self-activate a mixture, which must all be
            inscribed @C<n> where <n> is a numerical tag from 0 to 9.
            Examples:
            /mix 1233   -> mix chemicals inscribed '@C1', '@C2' and 2x '@C3'.
            /mix 1233*  -> mix those chemicals and self-activate the mixture.
            /mix 0      -> Self-activates a mixture inscribed '@C0'.
 Additional syntax, lower-case for alchemy satchel, upper-case for inventory:
  /mix <satchel-lower-case / inven-upper-case slot letters> [<'*' activates>]
            Example:  /mix accD* -> mix chemicals from the satchel slot (a),
                                    two units from the satchel slot (c), one
                                    from normal inventory slot (d) and finally
                                    self-activate the resulting mixture.
 Optional 'x<0-9>' parameter, must be first in line, repeats the whole process!
            Example:  /mix x5 bc9E*  -> performs the crafting attempt 5 times.
 To find and mix chemicals you must have the 'Demolitionist' perk, see (7.2b).


/monsters
/mon [<monster character>] [<+minimum level>]
            Same as going to ~ menu and selecting 'Monsters':
            Will show your kill count of all matching monsters.
            Examples:
             /mon D      ->  shows your greater dragons kills.
             /mon D +60  ->  greater dragons of level 60 or higher you killed.
             /mon +20    ->  kills for all monsters of level 20 or higher.
             /mon @ +30  ->  shows all forms you learnt of level 30 or higher.


/motd
/snotes     Shows the current server notes that are displayed at login.


/new        Client-side command to set an item to 'newest', which will use it
            in various item prompts when they allow to select the 'newest item'
            via '+' key.


/news       Shows the login screen, same as ~h, but in monochrome.


/naked      Same as /bed.


/note <character/account name>:<text>
            Leave a note to another player. The message will actually go to the
            player's account even if you specified a character name, so no
```

matter which of his characters he chooses to logon, he always gets
                    the note.
                    If you specify a character name and exactly that character (not
                    just any character of the same account) is actually online right
                    now, it will immediately see your note - in addition to it being
                    stored normally too and shown again on next login - provided the
                    target player is not ignoring you.
/note <character/account name>
                    Delete all pending notes that were addressed to that player.
/notes   Display all pending notes that you wrote to other players.

/object
/obj   Displays all objects known to you, same as ˜4.

/opty <option>
/optvy <option>
                    Sets a client option to 'yes'. Eg: /opty font_map_solid_walls
                    The /optvy command will display a feedback message (v = verbose).
/optn <option>
/optvn <option>
                    Sets a client option to 'no'. Eg: /optn font_map_solid_walls
                    The /optvn command will display a feedback message (v = verbose).
/optt <option>
/optvt <option>
                    Toggles a client option between 'yes' or 'no'.
                    Eg: /optt font_map_solid_walls
                    The /optvt command will display a feedback message (v = verbose).

                    Quality of life hack:
                    You can actually refer 'big_map' via /opt commands even though it's
                    not a real option (anymore)!

/page <player-name>   Sends beeps to that player to help you getting his
                         attention. (Using /ignore on a player will also
                         prevent getting paged by him.)
                         If you're on Linux and not hearing the page sounds,
                         see PROBLEM 20 in the troubleshooting section (9.8).

/paint <a..w|+>
                    (Also available by pressing 'h' for house menu.)
                    Use a potion in your inventory (specified slot or '+' for newest)
                    to paint your house entrance in a similar colour. The potion is
                    used up in the process. A potion of water removes the paint again.
                    Painting your house can be useful for example to mark it for others
                    to see that you run a player store. Further, you could choose the
                    colour to indicate the type of items you offer, for example red
                    for magic items similar to the red '6' town store.
                    Note that players of incompatible character mode (everlasting vs
                    non-everlasting) won't see each other's house paint.
                    (See (4.10a) for more information about player stores.)

/partymembers   Displays a list of all members of your party.

/pbbs <text>   Same usage as /bbs, but only readable/writable for party
                 members. So it's a party-internal BBS.
                 To read its contents, type /pbbs without any <text>.

/cvpng   Client-side command that invokes creation of a PNG screenshot from
              a previously taken xhtml screenshot, same as if the user pressed
              the '˜' key while already inside the knowledge menu ('˜' too), ie
              double-tapping the '˜' key.
              This utilizes an installed Firefox or Chrome or Chromium webbrowser

```
              to render the PNG file from the xhtml file. If you have installed
              none of these then this command will not work.

/pkill
/pk           Toggles the player's status regarding participation in 'PK' actions
              aka player-killing. PK rules must be enabled on the server in order
              to use this command. The PK status of each player will be displayed
              in the players-online-screen that you invoke by pressing @ key.
              Note: PK is disabled by default on our official main servers.

/play         Join/leave a mini-game (such as rugby on the field in Bree).
              Will at some point in the future be absorbed by /evsign and
              thereby become obsolete.

/pleave
/pquit        Leaves your party. Same as pressing 'SHIFT+P' and then '5'.

/pnote <text>
              Leave a note to the party you own.
              If <text> is omitted, it will display the current note.
              If <text> is just an '*' char, it will erase the current note.

/ppage        Will toggle paging you when you're AFK and a party member joins the
              server. (Also see /gpage.)

/pquit        Same as /pleave.

/pstore       (Also available by pressing 'h' for house menu.)
              Attempts to enter a player store next to you, even if it's your own
              house. So this command is good for 'testing' your own store.
              Usually you simply enter another player's store by trying to enter
              his house, which will display the player's store screen.
              (See (4.10a) for more information about player stores.)

/pvp          Carries you into/out of the PvP arena. Only usable by PvP mode
              chars. See (7.13) for details about PvP mode.

/quest
/que          Lists your currently pursued quests.
              Specify a quest number to drop a quest -- warning! You might not
              be able to acquire it again, depending on the quest and your quest
              progress.
              If you specify '*' instead of a number, you will drop ALL quests.

/quit
/bye
/exit
/leave
/logout       Leaves the game, same as pressing CTRL+Q.
              If any parameter is added (eg just a dot '.') it will terminate the
              client, instead of throwing us just back to the account screen.

/recall
/rec          Uses an item inscribed "@R" that provides 'Word of Recall' to
              teleport you over a long distance, either into a dungeon, out of a
              dungeon or across the worldmap.
              See "(0.3) Important Inscriptions, Word of Recall" for more info
              about Word of Recall. Examples:
 /rec -550    recalls you to -550ft, provided there is such a dungeon at your
              current worldmap location and you are not already inside.
              To specify depths in feet, the option depth_in_feet must be 'yes'.
 /rec -11     does the same, provided you have option depth_in_feet set to 'no'.
```

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/rec 32 32  recalls you to Bree (the town at (32,32) world map coordinates),
            provided you are on the world surface and not already in Bree.


/refresh
/ref        Redraw the screen (do this if it's messed up for some reason).
            or simply hit CTRL+R)


/reinit_guide
            (Undocumented developer command that reloads the guide from drive.)


/rest [turns]
            Rest for number of turns, or indefinitely if 'turns' is omitted
            (ie same behaviour as pressing the resting key in order to rest).
            Resting will always stop if resting conditions are no longer met,
            eg character is fully healed up, so specifying super-large amount
            of turns is pointless.


/retire
/ret        Gives a short message to use SHIFT+Q instead.


/rip <a..w|+>
/tear       Tear cloth from your inventory (slot specified or '+' for
            the newest item) into bandages.
            Example: /rip h   (if you have 'h) a cloth hat').


/rfe        Store a message/suggestion for the admin(s).
            (Request for enhancement)


/roll
/r          Same as /dice and /d respectively (roll some dice).


/sacrifice
/sac        Tells a hereticism-user if he may use the spell 'Blood Sacrifice'.


/say <text>
            Speaks <text> to players who are currently nearby your position,
            instead of sending your message to everyone on the server.
/sayme['] <text>
/sme        Write an emote to players who are currently nearby your position,
            instead of sending it to everyone on the server.
            The <'> apostrophe can be used to express genitivum.
            Example: /sme's supplies are running low!


/shout <text>
/sho        Shout <text> loudly, will wake up monsters. (Same as "/yell".)


/scream <text>
/scr        Same as /shout, but also aggravates monsters in your current
            line of sight. (Same effect as scroll of aggravate monsters,
            see (5.9)).


/seen <name>
            Tells you when the character or account of the <name> you
            specified logged in the last time.
            If the name matches both, account and character, it will report the
            account if it's been used more frequently than the character of the
            same name on that account.
            (Same as IRC command ?seen.)


/screenshot [<filename>]
/shot       Takes a screenshot to a html file. If <filename> is omitted, it
            writes to 'screenshot?????.xhtml' by default, where "?????" are
```

either increasing numbers or the current date and time if you have
the option 'screenshot_format' enabled.
You can also press CTRL+T to take a screenshot, which is exactly
the same thing as using this slash command.

You can view those xhtml files in most webbrowsers.
Also see /cvpng command for how to convert the last taken xhtml
screenshot to a PNG format image file.

/screenshotpng [<filename>]
/shotpng

Takes a screenshot as PNG image file. If <filename> is omitted, it
writes to 'screenshot?????.png' by default, where "?????" are
either increasing numbers or the current date and time if you have
the option 'screenshot_format' enabled.
You can also press CTRL+SHIFT+T to take a screenshot, which is
exactly the same thing as using this slash command.

This requires you to have installed...
 A) for Linux/OSX clients the package 'imagemagick', specifically
    the 'import' command contained in this package.
 B) for Windows clients the .NET framework.

The screenshots are saved to the "lib/user" folder on POSIX clients
(Linux/OSX) and to the "tomenet-user" folder on Windows clients.

/shuffle   See further up, above /deal command.

/sip   Drink from a fountain. You must stand on the fountain to do this.
               Fountains can have good/bad/no effects. There is no fountain of
               death, neither one of detonations, so you won't get instakilled.
               (It's easier to press '_' instead of using the /sip command.
               Also see '_' key above, for additional information.)

/snbar   Cycles through available types of sanity bars to display.
               Which types are available depends on the 'Health' skill, or – only
               if your class is mindcrafter though – on your character level too,
               in which case whatever of the two is higher counts.
               New views are unlocked at skill/level 10, 20 and 40.

/snotes   Same as /motd.

/split <a..w|+> [<amount>]

Splits up an item stack in your inventory (slot specified or '+'
for newest item), creating a second pile of the size <amount> or
just 1 item, if <amount> is omitted.
The split-off item (pile) is auto-inscribed !G to prevent instant
automatic reabsorbtion into the original pile.
The command will fail if there is no free slot in your inventory.

To split item stacks, the command key shift+K can also be used,
in its alternative mode: By pressing shift + inventory slot letter.

/stime   Tells you the current date and time (of the server, not of your
               local timezone). Also see /ctime and /time.

/stow [<a..w|+>]
/s   This command will try to stow all items in your inventory into
               eligible container items you carry.
               If a slot is specified (optional, '+' for newest item) it will only
               try to stow items which fit into the container item that is in that
               slot. Also see /unstow.

```
/suicide
/sui        Gives a short message to use SHIFT+Q instead.

/tag [a..w|+|* [inscription]]
/t          Tags one specific or all uninscribed items in your backpack by
            adding a '!k' or a custom inscription. Helpful for looting in
            conjunction with /dis command.

            If a slot (a..w, or '+' for newest item) is specified, it only
            tags the item in that particular inventory slot (if not yet
            inscribed already).

            If you specify '*' for all slots, it will skip all items that
            already have an inscription except for trivial pseudo- or 'on sale'
            or 'stolen' or 'handmade' inscriptions.

            If you want to specify a custom inscription instead of using '!k'
            you have to either specify an inventory slot (a-w) or write a '*'
            for all inventory slots.

            Examples:
            /t          inscribes all uninscribed inventory items '!k'
            /t c        inscribes uninscribed inventory item in slot c) '!k'
            /t * !*     inscribes all uninscribed inventory items '!*'
            /t c !*     inscribes uninscribed inventory item in slot c) '!*'

            The /tag command Will not affect equipped items.
            Inscriptions can also be undone again with the /ut command.

            A specialty is specifying '@@' or '@@@' in the inscription. This
            will attempt to 'power inscribe' eligible item(s). If used on a
            specific slot this will overwrite any existing inscription instead
            of adding a tag to it.
            For more information on power inscriptions see '@@' in (0.3).

/target <x> <y>
/tar        Allows you to target a specific grid specified by X,Y as offset
            to your current character position.

/tear <a..w|+>
/rip        Tear cloth from your inventory (slot specified or '+' for
            the newest item) into bandages.
            Example: /rip h   (if you have 'h) a cloth hat').

/testyourmight <show|rs>
/tym <show|rs[w|x]>
            '/tym show' will display your damage/healing output so far and
            '/tym rs'   will reset the damage/healing counters.
            '/tym rsw' will reset the damage/healing counters but wait with
                       counting until you perform your first attack.
            '/tym rsx' will reset the damage/healing counters but wait with
                       counting until you perform your first attack.
                       If you don't attack for 5 seconds afterwards, it will
                       automatically stop recording and evaluate the result.
                       This is the recommended way for stress-free testing.
                       (The 5 idle seconds will be ignored in the calculation.)

            Displays damage dealt, healing, regeneration, life-drain
            (vampirism) and damage taken stats for your character.
            Displays totals and averages over number of attacks and over time
            (# of seconds passed).
```

Note: 'Numer of attacks' only counts successful attacks, ie not
attacks that missed, were blocked/parried/dodged or nullified by
invulnerability, etc. It however counts ALL attacks, for example
aura hits too.

WARNING: For characters moving at high speed and having a high
number of blows per round, you might need to remove items giving
+SPEED or +Extra Attacks for the test to be accurate, this is due
to frame rate limits of the real-time engine, compare (9.7).
Then use the /ex command before and after taking off speed items to
see how often you can move per turn to calculate your real dps.

In general, if you want to compare different equipment sets,
taking off all extra (ie existing in both sets) items that give
+EA or +Speed is the best way to get accurate results!

/time   Tells you the current in-game time, same as /ex does.
             Also see /ctime and /stime.

/timer <# of seconds to count down or 0 to halt or '+' sign to count up>
             Starts a custom timer that will alert you when it runs out.
             You must specify the number of seconds, which must be between 1
             and 86400 (1 day) or 0 to halt the timer if it's already running.
             If instead of a number of seconds you just type the plus sign '+'
             the timer will count up indefinitely until halted or reaching the
             maximum threshold of 86400 seconds (1 day).

/tip <player>
             Tips a player who must be standing next to you:
             You give him (yourlevel * yourlevel) gold pieces. Eg if you are
             level 10, you'll give him 10*10 = 100 Au. If you are level 50, you
             would give him 2500 Au.
             If you carry less gold than that in your purse, then you only tip
             as much gold as you actually carry.

/trait   Allows outdated Draconian characters to acquire a lineage trait.
             This cannot be reversed, so the player should pick carefully.
             See (7.4) for a list of traits and what they do.

/tss   For characters that can use 'Thunderstorm' spell:
             Toggles between default state to avoid sleeping monsters and
             allowing the lightning strike to target sleeping monsters too.

/undoskills
/undos   A skill reset function ("respec"), allowing you to undo the last
             couple of skill points you assigned in 'G' menu. Use this to
             correct points you accidentally put into a wrong skill.
             NOTE:
             1) You can only use undoskills once per level.
             2) You can only undo the points that you have spent since your
                last level-up.
             3) If you enter a dungeon or tower you will forfeit the possibility
                to use /undoskills at your current character level. You will be
                able to use it again after reaching the next character level.

             There is also an experimental alternative possiblity:
             You may reset a whole skill once per character, at The Mirror
             located in Lothlorien, when you are exactly level 35 - not earlier
             and not later! See (4.5a) for details about The Mirror.

/uniques

```
/uni        Displays your list of unique monsters, same as ˜3. Offers similar
            optional parameters to refine the search results:
            /uni a    will only show uniques that are still alive for you.
            /hou b    will only show bosses.

/unstow <a..w|+>
            This command will unstow all items from a container (the one at the
            specified inventory slot, or '+' if you just picked it up last) and
            put them into your normal inventory instead. If it overflows,
            surplus items will drop to the floor. Also see /stow.

/untag [<inscription>]
/ut         If <inscription is omitted, it removes all inscriptions from items
            in your backpack which are exactly '!k' (as done by /tag command).
            Ohterwise it removes inscriptions of all items which are exactly
            inscribed as specified by <inscription>.
            Will not affect equipped items (except for '/untag *').
            Note that some <inscription> parameters are special and therefore
            reserved, those are:

/untag *    Will remove all inscriptions from all items in your inventory.

/untag p    Will remove all pseudo-ID tags from your inventory items.
            Note: This will work on equipped items too!

/untag u    Will remove all unique-loot tags from your inventory items.

/uptime     Displays time passed since the TomeNET server started up (running).

/version [x]
/ver        Displays the server version.
            If used with any parameter it will display the server settings too,
            same as pressing ˜i (knowledge menu -> server settings).

/whisper <text>
/wh         Whispers <text> to players currently standing right next to you.
            Others won't be able to hear it.

/who <character name>
            Returns the account name that character belongs to, and basic info
            on race, class and level.

/xorder
/xo         Gives you an extermination order! It needs to be carried out before
            a certain period of time passes (continues to expire even while not
            logged on). Completing it yields a random item for reward. It will
            appear in your inventory and carry an inscription indicating
            it's the reward. (See (4.13) for more info.)
            This command is only available in the Ironman Deep Dive Challenge
            dungeon and in the Halls of Mandos. Otherwise you have to visit the
            mayor's office in Bree to receive an extermination order.

/yell <text>
            Shout <text> loudly, will wake up monsters. (Same as "/shout".)

Extra slash commands for role-playing that have no further effect:
/applaud    Applaud someone nearby (sfx).
/hug        Hug someone next to you.
/knock      Knock on a house door next to you (sfx).
/pat        Pat someone next to you.
/poke       Poke someone next to you.
/slap       Slap someone next to you (sfx).
```

```
/wave       Wave at someone nearby to you.

Aside from slash commands there are also item-paste shortcuts, which can be
incorporated into any text you type in chat:
\\x         Will paste the item from your inventory slot x).
\\X         Will paste the item from your equipment slot x).
\\\Xx       Will paste the item from your bag X) (in lower-case), slot x).
\\\x        Will paste the item from slot x) of the store you're currently in.
            If the item in question has any random magic powers, those will be
            displayed as additional item inscription. (Fixed powers won't be
            shown, in order to keep the whole message as short as possible.)
\\_         Will paste the item that is 'under your feet', which is the item on
            the floor where you are standing right now. (You can press '_' key
            to enforce checking what's under your feet.)


Elevated commands / privileged accounts
---------------------------------------
Some slash commands can only be used by player accounts that have been set to
'privileged' or 'extra-privileged'. Currently there is no difference between
these two tiers, so only the first one is used.
In general, there is no difference between a standard account and a privileged
account, except for being able to use these additional commands.
In theory, certain quests that are still in testing stage could be set so they
are only accessible by privileged accounts, but there are no such quests at the
time of writing this.
To check the status of your account, press = A (requires v4.7.3 or higher).

/inval      Invalidates another player's TomeNET account.
            This sets an account from normal back to 'trial'.
            (This will not delete anything or inflict any harm on existing
            characters, it will just reimpose 'trial' account restrictions.)

            Basically the only use for this command is if you accidentally
            used /val on a new account that wasn't meant to be validated for
            some reason (eg another player just quickly created it to test
            something and you were too quick and actually validated it).

/val        Validates another player's TomeNET account.
            When a new player creates a TomeNET account, that account will at
            first be in 'trial' mode, aka 'invalid'. It means he can play but
            certain things won't be possible, such as levelling beyond 25,
            private chatting or dropping items.
            This command will remove the 'trial' restrictions and turn it into
            a normal account.


(0.2c) IRC bot commands
-----------------------
When in an IRC channel where the 'TomeNET' bot relays chat to and from a
game server, you may enter these IRC commands:
(See (1.1b) on how to set up IRC chat.)

?help           Displays a list of commands.
?players        Will reply with a list of players online on this server.
?seen <name>    Tells you when the character or account of the <name> you
                specified logged in the last time.
                (Same as in-game command /seen.)
?who <character name>
                Returns the account name that character belongs to, and basic
                info on race, class and level. (Same as in-game command /who.)
```

Depending on the TomeNET server settings and on the specific command,
these IRC commands can actually also be used in the chat-bridge channel
of the official TomeNET Discord server! So they are 'Discord commands' sort of.

(0.3) Important inscriptions, Word of Recall

To inscribe an item, press the { key. To uninscribe, press }.
You can also mass-inscribe/uninscribe items by using the commands /tag or /t
and /untag or /ut respectively (see (0.2b) for command details).
Brackets [ ] are not to be typed in actually, but just indicate that the
parameter inside them is optional, meaning you may or may not specify it, as
you prefer.

The ! inscriptions:
    Inscribing an item with an '!' followed by a key will - for most keys -
    cause that key to cease working on the item anymore. There are also some
    special !-combinations that do different things (eg !B on magic devices)
    which are all listed below. You may also specify several keys after a '!'.

    A space ' ', '@' symbol, '#' hashtag or '-' minus sign will end parsing the
    !-sequence.
    Example: You inscribe a 'Scroll of Artifact Creation' this way: "!kd rawr".
    Now you cannot destroy or drop the scroll anymore (keys to destroy and
    to drop an item are 'k' respectively 'd').
    However, you can still 'r'ead the scroll, because the 'r' in the "rawr"
    part is not parsed as it is separated by a space from the "!..." sequence.
    You can inscribe an item by pressing '{' and uninscribe it with '}'.

    !* inscription, this is a "combo" shortcut inscription.
        *   is a 'wild card' which stands for multiple inscriptions at,
                once inscribing an item '!*' will do ALL of these checks:
        !d   Prevent dropping an item.
                If on a bag this will also prevent storing it in a list house.
        !k   Prevent killing (destroying) an item. (Note that '!k' on a
                torch also prevents using that torch to refuel another one.)
        !s   Prevent selling an item to shop (!s).
                If on a bag this will also prevent storing it in a list house.
        !v   Prevent throwing an item away.
        !=   Automatically pick the item up from the floor.
        !h   (Prevent selling a house key. Keys usually aren't used anymore
                though.)

    For example, if you found a great item and you want to avoid accidentally..
    (d)ropping it, (s)elling it, (v) throwing it or (k)illing it, you could
    either inscribe it   !dsvk   or just   !*   (implies != too, but whatever).

    !+ inscription:
        Implies !k, !s, !=, !h.
        So it does the same as !* except that it does not prevent dropping or
        throwing an item. This can be useful for throwing weapons for example.

A very useful inscription for (heavily) cursed items:
    !w   Prevent wielding/wearing an item. This is very useful if you
                carry a cursed item in your inventory that you really don't
                want to equip by accident.

    !W[n]   Give a warning (message colour and sfx) when the stack size aka
                amount of this item reaches or goes lower than n.
                Also, the inventory slot letter will change to orange colour.
                If n isn't specified it will use the default value '10'.

This is useful for consumables such as healing potions, to
                draw your attention to them when you're running low.
                Eg: !W15
                (This warning can only get triggered when the count of the item
                stack is reduced, eg when an item is consumed.)
                WARNING: Don't confuse this inscription with !w. It does NOT
                prevent wielding an item!

Useful for characters who wield a boomerang not for throwing it, but rather
because it provides magical boni:
    !f   Prevent firing an item (ie your equipped ranged weapon).

Other ! inscriptions:
    !T   Prevent taking off a secondary item.
    !F   Prevent using up this light source or fuel item to fuel your
                    currently equipped light source. (Note that !k inscription
                    implies this too.)
    !Fn   If the server has the (experimental) Demolitionist perk enabled
                    this inscription can be used on blast charges to customize the
                    fuse length to n seconds, where nn must be within 0 to 15.
                    Eg: !F15
    !E   Prevent eating this food item.
    !q   Prevent quaffing this potion.
    !r   Prevent reading this scroll.
    !u   Prevent using a staff.
    !a   Prevent aiming a wand.
    !z   Prevent zapping a rod.
    !A   Prevent activating an activatable item.
    !L   Can be used on a scroll of Artifact Creation. The resulting
                    randart will not gain +LIFE ('it affects your hit points') mod.
                    So this is an inscription that only makes sense for winners to
                    use, since non-winners cannot generate +LIFE on randarts
                    anyway.
    !U   This item will be displayed in dark grey colour in your
                    inventory or equipment. Can be useful for sorting loot.
                    (A warning: You cannot visually distinguish this colour for
                    items that are greyed out because they are unusable to you.)
    !S   Prevents auto-stowing this item into any bags.

Mainly for consumable items:
    !Q   will not print a message how many you have left after consuming
                    one (like if 'taciturn_messages' were enabled). For example use
                    on ID scrolls in combination: !XQ
Mainly for consumable items stored in piles:
    !g   trying to pick up this pile will only grab 1 item, as if the
                    player pressed CTRL+G (or CTRL+Z with rogue-like key set).
                    If you use CTRL+G on a !g stack, it will instead pick up the
                    whole stack.

The # inscription:
    This one makes all following inscription be appended directly behind the
    actual item name, instead of at the end of the item's full description.
    It can be especially convenient if the item has a very long name.
    Sometimes you can also use this to confuse your fellow players :-p

Player-store inscription:
    @S   This inscription has a variety of different usages and is used
                    for displaying items in your own shop that you can set up in
                    any of your houses. For more information see (4.10a).

Items that 'can cause Earthquakes':
    !Q   Prevents the item from causing an earthquake. This usually

only works on the artifact "The Mighty Hammer 'Grond'".
(Press keys ˜i in the game to check server settings.)
See (5.11) for more information about earthquakes.
This inscription is ignored if the player tunnels their own
grid (ie direction '5') as that is interpreted as a deliberate
attempt to cause an earthquake.

Weapons/ammo, devices and spells:
@O   This and its variants control the 'auto-retaliator' which is a
            mechanism designed to make your character automatically attack
            targets that are standing directly adjacent to you.
            For details about auto-retaliation and the different types of
            @O... inscriptions, see (4.1a)!

Items that can recharge magic devices (eg Scrolls of Recharging):
@I<partial item name>
            Will not prompt for a target item but try to find the target
            item matching the partial item name specified after '@I'.
            Only magic devices will be considered as target items.
            Example:
            "A Scroll of Recharging {{1} {@r4 @IWond}"
            If this scroll were read, it would try to enchant a magic
            device which name partially matches "Wond". So if you carry
            a Wand of Wonder in your inventory, the scroll would try to
            recharge that one.
            You can also specify (parts of) an inscription of a target
            item, for example "@Imydev" or whatever you like.

For magic devices:
!B   Will play a beep sound if you either fail the activation roll
            to use the device or if the device is out of charges or still
            not charged up respectively, depending on the type of device.
            For all other cases of activation failure this inscription has
            no effect.

Rods only (other magic devices will give a notification message anyway):
!C   Will notify you when the rod finished recharging.

Wands and directional rods:
!F   Will enable fire-till-kill mode for this item, provided that
            you have turned on fire-till-kill mode the usual way ('m' key).

Wands and staves:
!D   Will automatically discharge the device first when a recharge
            attempt is made (to minimize the risk of blowing up at the
            tradeoff of discarding the extra charges).

Ammunition:
!=   Will make your character auto-pickup the ammo from the floor.
!b   Will make your ammunition break. Rather disadvantageous but
            maybe useful if you use rather worthless ammo that you don't
            want to pick up again and don't like littering the floor with
            it.
!M   Makes ammunition stacks of same base type and same ego power
            stack even if +hit or +dam enchantments are not equal. Those
            will be averaged and rounded downwards. (Doesn't work for
            cursed or artifact ammo.) Wield the !M stack first, then also
            wield the stack you want to merge with the equipped ammo.

Ammunition, boomerangs, (throwing) weapons:
!L   Inscribe stacks of ammo in your inventory !L to make them be
            automatically reloaded into your quiver as soon as the ammo

you're currently using runs out.
Note that you can place ammo in your inventory in the desired
order for reloading by dropping it/picking it up again!

The !L inscription also works for boomerangs (eg in case your
boomerang drops to the floor instead of returning to you).

Last but not least it also works on any kind of weapons,
specifically useful for throwing weapons, but also to recover
faster from disarming attacks if your weapon dropped to the
ground. Just inscribe it !L= for auto-pickup and auto-equip.
Note that !L only works when picking up an item from the floor!

Slings/sling ammunition and boomerangs:
    !R   Prevents ricochetting.
    !O   Allows ricochetting against sleeping/charmed monsters.
                Has no effect if 'Sling-mastery' is lower than 25.000 or
                respectively if 'Boomerang-mastery' is lower than 30.000,
                as the character is not able to control ricochetting well
                enough at lower skill levels to actually have a choice.

Scrolls/spell books of Identify (except for bag-ID), Rods/Staves of Perception:
    !X[n]   If you pick up an unidentified item, you will automatically
                read a scroll to identify it.
                This inscription also works on 'The Stone of Lore'.
                It does not work for Arcane Lore, since that is purely a bag ID
                spell.
                Note that the !X inscription only makes one attempt each time
                you pick up an item. That means if you use means that can fail,
                such as spells or magic devices, and you do fail, there will be
                no automatic retry, you will have to ID it manually.
                An optional number can be specified after the "!X" to restrict
                which items will be identified:
                 0: Only ID flavoured items.
                 1: Never ID flavoured items.
                Eg: !X0
                See (5.7) for more information about identification.

Gift wrappings:
    !$<amount> Wraps an amount of gold pieces instead of an item, when
                you activate the gift wrapping. Eg: '!$100'.

Bags (subinventory):
    !A[0|1]   !A : Do not auto-stow items into this bag.
                !A0 : Except if they stack with existing items.
                !A1 : Except if they are similar(*) to existing items.

    !O[0|1]   !O : Do not auto-stow unowned items (ie new loot) in this bag.
                !O0 : Except if they stack with existing items.
                !O1 : Except if they are similar(*) to existing items.

    !S[0|1]   !S : Only auto-stow items in this bag when buying from store.
                !S0 : And only if they stack with existing items.
                !S1 : And only if they are similar(*) to existing items.

    (*) 'Similar' just means they can stack with the item, but there might not
        be enough space to get fully absorbed into the existing stack.
        So only part of the items may stack and the rest or even all of it has
        to be placed into a fresh, empty bag slot.

    Also see !S inscription for items, which prevents auto-stowing an item.

Any item in your inventory:

    !G[n]   Prevents an item from stacking with other items in any case.
                 If an optional number n is given, it will stack items up to
                 this stack size, at most 99. Usage examples: !G or !G34 .
                 If 'n' is specified, the inventory slot letter will change to
                 yellow colour if the current stack size is lower than 'n'.
                 If picking up items that are inscribed !Gn and matching items
                 in your inventory are also inscribed !Gn then the lower n value
                 of the two is used. n must be at least 1 or it is same as !G.
                 If picking up a pile of items that exceeds the n value of a
                 matching stack in your inventory, then only the fitting amount
                 to saturate your inventory stack is picked up and the rest of
                 the pile will remain on the ground. So after that if you press
                 'g' again to pick up the rest...
                 If you pick up a pile of items when a matching stack in your
                 inventory is already fully saturated, then the pile (or single
                 item, whatever) is placed into a new inventory slot.
                 This inscription works with picking up items from the floor,
                 purchasing items from a store, stealing items from a store and
                 taking items from a list house (shop-style house).

                 If you purchase an item or get an item from a house or from the
                 floor, and the item has either a !Gn inscription or it has no
                 inscription but you have a matching !Gn inscription in your
                 auto-inscriptions list, the "Quantity?" prompt will suggest
                 that !G-amount as default quantity that you can simply confirm
                 with RETURN key (while a/spacebar are still 'all' as usual).

                 QoL effects:
                 You can use force-stack to combine !G stacks, overriding the
                 inscription.
                 When dropping/selling items from a !G stack which exceeds its
                 nominal capacity, the suggested default amount will be exactly
                 the difference between actual stack size and inscription-based
                 capacity.
                 If you use CTRL+G on a !G stack, it will pick up the whole
                 stack instead of trying to limit the target slot stack size.

    !K[n]   Inscribed on an inventory item, will auto-destroy any further
                 items you acquire beyond the amount of n.
                 If n is omitted, the default value of 15 will be used.
                 Use this mainly for empty bottles, especially in conjunction
                 with the 'keep_bottle' option enabled, to prevent uncontrolled
                 amassment of empty bottles. Example: !K10
                 (This inscription does not work on artifacts or ego items.)

    !%   This will not actually be inscribed. The item will keep
                 its current inscription (or remain uninscribed if it was).
                 Instead, the item's discount will be set to 100%, making
                 it unsalable to NPC stores permanently.

    !p   Force using this item for the 'Apply Poison' fighting technique
                 where the inscribed item must be a potion or mushroom and will
                 be destroyed in the process, whether it works or not.

Some examples for inscriptions to use with macros:
  An item that can be activated:
  Eg: @A1   Pressing the keys 'A' and then '1' will activate that item.

  A potion:
  Eg: @q3   Pressing 'q' then '3' will quaff that potion.

```
  A magic scroll:
  Eg:  @r0      Pressing the keys 'r' and '0' will read that scroll.

etc.. you get the idea. :)


There is also a special variant of the tag-macro inscription, when you have
only one type of item you want to use for a specific action, for example
refilling your torch from a stack of spare torches in your inventory:
  @<commandkey>%

When you press the <commandkey>, This macro will not prompt for an item but
immediately use the inscribed item for the action.
Example for refilling your equipped torch with torches in your inventory,
inscribe the torches in your inventory:
  @F%

Now if you press F (that is Shift+F) to refill torch, you will not get prompted
but one of the inscribed torches is automatically used for the macro.
The same macro works for oil flasks too, to refill a lantern.

Note that if you make a macro for an item inscribed with '%' shortcut that you
will end up with a pending inventory prompt if you are out of items, even if
you have safe_macros enabled, as the macro system cannot know that you intended
to not enter an actual item!
In this case as a workaround to clear the inventory prompt in case you are out
of items to use with the macro, you can add an '\e' (ESC) to the macro, eg:
 For refilling light:  \e)F\e
 For using a staff:    \e)u\e
 etc...


You can also inscribe items just to remember their abilities. For example
if you find an armour that is an artifact, and you found out it resists
fire and acid, you might inscribe it {ResFire,ResAcid} so that you will
remember what it does just by looking at it and reading the inscription.
It can make your life easier if you wear lots of items that have different
resistances or abilities. A shortcut is the...

Item power inscription (added in 4.7.1):
    @@          Will automatically inscribe an item with codes representing its
                special powers. Only works with *identified* items.
                Can also be used on custom spell books. If used on handbooks or
                tomes however, it works like @@@, shortening the spell names.
    @@@         Redux version. Omits infra-vision, searching, and mods that
                are obvious because they can only come from base item type
                (disarm, digging, luck), light radius, slays and brands except
                for kill-flags, partial ESPs, trap kits' eligible enemy type.
                Can also be used on custom spell books, will shorten the names.
                Will also shorten explosion-type names on exploding ammunition.

    Resulting inscription details:
    _S              sustain stat (S/I/W/D/C/H, where H is cHarisma)
    +S              increase stat
    ^S              increase and sustain stat
    -S              decrease stat
    Xm/Xs           extra might/extra shots (ranged weapons)
    HP/MP           +hit points/+mana
    Spd/Att/Crt/Stl +speed/+extra attacks/+critical hits/+stealth
    Src/IV/Dsr/Dig/Lu +searching/+infra-vision/+disarm/+digging/+luck
    Eq/Cht/Va/Vo    earthquakes/chaotic/vampiric/vorpal
    *F/C/E/A/P/W/N* immunity to an element (fire,cold,electricity,acid,
```

```
                    poison,water,nether)
    Base               resistance to the four base elements (same as 'fcea')
    f/c/e/a            resistance to a base element (fire,cold,electricity,acid)
     Resistances to high elements:
    Po/Wa/Nt/Nx/Ca/Di poison/water/nether/nexus/chaos/disenchantment
    So/Sh/Lt/Dk/Ti/Ma sound/shards/light/darkness/time/mana
     Further resistances:
    Bl/Cf/RT/FA/HL/Fe blindness/confusion/teleport/free action/hold life/fear
     Other flags:
    SI/Lv/FF/SD        see invisible/levitation/feather falling/slow digestion
    Rg/Rgm             regenerate hit points/regenerate mana
    Refl/Inv/AM/Bless  reflection/invisibility/anti-magic shell/Blessed
    ID                 auto-ID
    Climb/Swim/Wraith  climbing/swimming/wraithform
    *Auto*/Auto        (fully) automatic trap kit
    <D>/<U>/<a>/<W>/<Evil>
                       trapkit's eligible target monster type:
                       Dragon, demon, animal, undead, evil.
    Wf                 trapkit can harm wraithform (PASS_WALL) enemies
    Tt                 trapkit casts teleport-to-player on enemies
    AF/C/E             aura of fire/cold/electricity
    BF/C/E/A/P         brand of fire/cold/electricity/acid/poison
    +oTPaWUDEvil       slay orc/troll/giant/animal/undead/demon/dragon/evil
    *WUD               kill undead/demon/dragon
    ~oTPaWUDEvil       ESP orc/troll/giant/animal/undead/demon/dragon/evil
     SDRAgUni           spider/dragonrider/good('A')/nonliving('g')/unique
    ESP                telepathy (full ESP)
    Tele/NT            induces random teleportation/allows no teleportation
                       Note: No-Tele always overrides teleportation (except for
                       Zu-Aon), so if you have both these flags, No-Tele will
                       "win" and you will not teleport.
    Dr/Drm/Drx/Aggr    drains hp/mana/experience / aggravates
    Exploding ammunition will have its explosion type added in parentheses.
```

If you want an inscription starting on @ to follow a @@ inscription, add a
space or some other character as separator in between, to avoid it being
wrongly treated as @@@ inscription. For example like this:
```
    "@@ @S" or "@@-@x0"
```


Word of Recall, provided by items (scrolls and rods) or spells:

'Word of Recall' is far-distance teleportation magic that is used to either
travel into or out of a dungeon or across the world map.

When initiated, it will usually display this message in orange:
'The air about you becomes charged...' - or similar, depending on the exact way
the recall magic is initiated.
However, it will not recall you immediately. Rather it will take a short amount
of time until recall actually kicks in.
Before that happens it is possible to cancel the pending recall magic again by
initiating another recall (eg reading another scroll of 'word of recall').
Again an orange message will inform you about the recall spell being cancelled:
'A tension leaves the air around you...' - or similar.
In special circumstances recall magic cannot be used at all, resulting in an
orange message again, that goes similar to this:
'There is some static discharge in the air around you, but nothing happens.'

If you use these without inscription, they will just teleport you back into the
dungeon you came from, to the deepest possible floor. If you use them on the
world surface without inscription and there is no dungeon at your location that
you have previously visited, they will instead teleport you back to the last

town you visited.
    Travel into a dungeon/tower:
    @R500   will teleport you to depth 500ft (tower).
    @R-350   will teleport you to depth -350ft (dungeon).

    World travel:
    @RW32,32   will teleport you to sector 32,32 on the worldmap (Bree).
                 World map ranges from 0,0 to 63,63.

    or even better for any kind of recalling..
    @R   This inscription makes the above versions sort of obsolete.
                 If you have inscribed a Word of Recall item like this then you
                 can just type the command   /rec   into chat to invoke
                 the Word of Recall. Examples replacing above inscriptions:
                 /rec 500
                 /rec -350   <- when option depth_in_feet is 'yes'.
                 /rec -7   <- when option depth_in_feet is 'no'.
                 /rec 32 32   <- notice: No komma between the coordinates!

    NOTES:
    1) You must've already been at that depth or deeper in order to teleport
       there via WoR! And you must have been alive, not dead (ie a ghost).
    2) In order to recall to a place on the world map, you need to have been
       there before, not while you were dead (ghost), but while you were
       alive! Temple priests actually won't revive ghosts either who have not
       been to this place alive previously. So don't try to travel to Gondolin
       as a ghost, the priest over there will reject you and you won't remember
       the place when you return and revive in Bree.
    3) You can recall either across the world map or into/out of a dungeon, but
       not both at once. So if you want to go from Bree into the Orc Cave, you
       need two scrolls, first to go from Bree to the Orc Cave entrance located
       on the world surface, second to teleport down into the Orc Caves.
    4) Note that Word of Recall has a maximum range when used to travel across
       the world map. So if you want to recall from town A to town B you might
       require more than one recall spell depending on the distance.
    5) If you cast another Word of Recall while you're still waiting for one to
       kick in, the effect will be cancelled! That way you can change your mind
       if you suddenly spot a monster you want to go and kill after you already
       read a scroll of WoR.
    6) After being recalled the player will receive 'stair GoI' (a temporary
       extra protection from taking damage) for a short amount of time, see
       (0.4) for details.

    EXAMPLE:
    A player is in Bree (32,32) and wants to recall to Orc Cave -300ft which we
    assume is located at (31,25) and he has already been there before, so he
    can use Word of Recall to get there. He has his WoR scrolls inscribed '@R'
    and now types the following chat commands in order:
        /rec 31 25
        (he waits until that kicked in and transported him to Orc Cave surface)
        /rec -300   or   /rec -6   depending on option 'depth_in_feet'.
        (this will bring him to the desired depth, from the surface).

(0.3a) The auto-inscription feature

Since it can be annoying to keep inscribing newly bought items again and again,
there is an auto-inscription feature which you can access with '&' key.
Remotely similar to the macro menu, a list of auto-inscriptions appears (which
by default is empty).

Press 'e' or press ENTER to edit the first auto-inscription. A cursor will

appear, allowing you to input a partial item name. For example type in
'of Healing' (without the quotes). Hit ENTER key to confirm. Now the cursor
will allow you to enter an inscription, a little bit further to the right on
the screen. For example type in '@q1' (again without the quotes) and confirm
with ENTER key again.

Now you have just set up an auto-inscription that will automatically inscribe
'@q1' whenever any item is added to your inventory which has a name containing
'of Healing', ie 'Potions of Healing'.

Note that auto-inscriptions are case-sensitive, and only the first one in the
list that actually matches an item is applied to it.

You can use '#' as wildcard in the search string (was '?' before v4.7.1a).
For example if you want to distinguish between Rod(s) of Healing and Potion(s)
of Healing, you can use 'Rod#Healing' and 'Potion#Healing' respectively.
So '#' stands for any number (including zero) or sequence of characters.
Wildcards cannot be used as prefix or suffix and not on their own, except for
the auto-pickup and auto-destroy features (see below).

This following paragraph about force-inscribing is deprecated since 4.8.0,
as instead of an '!' prefix force-inscribing will now be toggled via 'f' key
in the auto-inscriptions menu instead:
If you put an '!' as first character of a search string, it will force the
inscription to overwrite existing inscriptions always (otherwise it only
overwrites trivial inscriptions such as price discount tags).

Instead of relying on wild cards, you can also use regular expressions.
To make the game parse an inscription as regexp, prefix it with a '$', eg
"$drag.*mail".
If you use both '!' and '$', put the '!' first, eg: "!$drag.*mail".
Regexps are always parsed case-insensitively.

Auto-inscription files can be saved and will be loaded automatically in a
similar manner as macro files, if the filename matches your race, trait,
class or character name (compare (3.6), 'Loading macros automatically').
The only exception are form-name specific ins-files, these don't work.
However, the difference to macro-file loading is that only the most specific
inscriptions-file found will be loaded and the rest ignored! The order from
first aka most specific to least specific is:
 – <charactername>.ins
 – <class>.ins
 – <trait>.ins
 – <race>.ins
 – global.ins
(Earlier client versions actually tried to read all of these and merge them.
This has been abolished as it could place inscriptions in unintended order.)

To immediately apply an auto-inscription that you just added or modified,
use the /at command.

NOTE: In addition to this user-defined client-side auto-inscription list, there
      is also a server-side auto-inscription feature that can be enabled via
      client option 'auto_inscr_server'.
      This option will add a predefined set of auto-inscriptions that might be
      generally useful for all types of characters, see (2.5) for details.

By pressing 'a' you can toggle auto-pickup (green 'a'), auto-destroy (red 'A')
or just ignore (yellow 'i') features. These will actually allow specifying
a "#" wildcard on its own, which means that ALL items will be picked up or
destroyed or ignored and subsequent rules will be ignored accordingly.
(The sole '#' will not work for inscribing items, any inscription is ignored).

The client options 'auto_pickup' and 'auto_destroy' must be enabled for these
functions to work. This can also be done via slash commands '/apickup' (which
toggles auto_pickup option) and '/adestroy' (toggles auto_destroy option).
Instead of using a "#" wildcard-rule, you can also toggle the option
'destroy_all_unmatched' (which can also be toggled via '/daunmatched' slash
command), this option requires 'auto_destroy' option to be enabled.
Auto-destroying and auto-pickup do not trigger inside houses.

Should you decide to manually edit .ins files, make sure that a match string
must not exceed 54 characters and a tag string must not exceed 16 characters,
or 18 characters for client versions newer than 4.9.0c.

(0.4) Typical slang/abbreviations

Art   Artifact. Those can be 'Static arfifacts' from the a_info.txt
             file, also called 'True Arts'. Or they may be 'Randomly generated
             artifacts' also called 'Randarts'.
             In game you can press ˜ 6 to search for any static artifact.
             (See (8.4) for more info about spoiler files.)
             Winners who beat Morgoth, Lord of Darkness will usually not
             be able to use static artifacts, but rely on randarts instead.
             On winning, you might be able to keep your true artifacts, but they
             will time out at double speed (except for artifacts that have a
             native level of 100: The One Ring and the Power Dragon Scale Mail
             'Bladeturner') and if you ever drop one it will instantly vanish.
             There are a few exceptions: Winner-artifacts! These are meant to be
             used -only- by winners, and can be handled by them normally without
             disappearing.
             Depending on the server settings, fallen winners might also not be
             able to use static arts.
             See (5.9b) for more information about artifacts.

Auto-ID   A special ability of some items. If you equip an item that grants
             you 'Auto-ID' all items you touch will automatically be
             identified! Items who grant their wielder Auto-Identification are
             highly sought after. Randart helmets or gloves sometimes have it.
             See (5.7) for more information about identification.

BD   Barrow-Downs. The main starter dungeon in the town of Bree, located
             to the far left of the town.

BM   Black Market (Store '7').

BpR/SpR   Blows per round, shots per round. The number of attacks you get
             in melee (BpR) or with your ranged weapon (SpR).

             For melee characters BpR depends on weapon skills, magic buffs and
             items that give you 'Extra Attacks' and (unless you use Martial
             Arts) on your weapon weight vs your STR and DEX stats.
             You should pick the recommend STR/DEX values on character creation
             to ensure that you start with at least 2 BpR and if possible buy a
             lighter weapon right away to upgrade your BpR from 2 to 3.

             For martial arts or ranged weapons, STR and DEX stats (or any other
             stats) have no effect on BpR or SpR respectively.

bpval   Base pval, aka item enchantment stemming from the base item type,
             independant of any ego or artifact powers, granting stat boni.
             Also see 'pval' and for details (6.3).

Cheeze	Questionable action, not quite cheating but close to it. This can be transferring items from a high-level character to a low-level character to boost him and trivialize the beginning phase of the game for him. This is perfectly legal though, it's just "cheezy". Or it could be exploiting weaknesses in the game design instead of reporting them to the forum (which could have certain repercussions depending on the severity or if it's already going into "Cheating" territory).
Clairy	Nickname for clairvoyance/enlightenment spells that map and light the complete floor.
DEW	Dark-elven warlock. A very deadly monster that comes in packs and shoots high-damage mana bolts, glass cannon style.
Dive	A trip into the dungeon, usually quite deep compared to the diver's character level.
DS	Disruption shield. A must-have spell for istari (mages).
DSM	Dragon Scale Mail. Legendary pieces of armour, that actually has neutral water buoyancy. When mentioned, its meaning usually includes Dracolich Bone Armour, which works exactly the same.
Excellents	Items that pseudo-identified as 'excellent'.
EA	Extra Attacks. Rings, gloves or weapons which increase your number of blows per round (BpR) with melee weapons. Quite expensive.
EL	Everlasting. This refers to the character mode that the player chooses during character creation. For details see (3.1).
EoS	Essence of Speed, a haste spell in the temporal school.
ES	Elemental Shield, a multi-school-spanning protective spell.
ESP	Extrasensory perception. ESP is a telepathic power that allows you to sense monsters even though they aren't in your line of sight but far away. This is tremendously useful as you know what monsters are lurking on the dungeon floor and where they are, so you won't run into nasty surprises – except you cannot ESP monsters that don't have a mind! And there might be special monsters that can cloak their mind, also preventing detection. Monster flags regarding ESP are EMPTY_MIND (the monster does not have a mind) and WEIRD_MIND (the monster will flicker on ESP). ESP powers can vary, from full telepathy (seeing all monsters that have a mind) to partial ESP that only detects specific kinds of monsters, such are: Animals, Spiders, Orcs, Trolls, Giants, Dragonriders, Undead (most lesser undead are mindless though and therefore undetectable by ESP), Demons, Dragons (includes Dragonriders), Good (all monsters that have the 'GOOD' flag), Evil (all monsters that have the 'EVIL' flag, which is quite a lot), Non-living (most of these don't have a mind though), Unique monsters. In the early game, obtaining ESP-Evil, often from a weapon of *slay evil*, is already a huge help, as it will cover a lot of monsters. ESP can be gained by magic or by items, typical items are: – Crowns of telepathy (full ESP, 'It gives telepathic powers.') – Weapons of *Slay Evil*, Aman, or Gondolin (ESP evil)

          – Weapons of Westernesse (ESP orcs/trolls/giants)
          – Dwarven Helmets (ESP dragons, rolls)
          – Weapons of *Slay Troll* (ESP trolls)
          The lower three are mainly listed for their troll-detection. While
          trolls are not a major threat, the ESP can be utilized for finding
          troll pits! These usually yield major amounts of experience in the
          early gameplay. Typically, the player would enter a dungeon floor
          and use Shift+L (CTRL+W for Roguelike key set) to scan the whole
          floor for a possible troll pit.

          Note that the rogue ability 'Cloaking' overrides ESP, so a cloaked
          target cannot be spotted by ESP.

FA   Free Action (immunity to paralysis).

FF   1) Feather falling.
          2) Fireflash. A holy-fire spell, good against evil creatures.

GoI   Globe of invulnerability. This only exists as 'Stair GoI', see
          further below.

Gorth   Room in the dungeon, divided into 4 chambers, similar to a pit.
          Also see 'Room', 'Pit' and (4.6).

GV   Greater Vault. (See (4.6))

GCV   Greater Checkerboard Vault (looks remotely like a checkerboard).

Haste   Any kind of speed spell, can be a player or monster spell.

HP   Hit points, the amount of damage your character can take before it
          dies. Actually you are still alive at 0 HP. Death occurs when you
          drop below 0.
          The starter HP are different for each race and class and can be
          viewed in the tables in chapters (7.4) and (7.5) respectively;
          quick-access these tables by searching the guide for chapter key
          words (or "/?" command) "race tab" and "class tab" respectively.

ID   Identify and *Identify* magic respectively, which is used to
ID   reveal magic properties of unknown items. Scrolls of ID can be
          bought in store 5.
          See (5.7) for more information about identification.

Iron Team A special type of party which can only be formed with newly
          created characters. Its members only gain experience if all
          members are online and on the same dungeon level.
          Also, members can only trade items and money with other members,
          or you will get the message "you cannot take items from outsiders."
          (same message as appears for IDDC trading restrictions actually).
          The owner can decide to 'close' an iron team in the party menu,
          which will permanently disallow addition of any further members.

Ironman   This typically describes a gameplay scenario where you cannot
          resurrect so death is permanent and often also where you cannot
          turn back and return to town either.
          There are basically 3 types of 'Ironman' in TomeNET:
          1) The Ironman server in the server list. You can return to towns
            here though. For details about its special ruleset see (9.6).
          2) The normal TomeNET server has a few Ironman dungeons too, which
            are just dubbed 'Wilderness' in the dungeon list when found.
            These dungeons can only be traversed one-way. To leave them you
            must reach the final floor and then use 'word of recall' there.

There is one 'named' Ironman dungeon: 'The Halls of Mandos',
which goes from level 1 to 100 and as a specialy (no other
dungeon has this restriction) has no unique monsters in it.
3) The IDDC dungeon (both, normal server and Ironman server
actually have one of these each): 'Ironman Deep Dive Challenge'.
In this dungeon, death is permanent and you cannot leave except
under a few specific exceptions. Special trade rules apply too.
This dungeon is recommended if you want to have an epic Ironman
diving experience, be it solo or in a party.
For details about its ruleset see (4.13).

Kinging   The process of beating Morgoth, the game boss, and thereby
acquiring a royal title (king/queen/emperor/empress).
Such player characters are also referred to as 'winners'.
A player must be at least level 40 to get credit for beating
Morgoth.

klevel, olevel
Somewhat more technical terms, these stand for the exact type of
item level that is meant in a certain context:
k-level is the 'object kind level', which is given in k_info.txt.
This is the object's base level and describes from which minimum
dungeon floor level or minimum monster level you can expect to
start getting that item type.
The o-level is the 'real' object level that you'll see on an item
you pick up. This can vary from the klev, depending on the dungeon
floor depth and monster level you got the item from.
Example: According to k_info.txt an Amulet of the Serpents has a
klev of 25, so you can expect to start seeing this drop on dungeon
level 25 (1250ft) or from level 25 monsters respectively. However,
when you find such an amulet on say a dungeon floor at 4000ft,
which equals dungeon level 80, an actual amulet you find might have
a level requirement (olev) of 30.
(Note: This is similar to mlevel vs rlevel for monsters.)

Loot   Items that have been dropped by dead monsters or players and
are waiting to be picked up by someone. :)

LV   Lesser Vault. (See (4.6))

mlevel, rlevel
Somewhat more technical terms, these stand for the exact type of
monster level that is meant in a certain context:
m-level is the 'real' monster level that you'll also see when you
have your character look at it. This level may actually be boosted
and therefore be higher than you'd expect. This happens when you
meet the monster on a floor that is far deeper than the level the
monster usually starts to occur on.
r-level is the base monster level (race level), which you can see
in game if you press ~ 7 and search for a particular monster.
It describes the minimum floor level a monster is usually found on
(although 'out-of-depth' occurances may be possible).

Example: According to ~7, Ancient Red Dragons have a base level of
41. That means you'll usually start seeing them on dungeon floors
of level 41 (2050 ft) and deeper, although there's always a slim
chance that you meet a monster earlier than its base level (called
OoD encounter, "Out of Depth").
So we know now that the r-level of Ancient Red Dragons is 41.
However, if you meet an Ancient Red Dragon on a much deeper dungeon
floor, say 2450 ft, which would be the equivalent to level 49, when
you look at the dragon you'll see it says level 42 instead of the

expected 41. This means the dragon's level was actually slightly
boosted because the dungeon floor's level was that much higher than
the dragon's. So while the rlev of this dragon is still 41, its
real level, the mlev, is 42.

Monsters that are on dungeon floors 8 levels or higher above their
base level will get an increase in levels of +1 for every 3 floors,
so +1 level at 8 dungeon levels above their r-level, +2 at 11,
+3 at 14 etc..
Monsters randomly gain hit points, speed, AC or damage dice/sides
for their melee attacks on each level-up. To find out in what way a
particular monster has been boosted you can use a rod of probing.

Some formulae used by the game use mlev, some use rlev.
(Note: This is similar to klevel vs olevel for items.)

Morgy   Morgoth, Lord of Darkness. Final boss enemy in TomeNET.
            See (1.3) for details.

MP   Mana points, the amount of magical energy you have at your disposal
            to cast spells or recite prayers.
            A class that cannot use any spells will '-' displayed instead of a
            numerical amount.
            The starter MP are different for each race and class and can be
            viewed in the tables in chapters (7.4) and (7.5) respectively;
            quick-access these tables by searching the guide for chapter key
            words (or "/?" command) "race tab" and "class tab" respectively.
            For an overview of all spells and prayers, see (7.8).

Nazgul weapon or RW weapon
            An artifact weapon that doesn't really excel, but since it's an
            artifact it can still be put to good use as a weapon for killing
            Nazgul (the nine ringwraiths, see (1.3a)).
            Since Nazgul still have a 1 in 1000 chance to destroy an artifact
            weapon on hit, you don't want to put your best weapons at risk.
            So using a mediocre artifact instead that you'd otherwise just sell
            to a store seems like a good idea, since it won't be much of a loss
            if it breaks, and it will usually still get the job done as long as
            its weapon class fits the type of your trained mastery skill.

Nest   Originally also just called 'pits', nests only differ from pits in
            the monsters in them being strewn around in a randomly mixed manner
            while pits contain 'organized' rings and circles of monsters.
            The monsters in a nest are not completely random but follow certain
            schemes. For example all monsters in a 'clones nest' are exactly
            the same type. Also see 'pits'.

non-EL   Not Everlasting. This refers to the character mode that the player
            chooses during character creation. For details see (3.1).

OC   The Orc Caves. A very commonly sought dungeon which is usually
            entered soon after having roamed Barrow-Downs a bit, or by some
            more daring adventurers even right away as their first dungeon.

olevel   see klevel.

OoD   1) Out-of-depth. Means a monster or an item encounter that happened
            at a surprisingly shallow level, opposed to the base level for that
            monster (shown in ~7) or item (given in k_info.txt) where
            you would usually start expecting to find it.
            Vaults often containing OoD monsters and items, increasing threat
            and reward for the brave.

Note: OoD is limited to at most +40 levels (happens in high-level
                    vaults); unique monsters can actually only be up to 20 levels OoD
                    (even in vaults) and, as a specialty, Great Wyrms of Power can only
                    ever occur up to 10 levels OoD.

                    2) Orb of Draining. A powerful holy spell, especially against evil.

Party   A group of players who fight together and share experience.
                In a party you will share experience points if you are within 7
                character levels to each other and on the same dungeon/tower level
                respectively the same worldmap/wilderness sector.
                You can invoke the party menu with shift+p key. See (7.9).

Pit   Pits contain monsters of a certain type, for example 'demon pits'
                or 'orc pits', with the monsters in them being placed in a somewhat
                'organized' manner of rings and circles. Also see 'Nest' or 'Room'.
                Pits are often confused with special rooms. See (4.6) for details.

Post-King   The life of a character within the level range above level 50.
Pre-King   The life of a character within the level range 1 to 50.

Prob   Probability Travel. A magic spell for fast movement over obstacles
Probtravel   as well as floating upwards or downwards.

Pseudo-ID   If a player keeps an unidentified item for a longer time he might
                'feel' if the item is average, good, cursed or special. The item
                will automatically receive a 'pseudo-ID inscription' then.
                Pseudo-ID intensity and speed depend on various skills in regards
                to the type of item: 'Combat', 'Archery', 'Magic' or 'Trapping'.
                It does not matter whether the player is acting, afk or idle.
                The feeling does not necessarily mean that the item is "good for
                the player's character" but simply refers to the value of the item
                ie when it's sold to shops or bought from them. So some 'good'
                items might even have undesired effects on the character.
                See (5.7) for more information about identification.

pval   Item enchantment stemming from either ego powers or artifact
                powers granting stat boni. Also see 'bpval' and for details (6.3).

PvE   Player vs environment. This is the main game style of TomeNET:
                You fight against the computer-controlled environment, usually not
                against any fellow players. Instead, cooperative gameplay is very
                rewarding.

PvP   Player vs player. Describes the act of player characters fighting
                each other. If you want to fight other players to death, create a
                new 'PvP mode' character. It's an option during the character
                creation process, much like 'everlasting mode' or 'normal mode'.
                For more information about pvp mode, see (7.13).
                Any player characters can have a friendly pvp-duel without any
                consequences by utilizing scrolls of blood bond (see (5.9)).

Randart   Randomly generated artifact. As opposed to 'Truearts' which are
 Randy   also called 'Static arts' from the file a_info.txt (you can search
                static arts by pressing ~ 6 in game). See 'Art' at the top of
                this section for more information.
                See (5.9b) for more information about artifacts.

RC   Remove Curses and *Remove Curses* (for heavy curses) respectively.
RC   Available as scrolls or spells.

Rekinging   Fallen winners, ie players who beat Morgoth but later on died and

thereby lost their royal title again, can attempt to regain it by
teaming up with someone who has not yet defeated Morgoth.
The player who has NOT yet killed Morgoth (check ˜ 3 b to verify)
has to land the final killing blow! Then everyone in her/his party
on the same floor will gain winner status again, even fallen kings.
A player must be at least level 40 to get credit for beating
Morgoth.
A new (experimental) way to obtain a lost royal title again is to
donate and pray in 'The Mirror' in Lothlorien, see (4.5a) for
details. (Also see 'kinging'.)

Res   1) Resistance. Will reduce damage and/or prevent status effects
             from a particular element when hit by it.

             2) Resurrection. A spell to revive player ghosts, also available
             as 'Scroll of Life' or temple service in town.

RFE   A request for enhancement, ie a suggestion, that players can send
             to the game admins using the "/rfe" command.

RLL   Restore Life Levels. A potion (can be bought in the temple) or
             magic that will restore drained experience points. (If drained xp
             can be restored this will be indicated by a yellow XP bar/value).

rlevel   See mlevel.

Room   The dungeon contains many rooms connected by passages. Some of the
             rooms are of special shape. Especially rooms containing a further,
             inner room similarly to pits are thereby often confused with those,
             mostly 'Gorths' (rooms divided into four chambers containing a
             lot of monsters), 'Checkerboard-Rooms' (rooms containing a
             checkerboard-like maze structure and a lot of monsters).

RoP   Ring of Power. While these also includes the true artifact rings of
             power, this expression is usually only used to refer to the randart
             rings of power that are dropped by Nazgul (level 0, ie soulbound).
             See (1.3a) for more information on Nazgul and their rings.

Scumming   Repeatedly using staircases up/downwards to make a level become
             recreated. Usually in hope of finding a specific monster on that
             depth. ('I scum 450..500 ft for Wormy'.)
             Use 'locate' (SHIFT+L or CTRL+W depending on key set) to quickly
             'scan' the floor for your desired monsters, provided you have the
             required type of ESP to see them.

SI   See invisible. (See (5.14) for details about invisibility.)

Specials   Items that pseudo-identify as 'special'. These are true arts or
             randarts.

ST   Stamina, which you can spend to use certain special techniques that
             are usually either fighting techniques (close combat) or shooting
             techniques (ranged combat), see (7.12) for a complete list.
             A class that cannot use any techniques will '-' displayed instead
             of a numerical amount.
             Maximum stamina is always 10, its regeneration is slow. It can be
             sped up by resting (SHIFT+R), and by having a higher Constitution
             attribute (CON) or by training the 'Health' skill.

Static   A level that is static will not change if you leave it but stay
             the same, permanently until it is unstaticed.
             All levels remain static for a short period of time after the

last player leaves them to prevent scumming.
Also, levels remain static if a player ghost-died (meaning he died
ultimatively without possibility of resurrection) for a longer
while depending on the dungeon level, see (3.11) for details about
static-by-death levels.

Static Art See 'Art' at the top of this section.

Stair GoI Stair-GoI is a very short-lasting globe of semi-invulnerability
(3 turns), 'GoI' meaning 'Globe of Invulnerability'.
It is a magical protection effect that any player who takes a
staircase up or down or uses Word of Recall will automatically
receive:
A temporary buff of +100 armour class and 40% chance to deflect
any attacks that hit him. Attacks that aren't deflected still get
their damage halved.
When an attack is deflected, you get a message saying:
"The attack is fully deflected by a magic shield."

True Art See 'Art' at the top of this section. Synonymous with 'Static Art'.

TT The Training Tower. The easiest (but also smallest and least
rewarding) dungeon in the game, located right in Bree, along the
south-eastern path away from the Inn.

Unique A monster that is named and exists only once. Although it can
respawn for another player who hasn't defeated it yet, each player
will receive loot only once from it. So if you engage a unique
monster while playing together with a team mate, check if you have
already killed it and if so let your team mate inflict the killing
blow, so he will get the kill credited and the monster will drop
loot accordingly.
To verify whether you have already killed a unique, you may..
-check the unique monster list in '~' menu.
-'l'ook at the monster, the name will be shown in dark grey if you
 already got kill credit for it.
-watch the damage messages when you attack it, they will be shown
 in dark grey if you already killed it.
-turn on the option 'unique_kill_credit' in '=' menu: It will beep
 if you hit a unique monster that you have already killed.
It is good etiquette that you don't touch the (inscribed) loot a
unique monster drops if it wasn't you who killed it in the end.
That's precisely because every player can only get kill credit for
each unique monster once.
(Killing a unique monster that you already got credited will still
grant you 10% of the normal amount of XP.)
Uniques often have large escorts.

Note that a unique monster cannot occur in two or more different
places in the whole game world at the _same time_ - with the only
exception being the IDDC (Ironman Deep Dive Challenge) which is a
closed ecosystem and has unique monsters spawn independently from
the rest of the game world.
So if you are desperately looking for a unique monster and can't
seem to make it spawn, ask in chat if someone else sees that
particular monster on his current dungeon level. Then wait till
they have left that level or killed the unique so it will be ready
to spawn again for you, or maybe they will tell you that you can
come over to kill it there in place.

Unique monsters will randomly respawn for winners, ie Kings,
Queens, Emperors and Empresses. That means: The game will "forget"

that you already defeated them, allowing you to defeat them once
                    more. There are some exceptions though, the following monsters
                    will never respawn: All dungeon bosses, te Nazgul, Sauron, Michael,
                    Morgoth, and all super-uniques that come after Morgoth, starting
                    with Tik'srvzllat.

                    This respawning happens (albeit very slowly) while you are logged
                    on with your winner character, except while you're in town or in
                    the area around a town (housing zone). When a unique monster
                    respawns for you, you will see a purple message:
                    "XYZ rises from the dead!" where XYZ is the unique monster name.
                    The higher level a unique is the less frequently will it respawn.

    WoR   Word of Recall (teleports you into the dungeon and back or on the
                    world map). See "(0.3) Important inscriptions, Word of Recall" for
                    more info.

    Wormy   Wormtongue, Agent of Saruman. He drops great items.

    (0.5) Some tips and warnings (READ!)

    -To report a bug use the /bug command in the game. It allows you to type a line
     of text to explain the bug or problem you encountered. You can use the /bug
     command multiple times if one line is not sufficient for the amount of text
     you want to write.
     Alternatively, you can use the bug report section of the official forum at
     www.tomenet.eu.
     Please DO NOT write bugs in chat in the game.

    -If you have a suggestion, use the /rfe command instead. It's used the same way
     as the /bug command (see above).
     Alternatively, use the forum at www.tomenet.eu.

    -Starting at version 4.4.5, TomeNET supports audio, that is, sound effects and
     background music. To find out more, read (2.2).

    -Usually characters expire (that means they are automatically deleted!)
     after 366 days of inactivity. Empty accounts (ie accounts that don't hold any
     characters) usually expire after 62 days.

    -Items on the ground (especially in towns) often disappear automatically after
     a while (usually 10-20 minutes for towns and wilderness, depending on server
     settings).
     So don't use the town or the wilderness to 'store' loot.
     If you don't own any houses, you can use public houses that are accessible to
     everyone. Risk is of course that someone takes your items.
     True artifacts dropped outside of towns will usually vanish instantly the
     moment you leave the sector!

    -If you press CTRL+Q to save&exit the game, you should do that in a safe town.
     Dungeons might change while you are logged off, and the next time you log on
     you might find yourself in a nasty place if unlucky.
     Another problem is that if you don't leave in a town (or the housing area
     around a town), your character will stay for another 20-30 seconds in the game
     before it finally disappears from the dungeon (or world surface)! If monsters
     were around, you might get killed easily during that time.

    -The items you find don't depend on your race or class but on monster level
     and depth and luck.

-Don't drop artifacts inside houses if the server doesn't allow artifacts to
 be dropped inside player houses, or you will simply lose the artifact!

-Items on the floor within a house don't form piles! If you drop too many
 items and space in the house runs out the dropped item may just disappear!

-The massive iron crown of Morgoth must not be worn by non-Kings/Queens!
 Wearing it otherwise will kill you in a mighty blast.

-Some special shops' features may currently not be available.

-Some monster abilities are currently not available/implemented:
 BO_POIS, HAND_DOOM, RAISE_DEAD.

-Some item abilities are currently not available/implemented:
 LEVELS.

-Monsters that pick up an item have a 30% chance to NOT drop it again on death.

-The dungeon floor/world sector you are in, be it on the world surface, in town
 or in the dungeon, has a chance of slowly spawning new monsters over time.
 Those will always be awake.
 The rules are the same as for when a dungeon level gets generated:
 Everything that fits the dungeon's theme (if any) is allowed, the monster
 level might occasionally spike out-of-depth, up to 40 levels above the floor
 level. This can be especially nasty because these spawns will not change the
 floor feeling, so you won't notice it except when you spot the monster.

-Team mates trying to move into each other will switch places. This can be used
 to pull your team mate across terrain they actually cannot cross on their own,
 as long as you can cross it!

-No, there is currently no 'fishing' feature implemented.

(1) Introduction
================

(1.1) What is TomeNET? (Where can I get the latest sources?)

TomeNET is an online multiplayer rogue-like role-playing game, derived from
MAngband (Multiplayer-Angband). It's based on the stories of J.R.R. Tolkien
mainly, hence the name "the Troubles of Middle Earth" or alternatively also
spelled out "the Tales of Middle Earth".
The final goal in TomeNET is to destroy the fallen god Melkor who is known by
the name of Morgoth, Lord of Darkness. The official websites are mentioned in
the first couple of lines of this guide.
Note that ToME and TomeNET although both coming from similar roots are actually
quite different games that are maintained by different persons/teams.

If you want to download the source code, you can get it from www.tomenet.eu in
the download section or from our github repository at
 https://github.com/TomenetGame/tomenet
or just clone it via command-line git command to your pc like this:
 git clone https://github.com/TomenetGame/tomenet.git

(1.1a) Where do I get in contact?

Apart from downloading the game client and playing, you can also get in contact
with other players and developers via the following media:

```
-The forum at https://www.tomenet.eu/.
-IRC: Channel #tomenet on server irc.libera.chat (port 6667, or 6697 for TLS)
      (Official web site is https://libera.chat/ and info about
      Internet Relay Chat in general is at www.irchelp.org).
      The channel #tomenet relays chat from and to the game server, allowing
      you to read what's going on in-game, and to chat with players simply
      with any IRC client.
      See below (1.1b) for how to set up IRC chat in detail.
      See (0.2c) for commands you can send to the TomeNET IRC bot.
-Voice chat via mumble, get it from http://mumble.sourceforge.net/.
      IP is 'europe.tomenet.eu', port is '23348', password is 'tomenet'.
      For details see "(2.6) Installing voice chat".
-Discord (Text and voice channels, https://discord.com/ ).
      Server is "tomenet". Aside from the general channel there is a dedicated
      one for russian language chat and one for korean language chat.
      Follow this invite link to join: https://discord.gg/QGJw7fT
      In the chat-bridge channel on the TomeNET Discord server you can usually
      use IRC commands too (depends on the servers), see (0.2c) for details.


(1.1b) How to set up IRC chat
-----------------------------
If you are already familiar with IRC, just see (1.1a) above for the IRC specs,
otherwise read on here.

Easiest method is to just use the lightweight webclient provided on the
libera.chat website. Start your internet browser and enter this URL:
  https://web.libera.chat/?channels=#tomenet
You can change the predefined random 'guest' nick name to anything of your
choice provided it's not already reserved by someone else, then click 'Start'.
(The channel name "#tomenet" should have already been filled in for you.)

If you prefer to use a stand-alone IRC chat client instead of using a browser-
based chat, here are some suggestions:

Windows: Most popular client is probably mIRC.

Linux: Popular IRC clients for Linux are Pidgin (actually rather a multi-
       protocol messaging tool, pretty nifty), x-chat (GUI), Konversation (KDE
       GUI) or irssi (command-line).

Mac OS X: For example Colloquy, X-Chat Aqua or Linkinus.

After installing your preferred IRC chat client, enter an username of your
choice and set it up to connect to the "Libera" IRC network, see the Libera
website at https://libera.chat/ for info.
(For detailed help on Internet Relay Chat visit www.irchelp.org.)

After you established a connection to Libera, have your client join the
so-called "channel" (all chat channels on IRC networks are denoted by a
hashtag in front of them) named:

 #tomenet

Joining a channel will relay chat from and to the TomeNET server, allowing you
to read what's going on in-game, and to chat with the players.
(Note that not all kinds of messages are actually relayed, for example AFK
messages are not.)
See (0.2c) for commands you can send to the TomeNET IRC bot.

Usually all IRC clients offer a possibility to configure them to connect a
```

specific network (Libera) and to join specific channels (#tomenet etc.)
automatically on startup, so you don't have to do it manually each time you
start the IRC client.

Most clients also allow you to setup auto-reconnect, which is useful if you
experience frequent disconnections from the IRC network.

(1.2) What is a rogue-like game?

Rogue was a game basing only on alpha-numerical characters, like letters and
numbers. It didn't have any graphics. Thus it could run on basically every
simple computer. However it was not a text-adventure. Its game engine provides
a grid for turn-by-turn movement and combat that the user looks at from high
above. Here is a small "screenshot":

```
...............
...########....
...#$.....#....
...#..@...'....
...#......#....
...########.p..
...............
```

The @ is usually the player, the dots are empty fields. The # are walls. Here
the player seems to be inside a building. In the upper-left corner some money
is deposited. The ' is an open door. Outside of the building there is a p,
which is usually some townsfolk. They are not always friendly and some tend to
steal! Rogue was the first game of this kind, hence all games working with
similar graphics and game engine are called rogue-likes.
Other well-known rogue-likes are Nethack, Larn, Moria, Angband.

(1.2a) Where do I find more information about rogue-like games?

Links:
    http://www.thangorodrim.net/
Newsgroups:
    rec.games.roguelike.*

(1.3) Goal and progress of TomeNET players

The final goal that a brave adventurer could possible seek in TomeNET is to
become King respectively Queen. To acquire this he or she must destroy the
fallen god Melkor who is known by the name of Morgoth, Lord of Darkness.

Morgoth is said to reside deep within the dungeons at around 5000 feet down in
the earth. Getting there will be an extraordinary journey bearing unbelievable
dangers but also fantastic treasure. Players on the same server can also play
together by forming parties and sharing their experience! Players will acquire
new ranks as their experience grows, allowing them to learn new abilities and
to become stronger. Morgoth is said not to show up until his servant Sauron,
the Sorcerer has been defeated. (See (1.3a) for details about Morgoth.)

On their journey through wilderness and remote towns, towers and dungeons,
characters will gain experience points that increase their level up to 50.
After defeating Morgoth, they will be able to advance further up to level 99.

Players who defeat Morgoth, become 'winners' and get the title of King and
Queen respectively, or Emperor/Empress if their character is of unworldly or
hellish mode. A player must be at least level 40 to get credit for this.

When you win the game, an automatic chardump is generated in the "/lib/user"
folder on Linux/OSX clients or the "tomenet-user" folder on Windows clients,
called '<charname>-victory.txt' (see (9.2)) which you can view with any text
editor.
Also, a screenshot is made automatically in the same folder, displaying your
situation, saved to '<charname>-victory-screenshot.xhtml'.
(You can view xhtml files in most webbrowsers.)

Winners (Kings, Queens, Emperors, Empresses) can still continue playing the
game just like always, but they also gain access to additional features!
These are...
 - You can wear Morgoth's crown and wield Morgoth's hammer, if you choose to.
 - You can advance beyond character level 50, up to 99, the absolute maximum.
 - Two 'post-king' dungeons, Cloud Planes and The Nether Realm.
 - Find and use 'winner-only' items, these are super heavy armour pieces
   and shields, especially useful for tank-style characters, including a
   few true artifacts even. These will take especially long to time out.
 - Winners cannot find or pick up non-winner true artifacts anymore, although
   they may usually continue using those they already carry, albeit they will
   timeout at double speed, except for artifacts that have a native level
   of 100 (only The One Ring and the Power Dragon Scale Mail 'Bladeturner').
   Should a winner drop a true artifact, it will instantly vanish for good,
   exception again are special winner-artifacts, these can be handled normally
   without disappearing.
 - Depending on the server settings:
   Purchase a 'castle', that is, a house with a moat. These are usually
   especially big in size (and very expensive accordingly).
   Only one castle can be owned per character.
 - Party with other winners, requiring to be within 11 levels of each other
   instead of the usual 7 levels for non-winners.
   They no longer share experience with non-winners, but do share it within
   7 levels with fallen winners (ie players who defeated Morgoth but then died
   and thereby lost their royal title again).
   Winners can party with other winners free of any character level difference
   restrictions if they are all at least level 80.
 - Suiciding the character will turn into 'retirement' instead of 'suicide',
   effectively being the same as in the character is irreversibly erased.
 - Unique monsters the character has already killed will randomly and slowly
   respawn for him over time, except for Dungeon Bosses, Nazgul, and any
   monsters of or above level 98.
 - You can enter party houses that were set to 'winners-only' by the party
   owner :).
 - Martial Artists can learn royalty-exclusive fighting techniques, see (5.3a).
 - Characters who learn stances will learn the highest rank, dubbed royal rank
   of each stances.
 - Rogues learn a new fighting technique, Shadow Run.
 - Druids learn new forms at levels 55 and 60.
 - They can create randarts with +LIFE mod on it (or suppress creation by
   inscribing the scroll !L, also see (9.4).

(1.3a) Sauron, Morgoth and the Nazgul

Morgoth, Lord of Darkness commands nine Ring Wraiths, called 'Nazgul'.
These corrupted souls of former ring-wearers are named..
Uvatha the Horseman, Adunaphel the Quiet, Akhorahil the Blind,
Ren the Unclean, Ji Indur Dawndeath, Dwar Dog Lord of Waw, Hoarmurath of Dir,
Khamul the Black Easterling and The Witch-King of Angmar.
Morgoth has the ability to summon these, so you should destroy them all
before facing him.

About Nazgul:

A very dangerous thing about the Nazgul is that weapons get quickly destroyed
if they come in contact with these corrupted beings.
If you are a spell-caster who doesn't use his weapon to fight but just to
profit from its magical abilities then it's strongly recommended to inscribe
the weapon @Ox to avoid auto-retaliation, see (0.3) about inscriptions
and (4.1a) about auto-retaliation.
If you rely on melee weapons you must try to get your hands on an artifact
since these resist Nazgul greatly! The Stormbringer also resists like an
artifact. (It doesn't matter if the artifact is a random or a static one.)
If your weapon gets destroyed you'll receive a warning message:
"Your weapon *DISINTEGRATES*!" or "Your weapon is destroyed!"
(The permanently cursed weapon 'Mighty Hammer "Grond"' cannot be destroyed.
See (5.9b) for more information about artifacts.)

Your weapon itself will not damage the Nazgul if it doesn't have one of the
mods SLAY_EVIL, SLAY_UNDEAD or KILL_UNDEAD and if it isn't a Morgul weapon.
However, you will still be able to damage the Nazgul, if your raw to-dam
bonus is high enough. Enchantments from rings, gloves or other items and the
damage bonus from your skills and strength will be the only factors which
decide the damage you deal, in that case.
For weapons which damage dice and to-dam bonus will not be counted (ie non-
SLAY/KILL EVIL/UNDEAD or Morgul weapons) you'll see the message:
"The Ringwraith is IMPERVIOUS to the mundane weapon."
The same is true for Martial Arts, which style boni will be nullified if you
don't have one of the slay-undead/slay-evil flags.

Note: For weapon attacks, having those slay/kill mods on gloves (or other
      items) instead of the weapon does not help! They will not count.
      For martial arts/bare-handed attacks, having the slay flags on other
      items (for example gloves) WILL count!

      However - the 'slay undead' bonus received from Holy Offense school at a
      skill of 30.000 and likewise from Spirit school at 40.000 will infuse
      your weapon (and bare-handed combat too of course) and will make its dice
      and damage count again, as if the weapon itself had the slay mod!

Martial Arts users can fight relatively efficiently against Nazgul since they
don't have to worry about their weapon breaking, but their chance to receive
Black Breath is higher than for weapon users:

If you come in contact with a Nazgul or a very powerful undead creature there
is a chance that you will be infected by the Black Breath. This dark aura is
able to infect other players if you come too close to them. It will drain your
stats and permanently drain your experience. Slowly, but steadily. There are
several possibilities to cure Black Breath, such as eating a Sprig of Athelas,
asking another player for help who is able to command the required healing
magic, or -if everything else is not available- visiting the Earth-Dome in
Gondolin, where you can receive 'Herbal Healing' for a (somewhat high) price.
Players cannot infect other players with Black Breath if they are in Bree or in
the Training Tower, those are safe zones.
(For all details about Black Breath see (4.11a).)

Each Nazgul will drop a ring of power, which is a random artifact ring bearing
the Nazgul's name. These rings have a lot of random mods (ie abilities) and
will always provide invisibility (5.14) and experience drain (5.16). They are
also always heavily cursed, cannot be dropped while cursed, and can re-curse
themselves (5.12).

About Sauron:

In order to find Morgoth, players have to defeat Sauron, the Sorcerer first,
Morgoth's servant, who dwells at the bottom of Mount Doom. A player must get
the killing blow on Sauron to get kill credit, so if you are in a party of
several players who all haven't killed him yet, you must seek him out multiple
times for every single party member who then has to get the last hit to get the
kill credited.

It is noteworthy that Sauron is able to boost his own spell-casting speed for
as long as he finds himself or the area around his target blocked by Glyphs of
Warding (also called Runes of Protection).
Also, he might try to avoid going into melee range of players who he deems good
at close quarters combat. In general, do not underestimate Sauron's power!

About Morgoth:

Morgoth, the god of destruction, has reinforced his surroundings to be
especially devastating to all living beings:
If you get killed on a level where Morgoth, Lord of Darkness walks, your
ghost will be destroyed too, even if you are everlasting! Beware! Even after
Morgoth is no longer there the floor will still keep this deadly property.
You will get a floor feeling warning you whenever you enter a floor where
Morgoth resides, see (4.8).
Note that on a floor where Morgoth currently resides, all vaults will turn into
no-teleport vaults.

Morgoth is also able to summon other powerful unique beings, so one of your
tasks to prevail against him will be to kill off as many of the powerful unique
foes as you can before facing him, including of course all his Nazgul.

When a player lands the killing blow on Morgoth, everyone else who is in the
same party and on the dungeon floor where and when Morgoth dies, will get
credit for winning the game too and receive a royal title accordingly, this is
often dubbed 'kinging' and the players are also dubbed 'winners'.
Note that for Morgoth the partied players don't need to be within the usual 7
character levels of each other to get kill credit.
Even 'fallen winners' (players who have beaten Morgoth already but lost their
royal title to death) can regain their title this way - by partying up with
someone who hasn't defeated Morgoth yet and making sure that that player lands
the killing blow.
However: Each player must be at least level 40 to get credit for beating
Morgoth and obtaining the royal title accordingly!
A new (experimental) way to obtain a lost royal title again is to donate and
pray in 'The Mirror' in Lothlorien, see (4.5a) for details.

In addition to some random loot, Morgoth always drops his crown and hammer.
Both of which cannot be worn by players without royal title. Attempting to
wear the crown without title will even instantly kill the player!

Morgoth scaling with player team size:

If you team up against him, he will grow stronger for every additional player
who enters his dungeon level. Growing stronger in fact means that he gains a
hit point bonus of +2/3 of his base HP, and a +6 speed bonus, for each extra
player after the first one. His base HP is 30000 HP, so for example for a party
of two players he gains an extra +20000 HP and +6 speed.
If a player leaves his level, he will weaken again.

If he is defeated by a party, he will drop exactly one crown and one hammer
per party member, so everyone in the party can get both items.
In addition to Crowns, Hammers and a bunch of random loot, he will also drop
specifically one additional random 'great' item per player in the party which
defeated him (similar to items obtained by Acquirement scrolls, but with an

even higher chance to turn out quite expensive). If it was just a solo player
he will receive one such item.
For _unworldy_ parties that defeat him, there are further special drops added:
For a party of at least 2 players, an extra randart will drop.
For a party of at least 3 players, he will even – for each player above 2 –
drop one scroll of Artifact Creation. So 3 players -> 1 scroll, 4 -> 2, etc.
These party rewards require the appropriate number of players to be all present
on the floor when he is defeated, of course.
Note that everlasting parties are already rewarded indirectly by obtaining the
possibility for easy "rekinging", as only the player who gets the final blow
will get the actual kill credit, meaning that the other players can still make
Morgoth spawn again, should the need arise to regain their royal titles,
without having to resort to donating at "The Mirror" (compare (4.5a)).
For more information about encountering Morgoth, see next paragraph (1.3b).

See the following paragraph (1.3b) for more information on Morgoth.

(1.3b) How to encounter the final boss: Morgoth, Lord of Darkness
----
–Morgoth is found only at dungeon level 100 or deeper.
–He won't show up until you defeated Sauron, the Sorcerer, who is found at the
 bottom of Mount Doom (which is dungeon level 99).
–Morgoth does not neccessarily spawn on each fitting dungeon level,
 sometimes you have to search for him, like for all other monsters/uniques.
–If a player who hasn't defeated Sauron yet or who has already beaten Morgoth
 enters a dungeon level where Morgoth is currently on, Morgoth will instantly
 teleport to a different dungeon level.
–If there's already another player on that level who has beaten Sauron but
 hasn't acquired the title of a King or Queen yet, the 'intruder' player will
 be teleported to town instead and Morgoth will remain on the level.
–If more than one player is on his floor, he will be a bit thougher than he
 appears to a solo player, depending on the number of players facing him.
 In details, for each additional player besides the first player joining his
 level, Morgoth (assuming his defined base HP is 30000) gains +20000 hit points
 (ie +2/3 of his base HP) and +6 speed. So if a team of three challenges him,
 he will have 30000 + 2 * 20000 = 70000 HP and 30 + 2 * 6 = 42 speed.
 Everyone who is at least level 40 and on the same dungeon floor and in the
 same party as the player who lands the killing blow will get credit for
 winning the game and receive a royal title accordingly.
–For unworldy (no-ghost) parties there are extra rewards for beating Morgoth as
 a team since they cannot profit from the rekinging potential that others get
 from this. So unwordlies, if they beat Morgoth in a team, will get..
 –An extra randart drop of 'combat' treasure class.
 –Extra artifact creation scrolls for every player more than two (so trio+).
–There are no obstacles that can hold Morgoth back for long.
–All vaults on Morgoth's floor will be no-teleport vaults.
–If you die on Morgoth's floor your character is deleted even if everlasting!
 You will get a floor feeling to warn you of this whenever you enter a floor
 where Morgoth resides on, see (4.8).

(Also see (1.3a) for more information about Morgoth.)

There are rumours of even more powerful beings than the Lord Of Darkness.
Kings and Queens who seek new challenges shall try to enter the Cloud Planes
in the skies far above the world surface, where icy winds freeze you to death,
and the Nether Realm, the deepest abyss that serves as barrier of the mundane
world, a dungeon with dangers beyond imagination.
Only those who destroyed Morgoth may enter these two dungeons. The Nether Realm
can be highly rewarding in terms of experience but also very deadly. Terrible
foes are said to dwell there which aren't seen in the mundane world.
See (4.5c) for more information about the Cloud Planes and about the extra XP

bonus characters gain in the Nether Realm.

(1.4) History of TomeNET development

TomeNET is a multiplayer rogue-like, based on and somewhat similar to MAngband
and ToME, and also featuring some Zangband and Cthulu Angband monsters. It was
created around 2001 (originally under the name of "PernMAngband" which had to
be renamed due to a letter of Anne McCaffrey's attorney who prohibited the use
of the name 'Pern') as a fork of MAngband which got some ToME design added to
it, which was done by DarkGod, Evileye and Jir. Zz, Tanix and C. Blue also
contributed code, and after the original development team dropped out one by
one over the course of the following two years, C. Blue became the only active
maintainer of the project. Two more years later, he formed a new development
team which was joined by Mikael and Adam, and later on by infamous Moltor who
created a fast-paced arcade shooter variant which has nothing in common with
normal rogue-likes anymore, but features Tron light cycle race and Smash'em
action. In 2009, Relsiet joined the developers when he (assisted by Kurzel)
suggested a detailed plan for a rework of the existing Runemaster class (which
was originally proposed by Mark and implemented by Adam). In 2011 Kurzel took
over the Runemaster class development and did another rework. Later on TomeNET
moved to GitHub and new contributors arrived on the scene, which you can check
on our official GitHub site: https://github.com/TomenetGame/tomenet/

The TomeNET servers were originally hosted kindly by the grace of Fizz, an
employee of a French company which provides line capacity, a secure environment
and a dedicated server just for the TomeNET project. Later we moved over to a
server hosted by OVH in France, with the servers being provided by Mikael.

(2) Installation & setup
========================

(2.1) Installing/updating TomeNET (Windows/Linux/Mac OS X)

Basic installation:

Go to https://www.tomenet.eu/ (or one of our personal pages) to download the
latest client. It is recommended to use the installer package if available for
your OS (especially Windows).
If you choose an archive file instead, extract it to a new directory and make
sure the pathnames are preserved.
Then just run..

Windows: 'TomeNET.exe' (or double-click the desktop TomeNET icon,
                              provided you used the installer download.)

                  If you use a foreign IME setting, eg korean or japanese, switch
                  it to US-EN IME (compare problem 54 in the troubleshooting
                  section (9.8)) or you might not be able to use most keys aside
                  from arrow keys for basic movement.

Linux: the 'tomenet' binary.

Mac OS X: 'TomeNET.command' (which prepares and runs 'tomenet'.)

Updating via reinstallation:

If you want to update your existing TomeNET and cannot/don't want to use the

TomeNET-Updater, you can also just download the latest TomeNET version again
and install it over your existing TomeNET installation.
This process will not delete any of your macros, screenshots, or configuration
files - EXCEPT for your 'lib/xtra/sound' and 'lib/xtra/music' folders if you
install a TomeNET package that comes with a sound pack or music pack
respectively. Those will then be replaced.

So if you have done custom changes to your sound and/or music pack that you
want to keep, you should rename those folders prior to reinstallation.
This is not a hack but actually the official way TomeNET handles multiple
audio packs and allows you to switch between them in the = X menu! The only
convention you must follow is that music pack folders must start with 'music'
and sound pack folders must start with 'sound'.
For example rename your customized 'music' folder to 'music.myown' and it will
be safe to install a new version of TomeNET over it, the custom music folder
will be left untouched and automatically be recognized by TomeNET afterwards,
allowing you to switch between your music.myown pack and the official pack that
was just installed by pressing '=' key (options menu) followed by Shift+X.

If you install a TomeNET version that comes with sound or music pack over an
existing installation that doesn't have one of these, you will end up with
an audio-wise "upgraded" installation that now features sound and/or music
as it should (depending on what you installed).

Updating via the TomeNET-Updater:

Starting with version 4.5.7a, TomeNET comes with an updater tool that should
work on most platforms. If it doesn't on yours, please contact us and provide
details about which operating system you are using.

To update your TomeNET client or the sound pack or music pack, just run the
'TomeNET-Updater' and click on the according button.
The only prerequisite is that you must have '7-Zip' installed, a great, free,
open source archiver that beats WinRAR and WinZIP easily. You can get it from
www.7-zip.org.
Important: You should exit the game before attempting to update it!
Note for LINUX:
The Linux version of the TomeNET-Updater no longer requires 7zG (the graphical
user interface of 7-zip), so you do not need to compile it yourself if your
repository packages don't provide it. If you want to compile it anyway then
see (2.2) and there "a) Automatic audio pack installation - LINUX". That
paragraph has short instructions on how to compile 7-zip from source in Linux.

If you didn't have a sound or music pack installed yet, by "updating" it from
the TomeNET-Updater these will actually be installed.

Optional dependencies on Windows:

To make use of all features of the game, there are the following optional
programs you can install on Windows:
- explorer and xcopy (these are already installed by default in any Windows
  version): For installing/updating audio packs and opening URLs and folders
  from within the knowledge (˜) menu.
- 7-zip (www.7-zip.org): For installing or updating audio packs.
- Firefox or Chrome or Chromium: For converting an xhtml screenshot taken to a
  PNG image file.
- Dot-net (.NET) framework for utilizing direct PNG screenshot capture via
  the CTRL+SHIFT+T hotkey.

Optional dependencies on Linux/Mac OS X:

```
----------------------------------------
```
To make use of all features of the game, there are the following optional
packages you can install on Linux:
- xdg-utils (for xdg-open) on X11: For opening folders and URLs from whithin
  the knowledge (~) menu.
- xclip: For using copy/paste capabilities.
- coreutils (for readlink) and Firefox or Chrome or Chromium:
  For converting XHTML to PNG screenshots.
- imagemagick for making PNG screenshots directly (via SHIFT+CTRL+T hotkey).
- 7-zip: 7zG on X11, 7z on GCU. For installing or updating audio packs.

Installation details / custom installation:
```
-------------------------------------------
```
If you want to read up about installation specifics, command-line options,
compiling your own client, using an archive file for extraction instead of a
self-running installer etc., read on here.

If you choose an archive file, extract it to a new directory and make sure the
pathnames are preserved.

Note: If you decide to download the 'test client' instead of the client of the
latest stable version number, be aware that it might stop working correctly
unexpectedly because it's undergoing development, possibly forcing you to
redownload it.

Covered in the following are Windows, Linux, Mac OS X, FreeBSD and Android:

(2.1a) Windows (custom/compilation)
```
-----------------------------------
```
It is recommended to get the installer package instead of the zip archives.
You can safely install TomeNET over an already existing installation (just
make sure to quit the game first!), the installer will not reset/delete your
existing macros, settings or custom audio packs (it will only overwrite things
in 'lib/xtra/music' and 'lib/xtra/sound' ie the official audio packs).

The Nullsoft Installer framework (NSIS) the Windows installer uses is an open
source project (https://sourceforge.net/projects/nsis/), yet annoyingly there
are a few badly maintained virus scanners that may give a wrong positive
warnings for NSIS. In the past Avira was notorious for it but it seems they
fixed it, nowadays it seems to be Acronis instead, at least at the time of
writing these lines. Anyway, you can safely ignore those *ahem*.
A fun fact: The TomeNET Windows version has never seen an actual Windows
system but was created purely on Linux.

If you used the ZIP archive instead of the installer, 7-zip is recommended for
extracting it. It's a free and open source zip-tool of outstanding performance
that works on all platforms. Grab it from https://www.7-zip.org/ .

If you use a foreign IME setting, eg korean or japanese, switch it to US-EN IME
(compare problem 54 in the troubleshooting section (9.8)) or you might not be
able to use most keys aside from arrow keys for basic movement.

There is also a manual in your TomeNET folder, the file is called
"TomeNET-Guide.txt". Double-click to read it. It is recommended to not open it
in Wordpad, but either in Notepad or in any web browser of your choice, because
Wordpad tends to warp the layout badly.
Alternatively you can find the latest version of the manual online for browsing
and easy searching, on the TomeNET homepage (https://www.tomenet.eu/).
The guide can even be accessed inside the game by pressing ? twice or ~g.

If you're tech savvy, you could decide to edit the game configuration manually, but that is not really required. Continue reading below if you want to do that.

If you are using Valve's Steam and are interested on how to integrate TomeNET into it, check out (2.3) :D.

On how to run the game, connect to the game server and start playing, continue reading at (2.4)!

Windows - Manually editing the configuration file (if you're tech savvy):

You may edit the file "TomeNET.ini" and do some changes to your likings, like setting up window positions (note that the game will remember window positions changed via dragging the windows around, which is an easier way), or choosing font size (look into lib/xtra/font directory to see available fonts).
Further you can specify an account name and password to be filled in automatically, and various other things.

Windows command-line options:
```
-h                    Displays this list of command-line parameters
-I                    Force-disable IME. Input Method Editors are for CJK
                      languages ie chinese, japanese, korean, to allow using
                      their keyboard layouts that use multiple keypresses to
                      construct a character.
                      If you don't use such a keyboard, but TomeNET still
                      auto-detects your system as 'IME' you can safely
                      disable IME in case you suspect it causes any problems
                      for you. This might be the case if you like to switch
                      your keyboard language via keyboard shortcut while
                      TomeNET is focussed or to ALT-TAB out of TomeNET.
                      Another way is to permanently set this in TomeNET.ini
                      via 'ForceIMEOff=1'.
-i                    Force-enable IME. See '-I' explanation above. Enable
                      this if you have an IME system (eg CJK language) and
                      TomeNET wrongly auto-detects your system as non-IME.
                      Another way is to permanently set this in TomeNET.ini
                      via 'ForceIMEOn=1'.
-C                    Compatibility mode for ancient servers (deprecated)
-F <fps>              Set client internal engine fps (default is 100)
-l<Account> <Password>  For example -lGandalf geheim
-N<character name>    For example -NDruidor
-R <character name>   Character name to choose and auto-reincarnate it
-p<Port>              For example -p19348
-P <path to lib dir>  Sets the path to TomeNET's 'lib' folder
-k                    Don't disable numlock on client startup
-m                    Skip motd (message of the day) on login
-q                    Turns off loading/initializing of audio ('quiet mode')
-u                    Disables automatic LUA script updating
                      (You should NOT use this option!)
-w                    Disables weather effects
-v                    Automatically save chat log on exit (exclusive with -V)
-V                    Automatically save complete message log on exit
-x                    Don't save chat/message log on exit (don't prompt)
-a                    Switch to 'ASCII' mode ie the original visuals mode
-g                    Switch to graphics mode, using a graphical tileset
-G                    Switch to dual-mask graphics mode (fore+background)
<ip address>          for example 37.187.75.24
```

(Skip down to (2.4) to continue reading.)

```
Windows (cross-compiling from Linux):
-------------------------------------
Install the usual compiling environment with gcc or clang.

For the crosscompiling part, install mingw32 and take note of the folder prefix
it installs to, in most cases it will be 'i686-w64-mingw32', so it will install
to /usr/i686-w64-mingw32/...  with notable subfolders include/, lib/ and bin/.
Edit the makefile.mingw to have MINGW_TARGET reflect the prefix.

For regexp search (only used for the guide-search in c-cmd.c) you will probably
need a regexp lib, mingw-libgnurx should work fine.

Next, for sound support you will have to download at least SDL2 and SDL2-mixer
v2.6 or higher. Optionally you can get SMPEG for MP3-support or MikMod for
various mod-file suport, and libogg/libvorbis, but it's not required.
Make sure you do _not_ download the designated 'mingw32' tar.gz from the
libsdl.org page but get the generic src tarball at the top of that page
instead.
Detailed instructions for installing SDL are provided by Mikael here:
https://muuttuja.org/tomenet/howto-install-sdl.txt
These aim at SDL 1 though, we have now migrated to SDL 2, so they don't apply
directly anymore, but they might still be helpful in some way.

Adjust the makefile.mingw accordingly, which means setting SDL_CONFIG to the
sdl2-config script that should now be installed inside your mingw-prefix folder
so probably it looks like SDL_CONFIG = /usr/$(MINGW_TARGET)/bin/sdl2-config.

You should be able to cross-compile the client now. First a paranoid clean-up,
then build the client (or server I guess, if desired):
make clean
make tomenet.exe
(Or for the server: make tomenet.server.exe)


(2.1b) Linux (custom/compilation)
--------------------------------

Linux (using pre-compiled client):
----------------------------------
Make sure that ncurses and crypt libraries are installed, package names are
usually libncurses5 and libxcrypt (formerly libgcrypt11). Depending on your
system, there might or might not be numbers appended to the package names
(eg libxcrypt1 instead of libxcrypt), just do a generic search.
Enter the 'tomenet/' folder and type:
        ./tomenet
to start the game.

If you get a font-related error ("Font not found: 9x15") please see PROBLEM 56
in chapter Troubleshooting (9.8).


Linux (compiling from source):
-----------------------------
There are additional distribution-specific information on Mikael's website at:
https://muuttuja.org/tomenet/installation-linux.php
(It's linked on www.tomenet.eu -> "Links".)

You can get the source from www.tomenet.eu, also see (1.1).

How to compile the game binary:
Go into '/tomenet/src' where the file 'makefile' is located.
```

Dependencies, that you must make sure you have installed:
C-devel, X11-devel, ncurses, ncurses-devel and crypt libraries.
The package names are usually (may vary depending on the build system):
build-essential, xorg-dev, libncurses5, libncurses5-dev, libc6-dev, libxcrypt
(formerly libgcrypt11) and libxcrypt-dev. Depending on your system, there might
or might not be numbers appended to the package names (eg libxcrypt1 instead of
libxcrypt), just do a generic search.

Since version 4.4.5 which supports music and sound via SDL2, you also need
libsdl2-mixer-devel, libsdl2, libsmpeg. Usual package names (SDL2, not SDL!):
libsdl2-mixer2.6, libsdl2-mixer2.6-dev, libsdl2debian, libsdl2-dev,
(preferably libsdl2debian-pulseaudio, eg under Ubuntu), libsmpeg0,
libsmpeg-dev and optionally more formats like libogg/libvorbis.
Sometimes instead of the libsdl2* packages your system might
provide the packages simply named 'sdl2' and 'sdl2_mixer' instead.
If you don't want to use audio, edit the makefile and compare the two
paragraphs titled 'Without SDL' and 'With SDL' and edit the makefile
accordingly, to compile it without SDL audio support.
NOTE: If you are compiling the above packages yourself, make sure that you
install the specific audio format libs (smpeg, ogg/vorbis/..) _before_ you
install libsdl2-mixer, so its configure script will recognize those formats
and enable support for the according file types.
Note that sdl2_mixer must be at least version 2.6!

Enter these two lines:
        make clean
        make tomenet
and the binary 'tomenet' will be created in this folder 'tomenet/src'.
IMPORTANT NOW: You need to move the binary 'tomenet' that was just created one
               level upwards, so it's placed in the 'tomenet/' folder!
After that, go up one level into your 'tomenet/' folder. There type:
        ./tomenet
to start the game.

If you get a font-related error ("Font not found: 9x15") please see PROBLEM 56
in chapter Troubleshooting (9.8).

Configure TomeNET on Linux by editing config files or setting environment vars:
(This is not really required. Most things can be configured by in-game menus or
by dragging/positioning the game windows with the mouse.)

To configure which windows are visible and what font they use and all sorts of
other options, edit the file ".tomenetrc" which should be in your home folder
(or specify alternative location via -f command-line option, see below).

Note: If the game client's positioning of windows doesn't work on your system,
you can use other means such as KDE's native window positioning (right-click
the windows and modify the "special window settings" or "special application
settings") or the tool Devilspie (should be in your default repository) if
you're on Gnome or Xfce or anything else. 'gdevilspie' may also be available,
which is a graphical version of devilspie.

Alternatively to using the .tomenetrc file for window configuration, you can
also set environment variables. These settings will override .tomenetrc.
Environment Variables:
TOMENET_X11_FONT - global font setting for all windows. If set, this will be
used for any window that doesn't have a specific font variable set:
TOMENET_X11_FONT_TERM_MAIN (height and width of main window cannot be changed)
TOMENET_X11_WID_TERM_1, TOMENET_X11_HGT_TERM_1, TOMENET_X11_FONT_TERM_1
TOMENET_X11_WID_TERM_2, TOMENET_X11_HGT_TERM_2, TOMENET_X11_FONT_TERM_2
TOMENET_X11_WID_TERM_3, TOMENET_X11_HGT_TERM_3, TOMENET_X11_FONT_TERM_3

```
TOMENET_X11_WID_TERM_4, TOMENET_X11_HGT_TERM_4, TOMENET_X11_FONT_TERM_4
TOMENET_X11_WID_TERM_5, TOMENET_X11_HGT_TERM_5, TOMENET_X11_FONT_TERM_5
TOMENET_X11_WID_TERM_6, TOMENET_X11_HGT_TERM_6, TOMENET_X11_FONT_TERM_6
TOMENET_X11_WID_TERM_7, TOMENET_X11_HGT_TERM_7, TOMENET_X11_FONT_TERM_7
Use the 'export' command to set them, eg:
        export TOMENET_X11_FONT_TERM_MAIN=8x13
        export TOMENET_X11_WID_TERM_4=80
        export TOMENET_X11_HGT_TERM_4=24
TOMENET_X11_FONT sets one font globally for all windows. It's overridden by
the window-specific font variables listed above though.
Depending on your system, some possible fonts are usually:
4x6, 5x7, 5x8, 6x9, 6x10, 6x12, 7x13, 7x14, 8x13, 9x15, 10x20, 12x24.


POSIX command-line options:
-h                      displays this list of command-line parameters
-c                      force command-line interface instead of X11 etc.
                        Use it if you want to run the client within a terminal.
-C                      compatibility mode for ancient servers (deprecated)
-e                      Create file 'tomenet.log' instead of displaying
                        error messages in the terminal
-i                      ignore the ~/.tomenetrc config file
                        This option must come before any -f options!
-f<config file>         source (use) a specified config file. This is actually
                        cumulative and does not cause the standard .tomenetrc
                        to not be loaded. To _only_ load this config file and
                        ignore .tomenetrc, specify -i option together with -f
                        option and make sure that -i comes first!
                        The last file that is read is used as default config
                        file and any changes that are saved will be saved to
                        this file.
-F <fps>                set client internal engine fps (default is 100)
-l<Account> <Password>  for example -lGandalf geheim
-N<character name>      for example -NMagnet
-R <character name>     character name to choose and auto-reincarnate it
-p<Port>                for example -p19348
-P <path to lib dir>    sets the path to TomeNET's 'lib' folder
-m                      skip motd (message of the day) on login
-q                      turns off loading/initializing of audio ('quiet mode')
-u                      disables automatic LUA script updating
                        (You should NOT use this option!)
-w                      disables weather effects
-v                      automatically save chat log on exit
-V                      automatically save complete message log on exit
-x                      don't save chat/message log on exit (don't prompt)
-a                      Switch to 'ASCII' mode ie the original visuals mode
-g                      Switch to graphics mode, using a graphical tileset
-G                      Switch to dual-mask graphics mode (fore+background)
<ip address>            for example 37.187.75.24

Full command-line example:
        ./tomenet -p19348 -lGandalf geheim -NGandalf 37.187.75.24


If your name contains spaces, it is neccessary to put a '\' in front of each.
Example:
        ./tomenet -p18348 -lIron\ Man geheimer 37.187.75.24
..if your account name is 'Iron Man'.


(Skip down to (2.4) to continue reading.)


(2.1c) Mac OS X (custom/compilation)
------------------------------------
```

Mac OS X (using pre-compiled binary; tested with Snow Leopard 10.6.6):

Run the file 'TomeNET.command' to start the game.

If TomeNET starts only in console mode (or even not at all if you're not within
a terminal but just clicking it from within a file manager window) that means
that TomeNET didn't find X11.
In this case, install XQuartz and run TomeNET.command from within it. TomeNET
should now launch correctly with a GUI, ie various game windows.

If you're tech savvy and want to manually edit the TomeNET configuration file,
see "Configure TomeNET on Linux" further above.

Otherwise skip down to (2.4) to continue reading.

Mac OS X (compiling from source; tested with Snow Leopard 10.6.6):

Basically use the same instructions as for Linux above. Additionally:

-You probably want to have XQuartz (which provides X11) installed to run
 TomeNET not just in console-only mode.

-To actually install gcc you will need to install the 'xcode' package, which
 contains gcc. Download the correct xcode version for your Mac OS X version
 from developer.apple.com. For this you will first need to create a developer
 account (choose the free account version of course).

-Download the required packages (tar.gz/tar.bz2 files from ftp.gnupg.org,
 ftp.gnu.org/pub/gnu and www.libsdl.org) listed in the Linux installation
 instructions above and extract, compile and install them each via the usual
    ./configure
   make clean
   make
   sudo make install
 command chain from a terminal window.
 Note: libsdl2_mixer can be found on www.libsdl.org too, by clicking on the
 "Libraries" menu and searching for "mixer".
 Note that sdl2_mixer must be at least version 2.6!

 If you have trouble installing those source packages, you could try to simply
 use MacPorts to fetch them, at https://www.macports.org/.

Dependencies:
-libgcrypt depends on libgpg-error, which you will need to install too.
-libsdl2_mixer may complain about missing dependencies (at least Ogg Vorbis is
 required for TomeNET, since it's the official audio format - the rest is only
 needed if you add custom audio files in the according file formats):
  -Ogg Vorbis library (www.xiph.org -> libogg and libvorbis) for OGG file
   support, which is what the official TomeNET audio files are.
  -SMPEG library (icculus.org/smpeg) for MP3 file support. (libsdl2_mixer's
   configure script May also list additional notes regarding the environment
   variable SMPEG_CONFIG, don't miss them.)
  -MikMod library (mikmod.raphnet.net) for various module music support.
  -FLAC library (flac.sourceforge.net) for FLAC file support.

-If you mess with compiler-related environment variables and paths and for
 whatever reason get a 'compiler cannot create executables' error when trying
 to ./configure packages, just close the terminal and re-open it, to reset all
 vars.

It is recommended to use the makefile called 'makefile.osx' for compiling.
If for whatever reason you try to use an unmodified Linux makefile to compile
then you might run into the following problems:

-ncurses starts hiding some internal properties at v5.7+ which causes a
 dereference error when trying to compile main-gcu.c. This seems to be a
 Mac OS X specific problem since only the ncurses shipping with Snow Leopard
 has NCURSES_OPAQUE set to 1 while the Linux version has not.
 To fix it, add
    -DNCURSES_OPAQUE=0
 to CFLAGS compiler options in the makefile.

-For preprocessing LUA files the 'cpp' variant does not work, the 'gcc' variant
 must be used instead: Edit the makefile, locate 'cpp' and comment out the two
 cpp-related lines and uncomment the two gcc-related lines, if it's not already
 like that by default.

-If the LIBS linker flags in the makefile say '-lcrypt' that will cause an
 error about library not being found if using libgcrypt. In that case change it
 to '-lgcrypt' to fix it.

-If the LDFLAGS are empty the linker will throw a not-found error 22. Fix this
 by moving (or copying) the -L... library search-folder parameters from LIBS to
 LDFLAGS so it contains all lib paths.

When you have successfully compiled TomeNET, see the paragraph above about
"Mac OS X (using pre-compiled binary" for additional information on running it
regarding X11 aka XQuartz.
If you get an error that libraries are not found, try setting your library path
to your TomeNET folder before running TomeNET:
   export DYLD_LIBRARY_PATH=.
   ./tomenet

Configure TomeNET on Mac OS X:

Most things can be configured by in-game menus or by dragging/positioning the
game windows with the mouse, and do not require manual editing.

See 'Configure TomeNET on Linux' above, it's basically the same, including all
the available POSIX command-line options.
Mac OS X also uses the ".tomenetrc" configuration file which should be in your
home folder, same as Linux.

(2.1d) FreeBSD (custom/compilation)

Should be same as on Linux, except that the "8x13" standard font might not get
found, preventing TomeNET from starting. A fix according to "N der Fuenfte":
   root% cd /usr/ports/x11-fonts/xorg-fonts
   root% make install clean
   root% # restart X server, if in doubt, just reboot PC.

(2.1e) Android (custom/compilation)

Compilation is straight-forward and similar to Linux:

- Install "termux" from F-Droid repository. Do NOT install the version from
  Google Play store! (Or you might not be able to download all packages.)
  F-Droid is an open source repository that is available at:
    https://f-droid.org/

- In termux, issue this command to ensure that the repository is up to date:
    pkg up

- In termux, issue these commands to install the SDL2 audio mixer library:
    pkg in x11-repo
    pkg in sdl2-mixer

- You might also need to install these tools:
    pkg in mc   -> the midnight commander ('mc') just for quality of life.
    pkg in git   -> this is required to download the tomenet repository.
    pkg in make   -> this is required for client compilation.
    pkg in clang   -> this is required for client compilation.
    pkg in wget   -> you can use the 'wget' command to download audio packs,
                          but it might not work and you'll have to download them
                          in your webbrowser instead if mediafire is under load.
    pkg in p7zip   -> the '7z' command is needed to extract audio packs.

- Get the latest github TomeNET source, as the most recent release at the time
  of writing this was 4.9.2 and it doesn't have the required code yet:
    git clone https://www.github.com/TomeNETGame/tomenet

- Enter the cloned repository, go straight into the source folder:
    cd tomenet/src

- Issue the build command, specifically using the GCU-makefile:
    make tomenet -f makefile.gcu

- After compilation finished, move the resulting 'tomenet' binary up one level
  and return to the main level, in order to run the game binary:
    mv tomenet ..
    cd ..

- Optionally, grab a sound pack and/or music pack, eg the official ones from
  the forum here:
    https://tomenet.eu/phpBB3/viewtopic.php?f=4&t=120
  and extract them to the tomenet/lib/xtra/ folder, so you end up with the
  folders tomenet/lib/xtra/sound and tomenet/lib/xtra/music respectively.

  Example command to download some music/audio packs from mediafire via 'wget':
    wget https://www.mediafire.com/file/issv5sdv7kv3odq/TomeNET-soundpack.7z
    wget https://www.mediafire.com/file/3j87kp3fgzpqrqn/TomeNET-musicpack.7z
  However, these might not work if mediafire is currently under heavy load, in
  which case you'll have to download the packs in your webbrowser instead and
  move them to your termux home folder by using some file manager on your
  device which is able to access the termux home folder as well as the device's
  download folder, so you can move the downloaded zip or 7z files into termux.

  After you acquired the audio pack zip files and moved them into the
  tomenet/lib/xtra/ folder, navigate into it with 'cd' command, eg:
    cd ~/tomenet/lib/xtra/
  and there use the '7z' command to extract them, eg:
    7z x TomeNET-Soundpack.7z
    7z x TomeNET-Musicpack.7z
  Verify by issuing the 'ls' command, it should show the 'sound' and 'music'
  folder (among other things) respectively.
  Finally, navigate back from tomenet/lib/xtra/ to tomenet/ by ascending twice:
    cd ../..

- Run the game:
    ./tomenet
  Most of the usual linux command-line options are available, such as "-q".

If you get the error message "TomeNET needs an 80x24 'curses' screen", make
sure that termux has at least a visible text area of 80x24, bigger is ok too.
You can just pinch-zoom out the display, which will shrink the termux font!
Or you can switch the on-screen keyboard to 'floating' mode, which means it
no longer takes up screen estate at all, but hovers 'over' any content.

- Optionally enable big_map mode (double-size main screen):
  The GCU TomeNET client newer than 4.9.2 (get the latest github code if your
  client is 4.9.2 or older) actually supports big_map mode. However, it does
  not support live-switching as of the time writing this. Instead you manually
  have to edit .tomenetrc in your home folder (or whatever config file you
  specify via command-line) and set "Mainwindow_Lines 46". This will enable
  big_map mode next time you start the client with this config file.
  This info and more details are also found in PROBLEM 74 in 'Troubleshooting'
  (chapter (9.8)).

- In the game, note that you might need to switch the key set to "rogue-like"
  in order to move. This can be done directly by (in-game) pressing = 1 A
  to toggle the option. (See (0.2) for key set details.)

- Optionally enable arrow keys for movement:
  If you want to move using the arrow keys and your client version is not newer
  than 4.9.2, please see PROBLEM 75 in 'Troubleshooting' (9.8) and consider
  downloading the pref-gcu.prf file form github, put it into lib/user folder.

(2.2) Installing sound and music packs

Starting with version 4.4.5, TomeNET features a new SDL-based audio system,
which provides sound effects and background music.

If you don't aim at installing specific 3rd-party packs but just want to add
sound or music capabilities to your installation, because your current version
does not have these, the easiest way is to go to the TomeNET website and just
download the full installer that comes with music and sound and install it over
your existing TomeNET installation. This will preserve your configuration while
updating everything to the latest version and also adding sound and music.
For details on this see (2.1) and then 'Updating via reinstallation'.

For a more chirurgical way to specifically just install an audio pack (music
pack or sound pack), read on:

All you have to do is download a sound and/or music pack and then install it.
For downloading the official packs, go to www.tomenet.eu and then click on
'Downloads'. Other players might offer their own audio packs on the forums.
Read on for instructions how to install those packs once you downloaded them.
There are two ways, automatically (client does it for you) and manually (you
unzip them to the correct location yourself):

a) Automatic audio pack installation

(See paragraph above for where to download audio packs.)
Starting with client version 4.4.9, there is an automatic installer for sound
and music pack:

Step 1:
 Windows / Mac OS X:
  Make sure you have 7zip installed. It's a free, powerful multi-platform
  archiving tool (fit to replace WinRAR, WinZip etc).
  Get it from www.7-zip.org.

```
Linux:
 Make sure you have 7zip installed. The package name is p7zip.
 Note that some Linux distributions (Ubuntu) have another package called
 p7zip-full and the package p7zip is lacking certain parts. In that case
 install p7zip-full.

 UPDATE that supersedes below update: Starting at v4.7.3 TomeNET no longer
 requires 7zG, so you don't need to compile it. The normal 7z will be fine.

 UPDATE (for TomeNET versions older than 4.7.3):
 Ubuntu seems to no longer provide the graphical user interface of 7zip,
 called 7zG, in either of these packages, so you'll have to download the
 source instead directly from the project page (on sourceforge) and compile
 it yourself:
  https://sourceforge.net/projects/p7zip/files/p7zip/
  pick the folder with the latest version and download the 'src_all' source
  archive, not the 'linux_bin' binary archive (it doesn't contain 7zG!).
 Short compilation/installation instructions:
  Extract the source archive and enter its directory.
  For 32-bit Linux, do:
   cp makefile.linux_x86_asm_gcc_4.X makefile.machine
  For 64-bit Linux, instead do:
   cp makefile.linux_amd64_asm makefile.machine
  Then do:
   make all4
  And last but not least:
   sudo make install
  That's it. Try entering '7zG' into the terminal to verify that it worked.

Step 2:
 Download the files 'TomeNET-soundpack.7z' and/or 'TomeNET-musicpack.7z' and
 put them into your TomeNET folder.
 Custom packs are also recognized as long as they follow this naming scheme:
 File names must start on "music" or on "sound" for music or sound packs.
 The automatic installation only recognizes these four file name types.
 If you download audio packs that are named differently, you can however simply
 rename them to match the schemes before attempting to auto-install them.

Step 3:
 Launch the game, press '=' to enter the configuration menu, and press 'I' to
 invoke the auto-installer.

Step 4:
 After it's done it should tell you to restart your client. (You might also
 get disconnected automatically, if the auto-installation takes a while. That
 is fine.) Just restart the game and press CTRL+U to look at the audio mixer
 (or CTRL+F if you're using rogue-like key set).
 It should tell you that sound and/or music pack have been installed.
 If the packs you installed weren't the first ones, you can switch between
 multiple installed packs via = X menu (Audio Pack Selector).

In case you want to install the packs manually instead of using auto-install,
read on.


b) Manual audio pack installation
---------------------------------
(See first paragraph of (2.2) above for where to download audio packs.)
Instead of automatic installation explained above you can also just manually
unpack audio packs to your TomeNET/lib/xtra/ folder. Make sure the game isn't
running while you do.
```

Note: Some people have reported that the program 'WinRAR' seems to cause
      problems in some cases, giving them "file corrupted" errors.
      This might also happen with WinZIP, but we don't know really.
      A powerful free and open source program that is guaranteed to work is
      '7zip' (a sourceforge project at the time of writing) downloadable at:
      https://www.7-zip.org/

You can get the official sound pack on https://www.tomenet.eu/ in the download
section, and also look for player-made sound or music packs in the forum!

On Microsoft Windows, the easiest way to do this after you downloaded a sound
or music zip file is to:
----
1. install 7zip, a free zip/unzip tool, if you haven't installed one already.
2. open a Windows Explorer window and navigate to your TomeNET folder. Then
   double-click the 'lib' folder to enter it. You should now now see a folder
   named 'xtra' being shown.
3. quit TomeNET if it's still running, just to be on the safe side (sometimes
   MS Windows may prevent files from getting overwritten if they are still in
   use by a running program).
4. double-click your downloaded sound or music pack zip file to open it in 7zip
   or whatever you use, and its contents should be displayed:
   Either a folder named 'sound' or a folder named 'music', depending on what
   kind of pack you just downloaded.
   Use the mouse to drag that 'sound' or 'music' folder over to the Windows
   Explorer window you prepared, right onto the 'xtra' folder, and let go.
   7zip will now extract the sound or music folder into the xtra folder (while
   preserving the path structure).
   If you were extracting a sound pack or if you already installed a music pack
   previously then you will be prompted to overwrite files - choose "yes".
   Wait for the extraction process to finish.
5. Start or restart TomeNET and press CTRL+U (or CTRL+F on rogue-like key set)
   in the game to view the audio mixer screen. If everything went smoothly it
   should say that a sound or a music pack or both have been found.
   If you don't have sound, make sure that your TomeNET.ini file (it's in your
   TomeNET folder, double-click it to view, can be opened with any normal text
   editor) says 'Sound=1' which it should by default if you haven't modified it
   earlier.

Alternative instructions (Linux/Mac OS X/in general):

After you downloaded a sound pack or a music pack, extract it to your lib/xtra/
folder, preserving the archive pathname structure. You should end up with a
folder lib/xtra/sound/ and lib/xtra/music/ respectively, which contain config
files and further subfolders for either sound effects or background music.

Important: If you extract it via command-line via '7z' command, make sure to
use '7z x ...' and not '7z e ...'! x will extract with correct path names.

Now start or restart the game, and you should have sound.
If you don't have sound, press CTRL+U for audio mixer (or CTRL+F if you're
using rogue-like key set):
It should say that sound and music pack have been detected if everything went
alright, otherwise you see a red error message.
Also verify that your config file ("TomeNET.ini" on MS Windows, ".tomenetrc"
in your home folder on Linux or Mac OS X) has 'Sound' set to '1'.

(2.2a) Audio controls and config options

You can control mixer settings with CTRL+U key on normal key set and CTRL+F on

rogue-like key set (or use CTRL+C to toggle music and CTRL+N to toggle the
master mixer on/off, CTRL+V instead of CTRL+N on rogue-like key set).

Note: Mixer settings are saved automatically, provided you use CTRL+Q to quit.
(Compare troubleshooting section (9.8), PROBLEM 22.)

Also be sure to press '=' key to have a look at the audio options.

If you want to temporarily disable all loading/initializing of audio then
instead of editing the config file's 'Sound' entry you can just use the '-q'
command-line option.

To change volume or disable certain songs or sounds, go to the jukebox with
either = n for sound effects or = N for music.
There you can make changes to volume wih -/+/v keys or disable/reenable things
with t key, these changes are persistent and saved automatically.

If you want to use your own sound and music, and create audio packs for other
players, read (2.2b) below.

(2.2b) Editing sound and music manually/Creating own packs

You can easily replace or disable certain sound effects or music, or even
create your own sound and music packs.

To download music from music sites such as youtube, soundcloud, bandcamp etc
the recommended tool as of the time of writing this is 'yt-dlp'. The syntax
is easy ("-x" option is to keep only the audio part, not any video):
  yt-dlp -x <URL-of-your-music>
For example:
  yt-dlp -x https://soundcloud.com/elen-mylo/elen-mylo-outward-night

Or eg for specifically only have title + extension in the filename:
  yt-dlp -x -o '%(title)s.%(ext)s'

To convert downloaded music to a format recognized by TomeNET (recommended are
either ogg or mp3, preferably ogg), the tool of choice is 'ffmpeg':
  ffmpeg -i <songname.XXX> <songname.ogg>
For example:
  ffmpeg -i "Outward Night.opus" "Outward Night.ogg"
So you basically just repeat the song name, but change the extension from
whatever it was to ".ogg", ffmpeg reconizes this and converts any format to it.

All audio files are in the sub-folders 'sound' and 'music' in the folder
TomeNET/lib/xtra/. You can just delete or replace the sound files and it'll
apply as soon as you start/restart the game.
To create a completely new pack, create a new folder starting on either 'sound'
or 'music' in the TomeNET/lib/xtra folder and add a custom extension of your
choice, eg so:
  TomeNET/lib/xtra/music.myownpack
Make sure it contains the music.cfg file, which you can then edit to add all
your songs that you put into this folder.
You can either copy over the music.cfg of the official TomeNET audio packs or
just download it from tomenet.eu/downloads -> music.cfg/sound.cfg templates.

In the game you can switch between the music... or sound... folders aka packs
with the selector menu, press = X to open it.

To convert your own sound files to the appropriate format of already existing
files, when you overwrite them, use an audio editor, for example:
- 'Goldwave' is a good sound editor for Windows OS, which is free to use

(although it asks for registration, but that's just optional.)
– The free open source audio editor 'Audacity' is available
   for Linux, Mac OS X and Windows.

For more specific editing, open the files 'sound.cfg' (in the sound folder) or
'music.cfg' (in the music folder, if a music pack has been installed) in any
text editor that supports unix line breaks (Notepad++ for example) and start
fine-tuning your audio. Both cfg files actually begin with some instructions
on what file types are supported and about the structure of the files aka how
to modify/add entries correctly.

For example if you want to disable a certain sound effect temporarily, open
sound.cfg in your text editor, locate the sound effect, and just put a ';'
symbol at the beginning of the line – that will effectively disable the whole
line. (Of course you could also just rename the actual sound file instead of
editing the cfg file; that way it cannot be loaded by the game anymore.
However, you shouldn't use '#' to disable sounds, because this might make the
server think that you are using an outdated audio pack and send you wrong
audio codes, resulting in hearing the wrong music in a particular dungeon for
example. So it's preferable to use ';' to disable songs or sound effects.)

If you want to edit sound or music configuration files in detail, you will
probably be starting off in one of these two situations:

A) You already have the official sound/music packs installed.

   In this case you can just happily edit the files sound.cfg and music.cfg
   (found in sub-folder TomeNET/lib/xtra/sound and TomeNET/lib/xtra/music
   respectively) if you want to change the actual filenames.

B) You have no packs installed. In this case, you will have pretty bare example
   configuration files in these two folders mentioned in 'A)', which are named
   sound.cfg.default and music.cfg.default.
   What you have to do in this case is either work with these or instead
   download full-fledged cfg-files from the downloads section of the official
   TomeNET website (recommended):

   i) Downloading full-fledged template files (music.cfg and/or sound.cfg)
       from the official TomeNET website – this is the recommended way:
       Just edit these cfg-files to insert your own music files as you see fit.

   ii) Starting out with bare minimum files *.cfg.default (the hard way):
       1) Do not edit these default files. Instead, make a copy of each, and
          call those copies 'sound.cfg' and 'music.cfg' respectively, and edit
          these!
       2) Since they're still pretty empty, you will have no ideas of the sound
          and music event names, save for the sound effects 'page', 'warning'
          and 'greeting' which are specified by default.
          So to find out all the other event names, open the file 'audio.lua'
          in any text editor. This file is found in folder TomeNET/lib/scpt/.
          Now you can just add new lines to your sound.cfg and music.cfg files
          using the event names you see in audio.lua, in the same manner as the
          three already existing entries in sound.cfg.

  MAKE SURE you read the instructions written in the beginning of the files
  sound.cfg and music.cfg. They also tell you which audio formats you can
  use.

  Note that the official cfg-files (both, the ones in the actual packs and the
  pure template ones) actually do NOT fully utilize ALL available sound and
  music events supported by the game!
  Randomly picked examples (at the time of writing this here – may change):

Currently, the official music pack does not contain any songs for the
character creation screen or the sickbay (among others, these two are just a
few of the unused opportunities), and the official sound pack for example
currently has no sound effects for bashing or cloaking.
Just look through the music.cfg and sound.cfg files for lines starting on a
'#' character. It means that the line is currently disabled. This way you can
easily spot all the places where you could add additional sound/music effects
that are supported by the game but currently unused by the official packs!

To test your changes live while you're logged into the game, press CTRL+U
(or CTRL+F if you use rogue-like key set) and then CTRL+R to reload and
reset all audio pack information on the fly. Changes to the files on disk
will be applied immediately to the live client this way.

Do not forget to fill out the [title] section in your cfg-files so people
who use your audio pack will know about it and who made it, so you get
proper credit. :)

To switch between different audio packs in-game, press = and then X.

Note: Do not MODIFY the file audio.lua, it has nothing to do with editing your
      sound or music. Don't worry though if you accidentally modified it, it'll
      be automatically restored next time you log on to the server.

(2.3) "Promoting" TomeNET on Steam ;)

In Steam's "Games" menu choose "Add a non-Steam game to my library".
Browse for the TomeNET.exe file and check it.
Click on "Add selected programs".

Now you can start TomeNET from your Steam library of games like any other game,
and if you do so then your Steam status will show that you are playing TomeNET!

(2.4) Starting TomeNET and getting to play on an internet server
----
If you use a foreign IME setting, eg korean or japanese, switch it to US-EN IME
(compare problem 54 in the troubleshooting section (9.8)) or you might not be
able to use most keys aside from arrow keys for basic movement.

If you used the installer you will have a TomeNET icon on your desktop to
start the game (and another icon for the TomeNET Updater).

If you used the ZIP file, you can run TomeNET from the unzipped folder by
either double-clicking 'TomeNET.exe' or (this is a safe-fail in case your
internet provider ever has DNS problems and you cannot connect to the server)
by double-clicking 'TomeNET-direct.bat' to directly connect to official main
server's IP address.

On Mac OS X you run the 'TomeNET.command' file, on Linux the 'tomenet' binary.

(Side note about the official servers:
 The official main server's hostname is "europe.tomenet.eu"
  and its IP address is 37.187.75.24.
 The official asia-pacific server's hostname is "apac.tomenet.eu"
  and its IP address is 92.38.178.77.
 The official north american server's hostname is "na.tomenet.eu"
  and its IP address is 68.71.132.101.)

You should now see a list of available TomeNET servers (except if you used

TomeNET-direct.bat, which will always connect you directly to the first main
server) starting with the official main server under 'a)'.
(This list of servers is called the 'meta-server'.)
Pick the first official server by pressing the 'a' key (or instead choose the
APAC or NA region server if your latency is better for one of these regions).
On some Windows configurations in the past the window would stay empty. If
this happens or if other problems occur, see (9.8) for possible solutions.

Now you are prompted to enter your account information: Name and password.
Since you are a new player, you don't have these yet. There is no separate
'registration' process, just type in a name and a password of your choice!
Make sure you remember your password and enter it carefully so you don't
make a typo. The TomeNET client will, however, automatically store these
crecedentials so next time you log in you can just hit ENTER key to confirm
the saved name and password which will be automatically filled in for you.

In most cases newly created accounts have to be "validated" by a server
administrator to enable you to use the whole functionality of TomeNET. For
example it is common not to allow unvalidated players to drop items or money
to the ground. This is done to prevent certain cases of abuse.
If you accidentally chose an account name or character name which was already
taken by another player, you will see a message telling you to try a different
name.

Now that you have logged in you are presented with the account overview screen.
It's just the list of all your existing characters. Since you don't have any
yet, it's empty. Press 'N' (shift+n) to create a new character which will
represent you in the virtual world of Middle Earth and then enter a name for
your character. You may use the same name as your account name, if you like.

Players logged on to the game are identified by 3 names:
-Nickname (character's name)
-Realname (account name)
-Hostname (The hostname of the connecting computer)
The hostname is not really important. However, make sure that all of these 3
names may only consist of letters, numbers, spaces, and all other characters
with an ASCII code between 32 (SPACE) and 122 ('z').
The realname and hostname must not be empty. The nickname (character name)
needs to start with a letter ('A'..'Z' or 'a'..'z').

Newly created accounts are marked as 'not yet validated' and have certain
limitations, which are:
Cannot drop items or chat privately with other players, or advance beyond a
certain level.
You will need an admin to 'validate' your account.
Usually, all you have to do is to keep playing/stay online for a bit until an
admin logs in, notices that you are new, and validates your account.
If that doesn't seem to happen, just ask in chat (press : key to chat) or ask
an admin directly, when you see one chatting (Admin's names are displayed in
dark blue in the chat).
If the server's intro screen mentions an email address you could also send an
email there if you still haven't been validated.

You may continue reading at (3.1), which explains details of the character
creation progress.

(2.5) Client options

By pressing the '=' key in game, you can access the options menu where you
cantweak your client in various ways. Some of these options that aren't

self-explaining or that are especially important are listed in detail here:

(1, 2, 3, 4, 5) User Interface Options:
    Rogue-like commands (rogue_like_commands)
        Toggles between normal key set and traditional rogue-like key set.

    Alert on taking damage while you are AFK (alert_afk_dam) and
    alert on taking damage while looking around the map via 'locate' command
    (alert_offpanel_dam). (The locate command is invoked with SHIFT+L on normal
    key set and CTRL+W on rogue-like key set.)

    A bunch of options for special visual effects and lighting.
        These options change how lighting is applied to lamp light and walls,
        lamp light colour and how walls are displayed depending on the font:

        font_map_solid_walls (depending on font displays walls as solid blocks.
                              This option can break visuals of custom fonts
                              and graphical tilesets as it interferes with
                              the mapping.)
        view_animated_lite (fire-based light sources flicker yellow-orange)

        wall_lighting (generally enables lighting/shading fx for walls:)
        view_lamp_walls (your light source lights up certain wall grids)
        view_shade_walls (darkens wall grids out of sight)

        floor_lighting (generally enables lighting/shading fx for floors:)
        view_lamp_floor (your light source lights up certain floor grids)
        view_shade_floor (darkens floor grids out of sight)

        view_lite_extra (lights up a few additional wall/floor types)

    Display overview resistance/boni page at startup (overview_startup)
        Makes your character sheet start out showing the resistances/boni table
        instead of the your basic stats and abilities.
        (Press C and then tap h to cycle through it, as usual.)

    Hide unusable skills (hide_unusable_skills)
        Skills that your character cannot use will not be displayed in the
        skill menu invoked by 'G' key.

    Don't display 'flavours' in item names (short_item_names)
        A 'Black Potion of Speed' will just be shown as a 'Potion of Speed'.

    Suppress server messages as far as possible (taciturn_messages)
        Will prevent some of the not-so-important server messages to be
        shown, for example 'You have <item>' when picking up an item.

    Show experience bar instead of a number (exp_bar)
        In the main window at the 'XP' label your experience is displayed as a
        progress bar instead of showing the numerical value, much like in
        common MMORPGs where each bar segment is often referred to as 'bubble'.

        This bar has a resolution of 5% steps and displays..
          a dark blue '#' to indicate 5%,
          a light blue '#' to indicate 10%,
          a full bar of dark blue '#' to indicate 95%+.

        This is especially recommended for high-level characters who require
        several dungeon dives to gain a level-up. This way, you can keep track
        of your progress during the current dive, eg "I want to make at least
        30% experience progress (aka '3 bubbles') before I recall out of this
        dungeon".

Examples for the bar (dark blue '#' are written as '+' here just for
illustration purpose):
```
---------    You have made less than 5% XP since your last level-up.
###------    You already made 30% (or a bit more) XP this level.
####+----    You made 45% (or a bit more) XP towards next level already.
++++++++    You have 95% (or up to 99%) XP and are therefore very close
            to level-up! Might just as well keep diving till ding! :-p
```

Flash own character icon after far relocation (flash_player)
    Whenever your character teleports, recalls, takes a void jump gate or
    phases in such a way that your current view panel changes, your
    character icon will flash quickly and brightly for a moment, to help
    your eyes ascertain your position.
    Useful for example if there are many monsters around and you're a
    mimic in monster form, or just in general when you're in big_map mode.

Use very basic, static symbols and colours for players (basic_players)
    Will always display party members as dark grey @ (flickering to slate
    if they have black breath) and will always display yourself as a white
    @, yellow while a nimbus or shielding spell is active, orange when the
    spell is about to run out, also orange when a temporary mimic form is
    about to run out. Also it will display yourself in light umber if the
    spell 'Martyrdom' is active and in violet if an Invulnerability effect
    is active.
    So it will ignore any class-based colouring for party members and both
    symbols and colours of monster forms for party members and the player
    himself.
    The only exceptions are if the player has flash_player, flash_player2
    or flash_insane enabled, which can override basic_players visuals.

(6, 7) Audio Options
    (See (2.2) for more information about sound and music.)

    A bunch of stuff here, mostly you might want to look at attack-sound effect
    frequency. Some people don't like to have those be played on each single
    attack, so you can tweak them here.

    positional_audio is an especially interesting option, enabled by default.

(8, 9, 0) Gameplay Options
    Use old target by default (use_old_target)
        If this is on, a ranged attack via *t5 or *t- will not pick a new
        (ie closer) target if the previously acquired target is still okay.

    Set 'AFK mode' automatically (auto_afk)

    Prevent floating for a short while after death (safe_float)
        For a few turns after your character dies you cannot float up or down
        with the '<' or '>' key. This prevents accidentally leaving the floor
        in case you were just trying to take a staircase right the moment you
        died, which would result in losing your items since the dungeon level
        would probably regenerate if you left it.

    Abort macro execution if an action fails (safe_macros)
        If any sub-action in a macro you execute fails then the whole macro/key
        queue will be discarded and cleared.
        This is useful if you for example have a spellcasting macro that would
        just do something weird in case you lost the according spell book and
        then tried to cast it anyway, accidentally.
        This only affects magic spells and monster traps.

Automatically open doors (easy_open)
    Your character attempts to open a door just by you moving into it.

Clear @-inscriptions on taking item ownership (clear_inscr)
    When you pick up items that belonged to another player, any '@...'
    inscriptions will be rendered effectless by replacing the @ by a space.
    This is a security feature that is intended to prevent the inscriptions
    from interfering with the inscriptions on your own items.
    For example, your potions of healing might be inscribed @q1. If you now
    pick up a potion of heroism that someone else also inscribed @q1, it
    will be used the next time you press your 'q1' macro, because heroism
    potions are sorted in in the inventory before healing potions, which
    might cost your life if unlucky.
    Alternatively if you have this option turned off, you can just use the
    '}' key to uninscribe the items you get from someone else.

Also use predefined server-side auto-inscriptions (auto_insc_server)
    Will provide a predefined (on server-side) set of item-inscriptions
    that will be applied automatically to some selected items,
    which are Word of Recall items, various scrolls and a few potions.
    (These inscriptions are applied independantly of the custom auto
    inscription feature you can access with '&' key.)
    The server-side auto-inscriptions are currently:
        Scrolls of Phase Door: @r1
        Scrolls of Teleportation: @r2
        Scrolls of Word of Recall: @r3@R
        Rods of Recall: @z3@R
        Scrolls of Identify: @r5!X
        Scrolls of Trap Detection: @r8
        Scrolls of Magic Mapping: @r9
        Scrolls of Satisfy Hunger: @r0
        Potions of Healing: @q1
        Potions of Speed: @q2
        Potions of Resistance: @q3
        Potions of Restore L.Lev.: @q4
    Note: Already inscribed items are not touched.

Thin down screen flush signals to avoid freezing (thin_down_flush)
    Enabled by default, this discards all 9 of every 10 flush signals, so
    it reduces the animation delays to 10%.
    See below for an explanation of flush signals.

Disable delays from flush signals (disable_flush)
    Completely disables the delay flush signals cause. Flush signals are
    signals sent by the server to make the client wait for 1 ms, which is
    used mainly to draw animations when casting spells or shooting,
    like the arrow flying or the balls of explosions.
    If you have a slow network or are lagging a lot, you may try to disable
    this. Certain animations might visually suffer from doing so.

Scroll the screen more frequently (wide_scroll_margin)
    Should always be enabled! Will reduce probability for off-screen kills,
    since the screen scrolls much earlier when you come close to a border!

Get kicked out automatically by the game when starving and idle for 30
    seconds. (idle_starve_kick)

Automatically pickup items (auto_pickup)
    Enables auto-pickup. Auto-pickup uses the auto-inscriptions rules list
    and the same matching algorithm.
    To choose items for auto-pickup press '&' to enter auto-inscriptions
    screen and toggle auto-pickup/auto-destroy/ignore with 'a' key per line

```
        matching an item name (or multiple).
        A green 'a' means the item will be automatically picked up.
        A special match with just '#' can be created to pick up ALL items.
        This option causes a loop on item piles that ends if item matches
        no more rules or there are no more items under the character.
        Option could be toggled through slash command '/apickup', this allows
        creating macros for fast toggling as you usually don't want to
        always pick up items (if you are in a fight or in your house).
        Auto-pickup does not trigger inside houses.

    Destroy item if it matches auto-destroy rules (auto_destroy)
        Enables auto-destroy. Auto-destroy uses the auto-inscriptions rules
        list and the same matching algorithm.
        To choose items for auto-pickup press '&' to enter auto-inscriptions
        screen and toggle auto-pickup/auto-destroy/ignore with 'a' key per line
        matching an item name (or multiple).
        A red 'A' means the item will be automatically destroyed!
        A special match with just '#' can be created to destroy up ALL items,
        the same effect can alternatively be invoked by enabling the option
        'destroy_all_unmatched' (see below).
        This option causes a loop on item piles that ends if item matches
        no more rules or cannot be destroyed, or there are no more items under
        the character.
        Option could be toggled through slash command '/adestroy', this allows
        creating macros for fast toggling as you usually don't want to
        always destroy up items (if you are in a fight or in your house).
        Note that the item is destroyed on the floor and not picked up first,
        so this is feasible to use against curse-no-drop items too.
        Auto-destroying does not trigger inside houses.

    Destroy all items that didn't match any rule (destroy_all_unmatched)
        This requires 'auto_destroy' option to be enabled and will do the same
        thing as '#' wildcard in & list set to auto-destroy:
        It will destroy all items on the floor that do not match any rule in
        the auto-inscriptions list.
        This optioncauses a loop on item piles that ends if item cannot be
        destroyed, or there are no more items under the character.
        Option could be toggled through slash command '/daunmatched', this
        allows creating macros for fast toggling.
        Auto-destroying does not trigger inside houses.

(w) Window flags
    Here you can configure each of the program windows in detail.
    It is recommended that you have one dedicated window for 'Display chat',
    so you don't miss important messages during combat.

(b) Toggle big_map (double screen height)
    Double height of map shown in the main window, dubbed 'big_map' setting.
    Definitely enable this to see if you prefer it: It doubles the size of
    the gameplay area displayed in the main TomeNET window.
    To save this setting, make sure to quit the game via CTRL+Q and not by
    terminating the game window via mouseclicking the window title bar's
    'x' button.
    Quality of life hack:
    You can actually refer 'big_map' via /opt commands even though it's not a
    real option (anymore)!

    big_map will not just increase the map size, but due to the increased game
    window size you gain access to additional features for which there is not
    enough room in non-big_map mode:
    - Indicators for temporary elemental resistances (base, poison, mana).
      Those will be displayed below the (xx,yy) world map coordinates:
```

Red "F" or fire, white "C" for cold, slate "A" for acid, blue "E"
              for electricity, green "P" for posion, violet "M" for mana.
            - Indicator for temporary ESP: "ESP" (in white colour).
              This will be displayed below the temp elemental resistance indicators.
            - hp/mp/sn/_huge_bar options (in =1).
              These huge bars for easy tracking are displayed over almost half the big
              main window size, in the otherwise unused bottom part, below the temp ESP
              indicator.
            - The minimap (~0) will display a legend of all symbols on the bottom left.

  (A) Account options
      Here you can see if your account is valid. Invalid accounts are also
      indicated by a yellow 'I' in the players list you get with '@' key.
      Also, you can change your password here!

(2.5a) Client options configuration files

Don't forget to save options to a file after you changed them, so the change
becomes persistent and will be remembered next time you log on.
The following files will be automatically processed by TomeNET:

global.opt   global client options, will be loaded on all
                                characters

global-<operating system>.opt   client options for specific OS, can be used to
                                have different options depending on whether
                                a Linux client is running in X11 mode or as
                                GCU terminal application. The file names would
                                be global-x11.opt and global-gcu.opt.

<character name>.opt   client options file that will be loaded for a
                                particularly named character only, if you log
                                on with it, eg "Gandalf.opt".

(2.6) Installing voice chat

While chatting in TomeNET is usually fine to communicate with other players and
party members in particular, using a real voice chat via headset (headphones +
microphone) can be much more effective, easier and more fun.

You can use the official TomeNET Discord server, but if you don't like Discord,
there is actually an official TomeNET 'Mumble' server too, Mumble being the
name of the voice chat software. (The server part is actually called Murmur,
Mumble is the name of the client part and the project name in general.)

Mumble provides excellent voice quality at low bandwith usage, and is a free
open source program, hence it is free of charge (both server and client).
It also allows sending text messages in case you don't have a microphone, those
can be automatically converted to speech, which is then read to the receipient.
(This feature can be turned off in the menu 'Configure' -> 'Text-To-Speech'.)
And same as Ventrilo or Teamspeak, Mumble allows for custom channel structures.
Mumble is available for all major platforms, ie Windows, Linux and Mac OS X.

Instructions to join the TomeNET Mumble server for voice chatting:
-Plug in a headset.
-Download the Mumble client from https://mumble.sourceforge.net and install it.
 NOTE: If you are looking for the Linux version, it should be in your package
 repository. No need to visit the sourceforge project website in this case.
-Go through the audio configuration (Audio Wizard) and possibly set up a key to

push when you want your voice to be transmitted (or just select voice-
      activation, which will automatically transmit your voice when you speak).
    -Go to menu 'Server' -> 'Connect' -> 'Add New..'
      and enter this server information to add the official TomeNET Mumble server:
      Label: Choose any name you like, eg "TomeNET Voice Chat".
      Adress: europe.tomenet.eu
      Port: 23348
      Username: Choose any name you like, it's your nickname on the Mumble server.
      Click 'Ok', select the newly added server in the list and click 'Connect'.

    That's it. To change to a certain chat channel, simply double-click it.
    You can only hear people in the same chat channel (or in a parent channel).

    Troubleshooting Mumble:

    PROBLEM M1: You could connect fine, but after reinstalling Mumble you cannot
                connect anymore.
    Solution: Go to "Settings" -> "Certificate Wizard", create a new certificate.

    PROBLEM M2: You get a message "the remote host closed the connection".
    Solution: Can be caused by some firewalls interacting with mumble's quality
                of service optimizations. You can disable QOS in mumble:
                Windows / Linux:
                 -click "Configure" -> "Settings".
                 -look down to the bottom left corner and activate "Advanced".
                 -click on "Network" on the left side panel.
                 -deactivate/uncheck "Use Quality of Service".
                Mac OS X:
                 -in the top menu bar click "Mumble" -> "Preferences".
                 -look up to the top right corner and activate "Advanced".
                 -click on "Network" tab.
                 -deactivate/uncheck "Use Quality of Service".

    (2.7) Fonts

    The Windows client comes with a few default fonts of different size, located
    in folder lib/xtra/font.
    If you aren't happy with the text size in the game, try switching the fonts
    used for the main window and the other subwindows:

    Press '=' to enter the options menu. Now you can either press 'f' for the fonts
    menu where you can change all fonts in detail with +/- keys, or you can hit 'F'
    to automatically cycle through predefined font sizes for all windows at once.
    (You could also edit font info manually in your TomeNET config file, which
    would usually be TomeNET.ini (Windows) or .tomenetrc (POSIX) if you wanted.)

    Logfont (Windows only):

    In the Windows client newer than version 4.9.2, the fonts menu (=f) also offers
    another choice: Logfont. This can be enabled/disabled via 'L key in the fonts
    menu and (at the time of writing) requires a client restart to apply.
    The logfont feature uses a windows-internal, freely scalable font, making the
    game independant of the .FON font files, which are no longer used while logfont
    is active. While logfont is enabled, you can scale width and height freely in
    the fonts menu using the -/+ (height) and ,/. (width) keys.
    The advantage of logfont is that you no longer depend on .FON files of your
    desired dimensions, the disadvantage is that .FON files can offer various font
    styles that you might visually prefer, and .FON files can contain custom font
    symbols and mappings such as pseudo-graphical font symbols, which the logfont

cannot offer (also see (2.7a) custom fonts chapter below).
Using logfont will disable font_map_solid_walls and solid_bars options as the
required symbol for these aren't supported by the windows-internal font, and
logfont can also be enabled via command-line parameter '-L'.

Fonts can also be pseudo-graphical, some such fonts might come shipped with the
client. Again press = f and then use + and - keys to switch the main window
font. These two keys allow you to switch through all fonts available in the
lib/xtra/font folder.

For the Linux/Mac OS X client, the game doesn't use the lib/xtra/font folder
but instead assumes that some standard fonts are provided by your system and
tries to select those when cycling with 'c' key in the fonts menu.
You can also set fonts manually with = f if you want to choose specific fonts
available in your Linux / Mac OS X installation.

To manually install your own fonts on POSIX, see the instructions for Linux two
paragraphs below in (2.7a), it should be in bdf or pcf format.

Starting in 4.9.2 I added an 'posix_extra_fonts' folder and install script for
more convenience to the lib/xtra folder, which attempts to install fonts in pcf
or bdf format (with optional prf file if they contain custom mappings) on POSIX
systems.
It already contains a bunch of POSIX fonts in pcf/bdf format that were made by
Virus, Svechnik and Tangar.

(2.7a) Custom fonts

It is possible to create your own custom fonts for the game.
For the Windows client which uses .FON files you can use "Fony" for example:
http://hukka.ncn.fi/?fony
(Up to client 4.6.1a it was not possible to use characters of numbers 128-255
but this has been addressed, so the full range of characters is available now.
Up to client 4.9.2 there was a glitch that required you to shift all R-indices
downwards by a fixed offset of 12, this has been fixed.)

For the Linux client you'll need to convert the font to 'pcf' format, but 'bdf'
might work too, depending on your system.
Place it into a registered fonts folder (check 'xset -q'), usually that can be
/usr/share/fonts/misc, let fontconfig rescan it with 'fc-cache' (optionally
with '-f' to force rescan) and also have X rescan it with 'xset fp rehash' and
then run 'sudo mkfontdir' in /usr/share/fonts/misc (if that's the folder where
you placed the fonts) to add them to fonts.dir file.
You can verify that all is fine by doing 'fc-list' and 'xlsfonts'. TomeNET
doesn't use fontconfig but it's probably a good idea to register the fonts in
both, fontconfig and X11. (TomeNET uses XListFonts() to read available fonts.)
Note that TomeNET only auto-scans fonts that contain a (lower-case) 'x' letter,
eg fonts whose names contain a <width>x<height> info. After this another filter
will be applied via the (exactly one!) regular expression specified in the file
'lib/xtra/fonts-x11-menuscan.txt'.
To add other fonts that don't match these criteria, you have to add their names
manually in the file 'lib/xtra/fonts-x11-menuscan.txt'.
When using a custom font that has different mapping than standard fonts you
might need to turn off the option 'font_map_solid_walls' in =2 if you spot
any wall tiles that look not like they are supposed to in that particular font.
Fedora 33: Tokariew wrote information about installing fonts on this OS here:
 https://github.com/TomenetGame/tomenet/issues/15

Since you might need/want to use mapping files to remap terrain features to the
characters in your font, you can create font-preference files that contain
mapping information.

The default font mapping file is lib/user/font-win.prf (for Windows OS). If it
exists, this file will automatically be loaded by the game client.
However, the client first checks for the existance of a specific, custom font
mapping file that has a filename: lib/user/font-custom-FONTNAME.prf and loads
this instead of attempting to load font-win.prf.
This allows you to have a custom mapping file for each of your fonts.

NOTE: Since client 4.7.0 the TomeNET/lib/user folder is copied to your Windows
user folder (usually C:\users\...\TomeNET-user) to fix problems with Windows 7
and higher. This copy is then used instead.

Example:
You go to the fonts menu by pressing = f and switch to a font named 10X16X.FON.
Now the client will automatically try to not only load the font from the font
folder lib/xtra/font/10X16X.FON but also a mapping file to go with it, named
lib/user/font-custom-10X16X.prf.
(On switching fonts, the client will automatically discard all mapping info it
loaded for the previously used font.)

Note that this mapping file loading only happens if you switch the font for the
main window, not when you switch fonts of the subwindows.

Font mapping files have the following syntax for mapping lines:
  F:index:attribute/character
  R:index:attribute/character
  U:tval:attribute/character
with 'attribute' and 'character' being optional.
Servers of internal version > 4.9.1 (using git code from 3. Jan 2024 or later)
can also process client mappings of objects, done in similar manner to above:
  K:index:attribute/character

'Attribute' is the colour, these are listed as TERM_ constants in defines.h.
'Character' is the (possibly ASCII) index in the custom font file.

Also, you can add comments with a '#'. The '#' and everything after it will
just get ignored. Details about the mapping lines:

F-lines:
The 'F' stands for 'feature', meaning a specific terrain tile such as floors,
walls, doors. You can see all of these in the file lib/game/f_info.txt, the
index of each feature is the number located right after 'N:'.

R-lines:
The 'R' stands for 'monster', meaning a specific base monster type. You can see
all of these in the client's in-game monster lore (~7) or in the spoiler file
lib/game/r_info.txt. The monster index is the number located right after 'N:'.
You can also use Mikael's monster search website under ~R .

U-lines:
The 'U' stands for 'unknown type', meaning a specific base object type (tval).
You can see tvals in the client's lib/game folder in file k_info.txt, it's the
first number after "I:" within an item definition block.
This mapping will be used for flavoured (ie coloured) items that you don't know
yet, for example potions, scrolls, mushrooms, magic devices.

K-lines:
The 'K' stands for object 'kind', meaning a specific object kind. You can see
all of these in the client's lib/game folder in file k_info.txt. The index is
the number right after "N:" at the very beginning of an item definition block.

These mapping lines will remap the specified feature or monster to the symbol
with the number 'character' in your font, which may range from 0 to 255, and

display it in the colour 'attribute' which may range from 0 to 55 (up to 4.6.1a
client) or 57 (in later clients), with colours 0 to 15 being static colours and
the higher ones being animated.

Examples:

   F:56:2/127
Maps the terrain feature 'granite wall' (#56 in f_info.txt) to the font symbol
#127 and the colour 2 (which is 'slate').

   R:862:/255
Maps the monster 'Morgoth, Lord of Darkness' (#862 in r_info.txt and in ~6) to
the font symbol #255, leaving its colour at its normal value (the one given in
r_info.txt) without changing it.

   U:40:/500 # all amulets! (their tval is 40)
Maps all unknown, flavoured items whose tval is 40 (that is, all amulets) to
font symbol #500. So if you find a type of amulet that you don't know yet,
instead of a K-mapping, this U-line will kick into effect, since your character
cannot know the k_info-index ('N:') yet, but only knows that it is apparently
an amulet, ie an item of 'tval' 40.

   K:500:/400
Maps the Phial of Galadriel (#500 in k_info.txt) to font symbol #400, leaving
its colour at its normal value (the one specified in the G-line in k_info.txt).

--- !!! IMPORTANT !!! ---
The font should always provide characters #2 and #127 as 'solid block' symbol!
This is important because these two ASCII codes are used for drawing bar
elements in the UI (especially if a player has 'solid_bars' option enabled).

When using a custom font you probably want to turn off the option
'font_map_solid_walls' in =2 , as it interferes with the mapping of various
wall tiles: It will force-remap all affected wall tiles to character 127 for
Windows clients and to character 2 for Linux/Mac OS X clients and all treasure
veins ('*' symbol in the game, aka walls with treasure to mine) to character 1,
which looks like a diamond in the standard fonts.
It will also change the colour of quartz veins form default 'white' or whatever
else it was mapped to, to light grey to make them visually distinguishable from
other walls.

Here is a list of all supported colours:

Static colours:
 0 black   1 white   2 slate   3 orange
 4 red   5 green   6 blue   7 umber
 8 dark grey   9 light grey   10 violet   11 yellow
12 light red   13 light green 14 light blue   15 light umber
Animated (flickering in multiple hues) colours:
16 multi   17 poison   18 fire   19 cold
20 acid   21 electricity 22 confusion   23 sound
24 shards   25 light   26 darkness   27 mana-shield
28 invulnerable 29 curse   30 annihilation 31 half-multi
32 psi   33 nexus   34 nether   35 disenchantment
36 inertia   37 force   38 gravity   39 time
40 meteor   41 mana   42 disintegration 43 water
44 ice   45 plasma   46 detonations   47 nuke (toxic waste)
48 unbreath   49 holy orb   50 holy fire   51 hellfire
52 thunder   (53 lamp)   (54 dark lamp)   55 ember
(56 thin fire)   57 starlight

For the Linux/Mac OS X client you'll need to either convert FON fonts to PCF
format (bitmap font files) or create fonts directly in PCF format. BDF format
might work too, depending on your system.
Add them to your system with the usual font-adding procedures for your specific
Linux distribution, then you can select them in TomeNET via = f (or enter
them directly in your .tomenetrc config file).

(2.7b) Graphical tilesets

Thanks to jEzEk (https://github.com/jezek) graphics tiles are now supported
again, now with two colour masks (a foreground and a background mask, of which
the background mask has currently no meaning, since all grids in TomeNET are
always drawn with black background) and auto-scaling to font size. There is a
also a third mask for 'dual-mask' mode in clients newer than version 4.9.2.
The advantage over normal fonts is that these can have many colours and thereby
look much better.

The graphical tileset menu is invoked in-game via '=' (options page) and there
press 'g'. Inside the graphics menu then you can switch mode via 'v' key.
Currently at the time of writing this (4.9.2) changes will not apply right away
but require a client restart to become active.
(If you want to manually enable tilesets, you can edit the TomeNET config file,
usually .tomenetrc (POSIX) or TomeNET.ini (Windows) and change values for the
config entries "graphics" and "graphic_tiles".)

Graphical tilesets are xyz.bmp files in 24-bit format (R8,G8,B8 - and make sure
to check "Don't include colour space information" in GIMP or whatever you use,
or in newer versions make sure to _uncheck_ "Write color space information",
or it will not work on Windows) that come with a graphics-xyz.prf mapping file.
The bmp filename must be in the format "<width>x<height><custom text>.bmp" and
the prf filename must be "graphics-<width>x<height><custom text>.prf".
The bmp file goes to tomenet/lib/graphics
and the prf file, as always, to tomenet/lib/user - or -
on Windows OS to the folder 'TomeNET-user' inside your user's home folder
(eg C:/Users/Tomenetplayer/TomeNET-user).

Tilesets also have two designated 'mask colours':
- a 'foreground mask' defined by colour R=252,G=0,B=251 (or hex 0xFC00FB)
  aka a strong magenta, which is treated special: It will be replaced by the
  actual font colour the grid would have with a normal font, thereby
  representing the type of floor feat, item, monster etc with its correct
  colour.
  For example a tile depicting an orc would display the mask colour in umber
  (ie brown) if it was a hill orc or in light green if it was a cave orc.
- (Currently no effect, as all grids in TomeNET always have black background:)
  A 'background colour mask' defined by colour R=62,G=61,B=0 (hex 0x3E3D00) aka
  a dark, somewhat greenish ochre. This is not a transparency mask but just for
  a second colour, as each character can in theory have a foreground and a
  background colour specified.
  Currently, TomeNET always uses black background colour for any grid it draws.
  (Example: A fountain in ASCII is currently a white '_' on black background.
  If background colours were enabled in the future, it could be a white '_' on
  blue background. In that case, if you switched from ASCII to a graphical
  tileset that maps fountains to a picture, all pixels that ought to show the
  blueness around the fountain would have to be 0x3E3D00.)
- No effect in clients not newer than 4.9.2:
  A 'dual-background mask' defined by colour R=29,G=33,B=28 (hex 0x1D211C),
  ie a very dark green. This is a transparency-mask.
  Graphical tiles that usually take precedence over terrain, such as objects,
  any traps, monsters, players etc. can use this colour to become transparent

for the background terrain.
Terrain graphics, which are considered 'background graphics' will be visible
in these pixels and therefore merged with the foreground.
So you could for example see a dagger lying in a pool of water.
Note that in = g the 'dual' graphics mode must be enabled for this to work
and the server has to support it too. You can also manually edit your config
file (eg .tomenetrc or TomeNET.ini) and set "graphics" to "2", same thing.
If you use a dual-mode tileset with normal graphics settings instead, this is
not a problem as it is 'backward compatible' and will interpret the dual-mask
colour (ie 0x1D211C) instead as background (0x3E3D00) automatically.

Svechnik (aka 'EvgenijK' on github) has worked on a major graphical tileset
that can be found on his github, including instructions on how to use it:

  https://github.com/EvgenijK/TomeNET-Tileset

At the time of 4.9.2 release, TomeNET ships with the tileset files (bmp in
the lib/xtra/graphics folder and prf in the lib/user folder) from that date,
and also a matching FON (in lib/xtra/font) and pcf file for POSIX systems
(in lib/xtra/posix_extra_fonts) to use together with the graphical tileset.
However, check out his site or our discord for updates maybe.

After ensuring that the '16x24sv.bmp' tiles file is in tomenet/lib/graphics and
the mapping file 'graphics-16x24sv.prf' is in tomenet/lib/user (or TomeNET-user
in your user's home folder on Windows OS), don't forget to activate the tileset
by putting this in your .tomenetrc (POSIX):
  graphics 1
  graphic_tiles 16x24sv
or TomeNET.ini (Windows):
  Graphics=1
  GraphicTiles=16x24sv
and then in-game make sure that the option =2 'font_map_solid_walls' is OFF!

However, you're not done yet, as you should still select a fitting font too
(easiest is to use the 16x24 font Svechnik provides too for this purpose),
so read on...

Notes about an important difference to normal fonts:

Graphical tilesets require you to still select a normal font too!
The way it works is: Whenever the graphical tileset provides a valid mapping
for a grid, it will use the graphics, otherwise it will fall back to the text
font and use its symbol instead.

Since the tileset linked above is a work in progress and so far there are no
known complete tilesets, that is the reason why an underlying font to work
together with the tileset is still needed. At least SOME font should always
be selected just to be on the safe side, as there are no drawbacks.

The font should preferably have the same dimensions as the tileset, or scaling
will be applied automatically (the graphical tiles will be scaled to the font's
dimensions), which might not look ideal.
For EvgenijK's bmp tileset which has dimensions 16x24 px/tile, there is also a
16x24 font to go with it. He also provides a 16x22 px/tile set and a 16x22 font
that is located in lib/fonts, as both .FON and .pcf format, but of course you
can use any other font file too, for example Tangar's 16x22TG graphical font
(a text font with additional, pseudo-graphical character set).
EvgenjijK provides other sizes than these two too, such as 10x14 and 24x36.

  Issues:

As of the time of 4.9.2 release when this was written, there are still issues
with graphical tiles (some listed on EvgenijK's github):

- interface crash and packet errors if there is only tiles for "monsters"
  (issue TomenetGame/tomenet#51)

- Up to client 4.9.2 there was a glitch that required you to shift all indices
  for 'R:' mappings downwards by a fixed offset of 12, this has been fixed.

(3) Creating a character & starting to play
===

(3.1) Creating a new character; character modes

During the character creation process you will be asked about details on the
character and after you have completed it you will start out in the first town,
called Bree.

To create a new character, you press either 'N' or 'E' key in your account
overview screen. 'N' is the normal way for creating a new character.

'E' is for creating a so-called 'exclusive' (or 'dedicated') character:
There are two character slots in your account that can be used for creating a
character dedicated to each of these special ways of playing:
 a) Ironman Deep Dive Challenge (IDDC, see (4.13) for details)
    Depending on server, this usually also allows entering the Halls of Mandos!
 b) Player versus Player (see 'PvP' further below in this section)
If you create such an exclusive character, you will be unable to use it for
anything else. The point of having exclusive character slots is to ensure that
even if your account is full of characters, you still have one slot available
to participate in IDDC (or Halls of Mandos) and in PvP gameplay.
Note: A dedicated IDDC character will be killed and erased if it acquires any
experience points outside of the IDDC (or Halls of Mandos) or if it recalls out
of it at one of the static dungeon towns. The kill message will be:
"XXXX was killed by indetermination".
Also, exclusive IDDC characters will automatically be no-ghost mode and will
receive an extra +25% score bonus (stacking with the no-ghost score bonus and a
potential hard-mode bonus should the player choose hard-mode aka 'hellish').

Reincarnation / auto-reincarnation:
If you already created a character of the same name before, you can choose to
reincarnate. This just means that the new character you are creating will be
created exactly like the deceased version of it, regarding class, race, etc..
There are two keys for reincarnation displayed on each step of the character
creation process: '%' for auto-reincarnation and '#' for reincarnation just for
the current step of the character creation process.
Auto-reincarnation, ie pressing '%', is like pressing '#' in every step of the
character creation process. (There is also command-line option '-R' for this.)

However, since this is your first character, just press 'N' to start the
creation progress, enter a character name, and continue reading.

(Note that on the Ironman server, you can convert your character to a
dedicated IDDC character by using the /convertexclusive command. As on the main
server an IDDC-exclusive character can usually also enter the Halls of Mandos.)

First you may choose your gender. This will not have actual influence on your
strengths or weaknesses.

Next you have to choose your class. Spellcasters like Istari (elvish word for
mages), Shamans or Runemasters are physically weaker and especially hard to
play for beginners.
If you choose a spellcaster, be aware that his casting ability depends on either
his intelligence or his wisdom, depending on the actual class.
Spellcasting involves using 'macros' (see (3.6)) and might be a bit difficult
for beginners.

Here is a short table that explains each class in a basic way,
for more detailed information about classes and their pros and cons see (7.5).

Class	How it basically plays
Warrior	Straightforward melee fighter, may access ranged skills too, even magic device usage, or specialize in 'anti-magic' instead.
Istar aka Mage	Master spellcaster, weak in the beginning until shield spell.
Priest	Mix of melee combat and various holy prayer schools (ie spells) leaning strongly to training multiple holy schools or all even. Can become a 'monk' by training martial arts.
Cor.Priest	(Very specifically a Corrupted Maia Priest.) Same as Priest but casts corrupt spells instead.
Rogue	Able melee fighter with tricks, may learn magic or trapping too and can actually train shoplifting (aka 'Stealing' skill).
Mimic	Shapeshifter learning forms of slain enemies, strong in melee.
Archer	Ranged archetype, high damage output but weak in melee.
Paladin	Mix of melee combat and various holy prayer schools (ie spells) leaning heavily to combat skills and just 1-2 prayer schools.
Death Knight	(Vampire Paladin.) Melee fighter with various dark spells.
Hell Knight	(Corrupted Maia Paladin.) Melee fighter with hellish abilities.
Ranger	Very versatile fighter using melee, ranged, spells or trapping.
Adventurer	Most versatile class, can train almost any skill. On the other hand that makes it easy to mess up by diluting skills too much.
Druid	Shapeshifter using martial arts and various spells.
Shaman	Versatile spellcaster/shapeshifter, can access melee skills.
Runemaster	Destructive spellcaster, can access melee skills and even train shoplifting same as rogue.
Mindcrafter	Versatile spellcaster/melee combat hybrid.

  ---- PLEASE NOTE: ----
  If you are new to the game, it is NOT recommended to choose one of these:
  Istar, Priest, Shaman, Adventurer, Runemaster.
  The reason is that these classes are hard to play in the beginning -
  compare introductory explanation in (7.5)!

Then you have to choose your race. Humans are good allrounders, while the other
races are more or less specialized. For example half-trolls are usually quite
dumb but very strong, and hobbits are quite nimble and intelligent but not
very strong. For more information about races see (7.4).
A half-troll warrior might be the best choice for a beginner to try since he
is tough and has less chance of dying instantly in case you make a more
serious mistake. Also you don't have to worry about the spell-casting system
for now.
Note that the availability of various races will depend on the class you chose,
some class-race combinations are not possible.

Now you will see your six basic attributes STRength, INTelligence, WISdom,
DEXterity, CONstitution, CHaRisma.

IMPORTANT NOTE: For fighters (rogues also belong to these, ie all characters
that rely on close combat) that use weapons, it is important that you have
enough STRength and DEXterity to execute at least two attacks per round, called
BpR (blows per round, see (7.5a)).
Sometimes this requires you to get rid of your initial weapon and buy a very
light weapon, for example one of these:
 -dagger or main gauche (sword class),
 -whip (blunt class),
 -cleaver (axe class) or
 -spear (polearm class).
(For more information about the different weapon classes see (5.1a).)
Sometimes it is even possible to start out with 3 BpR (warriors mostly).

Depending on the server configuration, starting at TomeNET version 4.2.0,
there are 2 alternative stages of character creation that may follow now.

1) The old way - random stats: (deprecated)
You see the short names for the 6 stats written from the left to the right
on the very bottom of the screen, and you're asked to choose a stat order.
You have to determine how important each of the 6 stats is to you by defining
an order. The first attribute you choose will be raised most.
However, know that all your stats are randomly modified slightly, each
character that you create even with same race and class will be a bit
different. Sometimes you are lucky and get really high attributes at the
beginning. And sometimes you get more gold to start with, especially if your
stats turned out lower, balancing stats against gold. If you don't like
the resulting stats after you finished character creation, suicide and start
over.

2) The new way since 4.2.0 - chosen stats:
You see your 6 stats written below each other, followed by a base number (10).
Right above them you see your free points (30) that you may distribute on the
stats. Use the numpad (numlock turned on) to navigate and increase or decrease
your stats until you used up all free points. Hit ESC when you're happy with
your choice.
In general, if you play a character that relies on close combat, try to at
least match the STR and DEX values shown in the table in the column titled
'Min. recommended, if possible'.
If you can do that then you should start with at least 2 BpR with a light
weapon, or even with your starting weapon. If your starting weapon already
gives 2 BpR you could still examine even lighter weapons in stores to find one
that gives you one more BpR i.e. 3 BpR and just discard your starting weapon.

Note: The stat points you distribute have no effect on the maximum value your
character can get by quaffing stat potions. These points to distribute are
basically just "free stat potions".

Should you not distribute all your stat points, you will get a warning message
that you have to confirm to proceed. In that case your character will start
with bonus Au (gold pieces) depending on how many stat points you 'sacrificed'
ie didn't allocate.

Now you can choose a difficulty level you wish to play on. Options are
n) Normal g) no Ghost H) Hellish e) Everlasting
It is recommended that you choose either n) to play a normal character or g)
to play a normal character without a ghost.
You can also choose e), that will give your character an infinite amount of
resurrections, while 'normal' characters often have a limited amount of lives
(depending on the server configuration).

These difficulty settings are called 'character modes':

(3.1a) Character Modes

Normal (3 lives)

A normal character will turn into a ghost if he dies. The ghost can be revived
by either visiting a temple or another living player using a magic scroll of
life when standing adjacent to the ghost. The ghost will return to the world
of living under the cost of a lot of experience but at least the player can
resume playing. If the ghost dies, the character will finally be erased
permanently, watch out!
Depending on the server configuration the number of times a ghost is limited,
standard is 3 lifes.

Everlasting (infinite resurrections)

Create an everlasting character for an infinite amount of resurrections (with
the exception that they too are completely destroyed if they die to insanity.)
Everlasting characters can become king/queen, but cannot enter the high-score.
Other character types cannot use items that belong to everlasting
characters. Exception: Word of Recall scrolls can be exchanged between an
everlasting and a non-everlasting player!
Non-everlasting and everlasting characters can't be in the same party.
If an everlasting King/Queen dies, he won't be destroyed but lose the
King/Queen status. To regain it, he needs to find another player who hasn't
defeated Sauron and Morgoth yet and team up with him, because those two won't
(re)spawn for the everlasting player.
Since it was often asked: Non-everlasting and everlasting players can revive
each other without problems.
Everlasting characters can additionally use the 'Instant Resurrection' feature
offered by town temples, see (4.5a).

Unworldly (no-ghost)

Unworldly characters are like normal characters, but they have only one life.
So if they die they cannot revive but are completely erased (no ghost will be
created.)
Note: This is the traditional rogue-like gaming mode.
Unworldly characters will receive 25% bonus on their high score.

Soloist (no-ghost and no PC-trading)

This is exactly like above 'Unworldly' mode, except you cannot do any trading
ie exchange of items or gold with other player characters. You can use all NPC
stores as usual though.
Furthermore, Soloists will not be affected by buff-spells other players cast on
them, and they cannot pick up any items dropped by monsters that they didn't
kill themselves.
This mode allows you to have a 'single-player' experience of traditional
rogue-like gaming. But of course you could still ask other players in chat to
help you out of a dire situation..

Hellish (extra hard no-ghost)

These are unworldly characters with extra penalties:
-1 point malus on each of the 6 character attributes
-healing is reduced by 25%
-AC is reduced by 50%
-ESP only works within radius of 20 squares
-any speed changes above or below +0 are reduced by 50%
-max mana reduced by 25%.

```
-max class-based number of melee attacks per round is reduced by 1.
Hellish characters receive 50% bonus on their high score.


PvP (gameplay almost limited to killing other PvP players)
----------------------------------------------------------
This is a special restricted mode that has nothing to do with normal gameplay.
If you're new to the game, it's absolutely not recommended to choose this.
More information about 'PvP' mode is given in (7.13).
PvP mode character cannot enter the high-score and cannot become kings/queens.

The highscore numbers are just for bragging and have no actual influence on
gameplay or anything.

Last you can choose a body modification. It's strongly recommended for
beginners to choose 'normal body' and NOT 'fruit bat'. ;)


(3.1b) Body Modifications
-------------------------
If you selected a modified (ie non-normal) body, it will be displayed in the
"Sex" line on your character sheet, appended inside parentheses to your gender.


Normal body
-----------
This is what you should pick in most cases and especially as a new player.


Fruit bat (dubbed "batty", less limbs than normal body)
-------------------------------------------------------
A fruit bat is like a normal character, just not in humanoid shape but in bat
form! Fruit bats cannot equip weapons, boots or gloves.
These restrictions won't change even if they choose a class which can make use
of mimicry and thereby mimic a humanoid form (druid fruit bats would in fact be
the most ineffective choice).
However, fruit bats are twice as fast as normal characters at the beginning
(they get a flat +10 speed bonus added) and their melee attacks are somewhat
vampiric, making them leech life on each hit, replenishing their hit points.
Fruit bats are said to make good explorers. If you're new to the game, it's
absolutely not recommended to try and play fruit bat.

Note that race and class will have influence on how much experience you will
need to gain a new character level. For example, High-Elves already know a
lot, so experience is hard to gain for them. In fact they will need 130% more
experience than a human.

Creation of your character is now finished and you are asked to press a key to
start the actual game. Do so and take a minute to read the text that will
appear. It is called news or motd (message of the day) and often contains
important server-specific information or announcements to the players.

If you ever get stuck in a problematic situation where you feel you either
cannot defeat a certain monster or you cannot advance your character the way
you'd like to, check out (8.3a)!


(3.1c) Character names, collisions and reservations
---------------------------------------------------
You cannot pick names of characters that are already in use by other players or
that are very similar to another player's account name.
However, if your character dies and gets erased, its name will be reserved for
you for 24 hours, allowing you to recreate it if you want to.
Certain swear words are also not allowed in character or account names.
Last but not least you cannot create an account with a name of an existing
```

character or account of someone else, but your actual account name will at the
same time always be reserved as a character name for you personally, so there
is no need to hurry and create a character of the same name as your account
just to reserve it for you.

(3.2) The display (user interface)

After you logged in with a character you will now see yourself (you are the
'@' symbol, except if you chose 'fruit bat' body, then you'll be a 'b')
in the town of Bree in the main window.
You will already have a few basic starter items equipped, so you're mostly
ready to move out. Note that Bree has already two dungeon entrances, one is the
"Training Tower" where you should go first, the other one is "Barrow-Downs",
the first 'real' dungeon. The training tower entrance is a green '<' symbol,
step on it and press the '<' key to enter. To actually locate the entrance you
can use Shift+L which will let you look around the local map. The entrance to
the training tower is somewhat south of your starting position.
Note that the Bree already has some "monsters", well, townspeople, denoted by
the letter 't'. They're all more or less hostile though so don't hesitate to
kill them off for some extra money and beware of mean-looking mercenaries and
battle-scarred veterans since these could make short work of you at level 1.
You could enter some shops (numbers and '+' symbols) and see if you find
anything affordable worth buying, maybe some armour, potions, scrolls or a
brass lantern.

You can move around in all 8 directions by using the number pad keys! You can
run by pressing the SHIFT key together with a direction key.
IMPORTANT: To run (SHIFT+direction) make sure that the Numlock key above your
number key pad on the right side of your keyboard is turned off. A green lamp
will usually indicate whether it is on or off.
Running will not work while awake monsters are in your line of sight, except
for the starting town of Bree, where running is always possible.

You can also use the arrow keys to move, but the numpad is better since it
allows you to move diagonally too, which is very important.

You can wear/wield items with 'w' (weapons, armour, light source..)
You can pickup items with 'g'. Drop items with 'd'. Destroy items with 'k'.
You can see a list of players who are currently online with '@' key. Other
 players eligible to form a party with you have their level displayed in light
 blue colour in this list. Press SHIFT+P to invoke the party menu.
You can chat with other players (say hello ^^) with ':' key.

The top right window will give an overview of your character attributes and
miscellanous abilities. The bottom right window will show the contents of your
backpack, also called inventory. All characters except ghosts have a backpack.
The bottom left window will show combat- chat- and server-messages. If most
of the windows stay totally empty, see (9.8) for possible solutions.
To the left border in the main window you see a short overview of your most
important stats:
-starting with your race
-your class
-your current title
  (the title will change as you gain experience levels by fighting monsters),
-followed by your character level
-your amount of experience
-and your money ('Au' stands for Aurum, latin for gold)
-the 'encumberment' bar (blank at the beginning)
-a mini lag-o-meter bar displaying your 'ping' by coloured plusses, 1 plus
 symbol means your latency is below 50ms, each further plus symbol means 50ms

more, so if you see +++ your latency is between 100 and 149 ms.
-your 6 character attributes:
 STRength, INTelligence, WISdom, DEXterity, CONstitution, CHaRisma,
-your current sanity (sound means you are completely sane, this might drop, for
 example if a mindcrafter blasts your mind with psionic energy, leaving you
 mad)
-then comes your Armor Class (AC) which describes how well you are protected
 by all the armor you're currently wearing.
-The next two values are most important and will change all the time while
 fighting monsters.
 They are your Hit Points (HP) and Mana Points (MP), current/maximum values.
 The current hit points (Cur HP) tell you if you are injured. If they drop
 below zero you die! If they are the same as your Max HP then you are fully
 healed.
 Mana points are very important for classes that can cast spells or recite
 prayers, since they determine which spells and how many of them you can cast.
 A list of all spells and prayers can be found at (7.8).
 If your current MP or HP are low and you wish to regenerate them faster, you
 can press SHIFT+R to rest. While resting, regeneration is greatly increased.
-Next entry is your stamina (ST), if you chose a class that makes use of it.
 Stamina may allow you to employ special techniques accessed with 'm', see
 chapter (7.12) for details. Maximum stamina is always 10.
 If your current ST is low and you wish to regenerate it faster, you can press
 SHIFT+R to rest. While resting, regeneration is greatly increased.
-Below stamina is a 'flag bar' which displays certain combat-related modi of
 your character, if available to your class:
 -Combat stance (Bl = balanced, Df = defensive, Of = offensive, see (7.2))
 -Dual-wield mode (DH = dual-hand aka default, MH = main hand only, see (7.2))
 -Fire-till-kill toggle (FK = enabled, see (5.2a))

Below that, there are further status indicators such as
-your current world map location (sector 32,32 aka the starter town of 'Bree'
 when you log in for the first time) and the 'AFK' status indicator
-as well as your food indicator ('full' by default). Note that if you don't
 eat when you become hungry you might get paralyzed sporadically and eventually
 even die of starvation!

In the lower middle to lower right area of the bottom status line of the main
window, you find:
-your speed (Normal, Slow or Fast)
-your number of melee attacks per round (BpR aka blows per round)
-your current depth or town. If you are in a town the town's name is displayed,
 otherwise the dungeon depth (negative numbers) or tower height (positive
 numbers) are shown, either in feet (each level equals 50 ft) or in levels,
 depending on your configuration. So if you stand on the world surface (0 ft)
 and enter a dungeon, you'd end up at -50 ft.
 This number can also have different colour, indicating some things:
 -A white number means no special effect.
 -An orange number means that Word of Recall magic is pending.
 -A yellow number means that your character's level is somewhat too high
  compared to the dungeon/tower level you are on, and therefore you will get
  greatly reduced amounts of experience points.
 -A grey number means that your character's level is way too high compared to
  the dungeon/tower level you are on, and therefore you will not get any
  experience points at all here.
 -When you spend about 2 minutes on a dungeon floor, a light blue asterisk '*'
  will appear behind the depth indicator, or if you are in a town the town's
  name will change colour to light blue.
 This means that on the next dungeon floor you enter you will receive an extra
  feeling, displayed in yellow colour, that tells you some rough information
  about the dangers lurking there. For more information see (4.8).

Note: There are certain areas in the game that inhibit teleportation, mostly
so-called "no-teleport vaults". These areas are extremely dangerous because if
a monster summons other monsters around you, you might not be able to escape!
If you enter such a no-tele area, it will be indicated as described in (4.8)
under "vault feelings".

By the way: If you enter the game and find that you don't like your
character and want to recreate it from scratch, you can suicide by pressing
'Q' (capital Q), followed by confirming the question if you really want to
commit suicide with 'y' and then finally verify your suicide with '@' key.
Note that a suicided character is completely and permanently gone (as is a
no-ghost/hellish character on mundane death).
Also see (0.2) for some details about suiciding.

(3.2a) The encumberment bar

Between AU and the mini lag-o-meter is a line indicating if you are encumbered
in any way. This line is blank by default, but may start to show little
coloured icons if your character becomes overburdened in some way.

If you are new to the game, you can skip the rest of this chapter for now,
as long as your encumberment bar doesn't show any icons in it, and continue
reading at (3.3) down below.

This line consists of the following icons that may show up:
(Order: From left to right; program code 'nicknames' added in parentheses)
      Brown (Your armour is too heavy (tohit/sneakiness penalty).
                      (cumber_armor)
      Red /   Your weapon is way too heavy for you.
                      (heavy_wield)
      Red \   Your tool is way too heavy for you.
                      (heavy_tool)
                      You will receive extreme penalties on melee combat.
      Orange \   Your weapon isn't fit for your character (e.g. priest
                      using edged non-blessed weapons such as swords, vampires
                      or hell knights using blessed weapons in turn).
                      You'll receive a big penalty on hit chance and damage
                      and an increase to spell casting failure rate.
                      An orange warning message will display:
                      "You do not feel comfortable with your weapon."
                      (icky_wield)
      Yellow /   You are using a 1,5-h weapon together with a shield.
                      This is possible, but you will receive a penalty on
                      hit chance and damage.
                      (awkward_wield)
      Green | You are using a 1h weapon two-handed and get a small
                      bonus from that (works only for some of the weapons).
                      (easy_wield)
      Red [Your shield is way too heavy for you.
                      You will receive extreme penalties on block chance.
                      (heavy_shield)
      Red }   Your ranged weapon is way too heavy for you.
                      You will receive extreme penalties on ranged combat.
                      (heavy_shoot)
      Yellow }   You are using a shield on your arm, reducing your
                      accuracy with your ranged weapon.
                      (awkward_shoot)
      Light-red 'F'   You are Martial Arts user and your backpack is too
                      heavy, so that you don't receive Free Action from MA!
                      See (5.3a) for more detailed information.
                      (cumber_weight)

```
Yellow (        You are Martial Arts user and your armour is too heavy.
                You might receive various penalties (see (5.3a)).
                NOTE: Up to client version 4.4.2 this can stand for both,
                the meaning described above and the meaning of 'Blue ('
                described below. Starting with 4.4.2a, these two were
                separated into yellow and blue '(' icon.
                (monk_heavyarmor)
Blue (          You're a rogue or using primarily rogueish skills such
                as dodging or Dual-wield which depend on especially
                flexible armour (meaning: Your total armour weight must not
                be too high), but your armour is exceeding that limit!
                You will lose some of the benefits, see (5.5)!
                (rogue_heavyarmor)
Violet (        Your armour is so heavy that it reduces your MP.
                This only affects classes that have a mana pool.
                (awkward_armor)
Violet ]     a) Your gloves are not made for spellcasting or too heavy,
                reducing your MP.
                (cumber_glove)
             b) Your headgear is too heavy, impacting your ability to cast
                mindcrafter school spells, reducing your MP. Only affects
                characters who have trained in one or more of the
                mindcrafter schools.
                (cumber_helm)
```

Also see (5.3a) and especially (5.5) for more information about encumberment,
and for specific details about penalties that are applied.

(3.3) Chat, chat messages and chat modes

You can chat with other players by pressing the colon key ':' to enter the chat
prompt, once you have joined a game with your character.

In general, don't hesitate to ask questions. Players are usually willing to
help you with the beginnings. Keep in mind that players often don't have time
to look at the chat while they are fighting monsters, that means if you write
to someone while he is in the dungeon, he often likely won't notice your
message. Politely try again after some time, and make sure to address him by
his character (or account) name, as that will cause the name to be highlighted
in the message he receives, so it may catch his attention better.

You can scroll back through all messages you have received since logging on by
pressing CTRL+P, or to look only at chat/important messages by pressing CTRL+O.

Please do not use foul language in chat. If you do, depending on the server
settings you might end up in jail.
Also, foul language is filtered by default. If you want to turn that off,
press =1 and toggle the client option "censor_swearing". (Requires client
version newer than 4.4.8a.)

All normal text you type in the chat prompt becomes a global message, visible
to everyone currently logged on (and possibly on IRC too, see (1.1b) for info).
However, of course you can also send a private message to someone specific.
To send a private message to someone, type: <name>:<text>
Example: Hi!   <- goes to everyone, aka public message
            C. Blue:Hi!   <- goes privately to the character named 'C. Blue'.
                              Note that you can also specify his account name
                              instead of his character name.
                              You don't actually need to type out the full
                              name, the first few letters are enough, just so

that the result is distinct from anyone else's
name who is currently logged on.

In chat messages you can type a double colon '::' to force output of a normal
colon ':' instead of having it interpreted as separator for a private chat
message. Most smileys are recognized automatically and don't require you to
enter a double colon.

In the chat prompt, you can also press CTRL+p and CTRL+n to scroll through the
past messages you typed, in case you want to repeat one of them. See (0.2a) for
a list of all such text-editing keys.

Another thing you can do in the chat prompt, aside from typing in an actual
chat message, is to type in a 'slash command', that are certain commands that
all begin on a "/", for example: /afk   or   /ex
You can see a list of slash commands in (0.2b).

Colour codes

You can use colours in your chat messages. To change the message colour,
put a '{' followed by a colour code somewhere into your message line.
Example:
        {pHi!   <- results in a 'poison-coloured' Hi!
        I see some {vh {Bto the east
                             <- results in "I see some h in the east"
                                where the 'h' is violet. The rest of the
                                message is light blue (standard colour).

If you cannot see coloured messages in your secondary Tomenet windows other
than the big main window, check your client option settings by typing =2
and looking for 'Show animated text colours in sub-windows' (recall_flicker).
Set it to 'yes'.

If you want to type the character '{' in a chat message, rather than using
it for a colour code, type it twice '{{'. It will become '{'.

Here is a list of colour codes (try not to annoy your fellow players :))
    d black   b blue   B light blue
    D dark grey   g green   G light green
    s slate (grey)   r red   R light red (pink)
    W white   u umber   U light umber
    w bright white   y yellow   o orange   v violet

    a acidic   c cold   e electric   f fire
    p poison   L light flicker   h half-multi   m multi
    A dark flicker   S sound   C confusion   H shards
    I invulnerability M disruption shield

There are extended colour codes available since 4.5.2 (some in later clients)
    P psi   x nexus   n nether   q inertia
    T disenchantment   F force   V gravity   t time
    E meteor   N mana   Q disintegration Y water
    i ice   l plasma   O detonation   k nuke
    K unbreath   j holy orb   J holy fire   X hellfire
    z thunder   Z ember   0 starlight   1 havoc
    2 lamp light   3 dark lamp light 4 menu selector   5 palette test

To return to the previous colour, instead of specifying it you can also just
use '{-', for example: {rRed Text{gGreen now{-Red again.

Note: 'multi' colour is also the 'chaos' colour for any chaos-based attacks.

To see the actual colours in-game, log in and type the /col or the /acol
command in chat, to see all colours (col) or animated colours (acol) in action.

Name colours

You will observe that character names in chat lines have different colours too,
indicating character modes (see (3.1a) for more info about modes):
  White   Normal mode player.
  Light blue   Everlasting mode player.
  Dark grey   No-ghost / hellish mode player.
  Light grey   Soloist mode player.
  Yellow   Player is a PvP mode character.
And indicating special character status:
  Violet   Player character is a 'winner' ie has beaten the game boss,
                 Morgoth, the Lord of Darkness.
  Red   Player is a ghost (ie dead, maybe ask if he needs help)!
  Dark blue   Not a player but a game administrator.

Chat modes:

After pressing ':' key to enter chat mode, you may press TAB key to switch
between the three chat modes:
-normal
-party chat: All messages are sent exclusively to your own party.
-level chat: All messages are sent to everyone on your dungeon level.
-guild chat: All messages are sent to all your fellow guild members (if any).

Note: While TAB cycles forward, you can also press CTRL+U to cycle backwards,
CTRL+A to switch to 'normal' mode, CTRL+T to switch to 'party' (team) mode,
CTRL+G for 'guild' mode and CTRL+F for floor mode (current dungeon level, or
gets converted to a "/say" action if not in a dungeon).

Also you can use the following prefices in the beginning of a chat line,
to get similar behaviour as in one of the chat modes just for one line:
!:   Sends the following text to your current party.
$:   Sends the following text to your current guild.
#:   Sends the following text to everyone on your dungeon level.
       Note: While in town this will instead become a /say.
%:   Sends the following text to yourself (eg for feedback in macros).
%%:   Sends the following text to yourself, qualifies as 'chat message'.
+:   Sends the following text to the last person who whispered us a private
       message, so it's sort of a 'reply' function.

Last but not last you can use the following slash commands for chat effects:
/me   Sends an 'emote' chat message, eg "/me frowns".
/s   short form of "/say", will say something locally that is only "audible"
       aka visible to other players that are close to your current location.
       Eg "/s hello there, so we meet in this place!".

Copy/paste from and into chat:

Similar to message scrollback (CTRL+O/P), you can copy/paste while in the chat
prompt, too:
CTRL+K will copy the currently written text in your active chat prompt to the
OS clipboard (requires xclip to be installed on Linux/Mac OS X), and CTRL+L
will paste the current OS clipboard into your chat prompt, thereby erasing
anything you were aleady typing in).
Double-tapping CTRL+K will specifically attempt to extract an URL from your
chat input and copy that one to the clipboard.

(3.4) Inventory and equipment

In TomeNET, your character has two different 'places' for items:
Inventory and equipment.

Your inventory is your backpack - if you pick up loot from the ground, it will
in almost all cases land in your backpack aka inventory.
Your inventory is displayed in a sub-window of its own, labelled 'Inventory'
appropriately. Asides from that you can also invoke your inventory in the main
window by pressing the 'i' key.
Inventory slots are indiscriminate, the order doesn't matter, you can always
access any item equally, no matter where in your backpack it resides.
All items in your inventory are ordered automatically by their type and some
other parameters, determined by the game server. Their order therefore cannot
be modified by the player. An exception is ammunition, which can be rearranged
at least within all stacks of ammunition currently in your inventory, allowing
you to create your desired auto-load order to work with the !L inscription.
In order to rearrange ammunition stacks, just drop them and pick them up again.

Your equipment, in contrast, are all items that you are wearing on your body.
The equipment consists of defined slots that fulfil a specific purpose each.
Like the inventory, your equipment has its own sub-window, labelled 'Equipment'
and again you can invoke it anytime in the main window too by pressing the 'e'
key.

Equippable items can only be active while equipped:
Weapons, armour, magic rings and amulets, a lantern or a digging tool, ammo in
your quiver - all of these must be equipped (via 'w' key to wear/wield an item)
in order to have effect.
If you don't want to use a certain item anymore, you can take it off again with
't' key (or 'T' in rogue-like key set), putting it back into your inventory.

Light sources that run on fuel (torches and brass lanterns) will put the fuel
consumption on hold while in your inventory. Their fuel will only be consumed
while you have them equipped.

In many item prompts, such as when identifying or enchanting an item, you will
see the option to press the '/' key to toggle between inventory and equipment,
so you can for example enchant your weapon without having to take it off first.
Also, item prompts will allow you to press '*' key to see the full list of
potentially eligible items (for whatever action the prompt is about).

Inventory and equipment can both take damage sometimes!
In general, your backpack (aka inventory) is much more prone to damage, while
your equipment will only rarely take damage, usually when fighting nasty
elemental monsters that for example cause your weapon to corrode on hit.
For details see (5.10) and for equipment specifically (5.10a).
If you find a great item, for example from Smeagol, Wormtongue or Robin Hood
early on, it can be a good idea to equip the item immediately ('w' key) so it
is much less likely to get destroyed by some unfortunate elemental attack in a
subsequent fight before you finally reach town.

Unused equipment slots can still be useful to carry more loot back to town for
selling. For example, even if your character doesn't use a shooter weapon, you
can still place some expensive enchanted ammunition you found into your quiver
to free up one inventory slot, and -when you are back in town- even sell it
directly from your quiver to a shop.
Or if you are a martial artist who doesn't use weapons but your inventory is
already full and there is another expensive weapon on the floor you'd like to

haul back to town to sell it, you could just equip it anyway to just use that
weapon slot in your equipment as a +1 extension of your inventory, and then
teleport back to town right away (via a scroll of Word of Recall).

Paste item (also dubbed "link item") to chat:

You can paste an item's name (including its inscription) to chat by pressing
either 'i' for inventory or 'e' for equipment and then SHIFT + slot letter.
For example if you have an item "b) a Dagger" in your inventory, you would
press 'i', then 'SHIFT+B' to paste it into chat.
While you are inside a shop, you can also paste items offered by the shop to
chat by pressing the 'c' key and then the shop item's slot letter.
Another method to insert items into your chat messages is to use the \\x tag
for inventory \\X for equipment, and \\\x for shop items. Finally, there is
the _ tag for pasting items under your feet (ie on the ground on the grid
you are currently standing on), where 'x' stands for the slot letter and 'X'
stands for SHIFT + slot letter. So for example to mention your equipped
weapon, which is in equipment slot 'a)', you could write this chat message:
"Hey everyone, look at the \\A which I'm wielding."

(3.4a) Subinventory aka Bags

Starting in game version 4.8.0, there are 'container' items, bags and chests,
that provide a small inventory in themselves, thereby extending your total
inventory space.
However, you can only ever use one of each bag type at the same time.

Currently, bags themselves cannot be stolen by monsters, just items inside
them can get stolen same as for other items in the normal inventory.

If a bag gets destroyed by an elemental attack of any kind hitting the player,
all items inside are placed into the normal inventory, possibly overflowing it
if there is not enough space, resulting in the excess items getting dropped to
the ground.
Currently, only chests can be destroyed by elemental attacks, specifically all
wooden chests by fire, and all chests in general by acid. Other bags are safe.

To stow items from your inventory into subinventory, press 'i' first to
invoke your inventory, then 's' to stow an item or stack of items.

Subinventory can be browsed via 'b' (same key as used for browsing books).
While browsing subinventory, you can press 's' to unstow an item or stack,
putting it back into your (normal) inventory.
Alternatively, just for a quick check of contents, you can inspect (SHIFT+i) a
subinventory container. You cannot interact with the contents this way though.

To make your complete subinventory (ie the contents of all your bags) visible
at any time, you can enable a new terminal window for it via = w which is
indexed as "Display subinventory". To enable more terminal windows, go to = f
and press 'v' on a selected inactive terminal to toggle its visibility.

If you drop or destroy subinventory container item, all items will be removed
from it and placed into your inventory. Items that don't fit in will be dropped
to the ground instead.
If you carry two containers of the same category, you will only be able to use
one of them.

There are four categories of subinventory containers:

– Chest
  Using chests is not very feasible as their weight is usually very high and

will hence slow you down, while they at the same time do not provide much
space really, but anyway:
When you empty a chest you found, it turns into a 'usable' chest and you will
be able to store a few of your own items in it.

In general, you cannot access or do much with items inside chests, for
example you cannot quaff potions or read scrolls. Only the generic commands
(listed further below) will be usable.

- Alchemy Satchel
  This satchel stores chemicals and mixtures related to the Demolitionist
  perk acquired via Digging skill (7.2), and allows you to mix chemicals right
  from within it via 'a' key, while browsing the satchel.
  Alternatively you can activate them from the outside as usual with SHIFT+A,
  but for client versions older than 4.9.2, you must then use the '@' feature
  (call by item name) in the prompt, or simply create a macro using the macro
  wizard, which creates call-by-name macros.
  If you pick up chemicals or mixtures they will be auto-stowed into this bag
  unless inscribed (see further down).
  Satchels are sometimes sold by the Alchemy Shop in town.

- Trap Kit Bag
  This bag compactly stores a surprising amount of trap kits and allows you to
  deploy them straight from within.
  (For client versions older than 4.9.2, you must use the '@' feature (call by
  item name) in the prompt, or simply create a macro using the macro wizard,
  which creates call-by-name macros.)
  If you pick up trap kits they will be auto-stowed into this bag unless
  inscribed (see further down).
  Trap kit bags are sometimes sold by the General Store in town.

- Antistatic Wrapping
  This bag can hold magic devices that do not require a directional activation
  (all staves and some rods) and allows you to use them straight from within.
  However, it actually requires decent expertise in magic-device handling,
  so your character will need at least 15.000 in either 'Magic Device' skill
  or in 'Trapping' skill (as trappers are proficient in magic-device-based
  trap kit handling too).
  (For client versions older than 4.9.2, you must use the '@' feature (call by
  item name) in the prompt, or simply create a macro using the macro wizard,
  which creates call-by-name macros.)
  Just pay attention that you use % z J (and not % z k) to create the macro.
  Unknown rods are never eligible to be placed in this bag.
  Note that !C inscription (to alert when charged) on your magic devices works
  just fine when they are inside bags, just as usual.
  If you pick up fitting magical devices they will be auto-stowed into this bag
  unless inscribed (see further down).
  Wrappings are sometimes sold by the Magic Shop in town.

- Potion Belt
  This utility belt can hold potions for you, ready to use on demand, thereby
  alleviating the load on your precious inventory space.
  (For client versions older than 4.9.2, you must use the '@' feature (call by
  item name) in the prompt, or simply create a macro using the macro wizard,
  which creates call-by-name macros.)
  If you pick up potions, they will be auto-stowed into this bag unless
  inscribed (see further down).
  Potion belts are sometimes sold by the Alchemy Shop in town.

- Food Bag
  This dry bag can store all kinds of food, such as rations, mushrooms and for
  the sake of gameplay even pints of ale/wine :-p.

It has a relatively high capacity, allowing you to carry various special-
purpose mushrooms without taking up main inventory space.
(For client versions older than 4.9.2, you must use the '@' feature (call by
item name) in the prompt, or simply create a macro using the macro wizard,
which creates call-by-name macros.)
If you pick up food, it will be auto-stowed into this bag unless inscribed
(see further down).
This is by far the cheapest bag and often sold in the General Store in town.

For client versions older than 4.9.2:
From outside the subinventory you cannot access any items inside except if you
use the '@' (call by item name) feature in the item prompt.
Since the macro wizard actually creates call-by-name macros anyway, you can
just use it if you are unsure.

A few generic commands are always available from within subinventory:
  - Chat (:).
  - Screenshot (CTRL+T for xhtml file, CTRL+SHIFT+T for PNG image file).
    The xhtml files take up extremely little space and can be viewed in any
    web browser. The screenshots are saved to the lib/user folder on POSIX
    clients (Linux/OSX) and to the tomenet-user folder on Windows clients.
  - Inspect item (x).
  - Drop an item (d).
  - Destroy (kill) an item (k or CTRL+D).
  - Inscribe or uninscribe an item ({ or }).
  - Pasting an item into chat via SHIFT+slot.
  - Unstow item, ie put it back to inventory (s).

Also while inside a store you can still 'b'rowse a bag and then directly sell
an item from within it via 'S' (capital 'S' instead the usual lower-case 's').

There are also inscriptions that can be put onto these bags (don't mix them):
  !A Do not auto-stow items into this bag.
  !A0 ..except if this item can stack with already existing items in the bag.
  !A1 ..except if they are at least similar(*) to existing items.

  !O Do not auto-stow unowned items (ie new loot) into this bag.
  !O0 ..except if this item can stack with already existing items in the bag.
  !O1 ..except if they are at least similar(*) to existing items.

  !S Only auto-stow items into this bag when buying from a store.
  !S0 ..and only if this item can stack with already existing items in the bag.
  !S1 ..and only if they are at least similar(*) to existing items.

  (*) 'Similar' just means they can stack with the item, but there might not
      be enough space to get fully absorbed into the existing stack.
      So only part of the items may stack and the rest or even all of it has
      to be placed into a fresh, empty bag slot.

  Also see !S inscription for items, which prevents auto-stowing an item.

The inscriptions !d and !s have a special, additional QoL function when used
on bags: They will prevent storing the bag in a list house. Either one works.
This way you can be sure when stashing items into a house that you don't
accidentally 's' a potion belt that is currently in use, resulting in quite
an annoyance etc.

(3.4b) Start-up equipment

Every new player has some items right from the beginning, in the past those
came stored in the inventory but nowadays they are immediately equipped.

As a warrior you will have a chain mail and a weapon, for example a sword. Start-up equipment always has level 0 and cannot be used by other players!

If you find further items you can equip them with 'w' key - you will be asked which item you would like to wear or wield, choose the letter in front of the item inside your inventory, for example e) if the item is the fifth item in your backpack.

Make sure that you have a lightsource ready to be equipped, like a torch or a lantern. If it is night in town that will help you to see anything. Inside a dungeon most passages and rooms tend to be dark so you should always have a lightsource equipped while in a dungeon.

Startup items that you don't want to use you may simply destroy with 'k'. In town, you can see rectangular blocks that rensemble buildings. These are the town stores. They each have an entrance, rensembled by a number '1' to '7' as well as '9' and '+' symbols. These are the different shops that you can enter to sell or buy items. It is recommended that instead of using your torches, buy a brass lantern from store '1' (General Store), because a lantern provides more light, increasing your radius of sight in the darkness. Also buy a flask of oil for your lantern to refill it if it runs out of oil (press SHIFT + f).

Press '?' to see an in-game introduction and overview of the keys and commands that you may use. For example 'e' will show your currently equipped items. You can chat with other players using the ':' key. This way you can also enter certain commands like /fill to fill an empty bottle with water of a fountain. At the beginning, all players receive a parchment with their start-up equipment. It's the "Gazette". Press 'r' to read it. It may contain some notes about the server or tips for newbies.

(3.4c) Item basics

When you've logged in and look at your inventory (your backpack, basically), ie the items your character starts with, you will see various item names that give you some sort of idea what the item is good for, along with some cryptic numbers and brackets.
The meaning of these will be explained here:

a Ration of Food {+,0}
    Pretty straightforward, this is an item that you can consume if you
    get hungry. To do so, use SHIFT+e to 'eat' this item.
    The {..} part means the following:

    The number in it is the level required to use this item. 0 means that it
    was given to a character by the system on birth, or some other special
    event and cannot be traded to other players.

    The '+' symbol means that you own the item. If it was someone else's ration
    then you would see his name written there instead of the '+', for example:
    a Ration of Food {Gandalf,0}.
    If the owner died and the item hasn't been picked up yet by someone else
    who meets the level requirements, it will display a '-' instead of a name,
    meaning it has been owned, but the owner died. Example:
    a Ration of Food {-,0}.

    If you own an item or found an item, then the level requirements won't
    matter. Even if they are much higher than your level, you can still use it.

    The level requirements are only important for TRADING an item:
    If the character who receives the item is too low to match the level
    requirement, he won't become the owner of the item and therefore will be

unable to use the item until he reaches the level. He can still carry the
item in his inventory though, but it will be displayed in dark grey to him,
indicating that it isn't usable yet.

Note that you usually can neither trade nor sell items that are level 0.
Food (and possibly some other very basic items such as torches) is an
exception to this rule, since it can be traded (but not sold) even if it
is level 0.

For those interested in more details, that item level is roughly determined
based on the following factors:
  - Base item level (the dungeon depth where it starts popping up)
  - A slight increase for when it's found on even much deeper floors
  - An increase depending on ego powers it possesses.
Some items have special level requirement calculations, for example the
level of a ring of speed is directly tied to its +speed value.

a Chain Mail {+,0} (-2) [14,+0]
    The {..} part is already known, it's the same as for the ration described
    above. What's new is the [..] part, which all types of armour have:

    The (-2) part is a to-hit malus. This armour reduces your to-hit value by
    2, because of its bulkiness. Lighter armour has -1 or no to-hit malus,
    heavier armour may have even more than -2.

    Rectangular brackets [..] describe 'Armour Class' or short AC. AC is a
    number that tells you how well the item helps to protect you when a monster
    (or a player whom you duel) hits you.

    The first number stands for the item's 'base AC'. All 'Chain Mails' have
    the same base AC of 14. All 'Metal Caps' have a base AC of 3, and so on.

    The second number, here a +0, can vary: It is this item's magical
    enchantment. It is simply added to the base AC to determine the total AC
    this item provides.

    For example a Chain Mail [14,+3] is magically enchanted 3 times, and
    therefore will provide you with 17 AC instead of just 14, ie 14+3.
    The armour class helps for both: Reducing the chance to get hit, and
    reducing the actual damage you suffer in case you are hit.

    Likewise, if you fight an acidic monster for example, the acid might damage
    your Chain Mail, and turn it into for example a Chain Mail [14,-2].
    This Chain Mail only provides you with 12 AC. You could 'repair' it
    by buying two 'Scrolls of enchant armour' from store 5 in town to enchant
    it back to +0, but the cheaper way would be to use the 'repair' service
    instead which is offered in the armoury (and also at the weaponsmith's).
    Note that enchanting items by using scrolls to anything above +0 has a
    chance to fail, depending on how high it has already been enchanted.

a Small Metal Shield {+,3} [17%]
    Shields are special in that they do not provide AC (armour class) but
    instead a base block chance, specified in [..] brackets.
    This chance is modified by various factors such as character class and type
    of attack, to determine the real case-by-case block chance.
    In general, characters that are 'superb' at blocking (see table in (7.5))
    will use this chance as base in all blocking calculations, while anyone
    worse than 'superb' will mean that the character gets this base block
    chance somewhat reduced.
    Example values of the actual chance can be checked in 'm' menu.
    For a complete rundown on parrying and blocking, see (7.11).

```
a Long Sword {+,0} (2d6) (+0,+0)
    Again the {..} part is already know. What's new for all types of weapons is
    the (2d6) and the (+0,+0) part:

    Like in Dungeons & Dragons, on which rules some aspects of the game are
    loosely based, when your character attacks a monster (or another player),
    dice are cast to determine the amount of damage your blow deals.

    The (2d6) mean that when you hit someone with this weapon, two dice of six
    sides each are cast, so you may deal anything from 2 to 12 damage randomly.
    (The real damage the target suffers can possibly be further reduced by the
    target's armour class or protective magic.)

    Similar to armour, weapons can be enchanted too. This is the second pair of
    brackets: (+0,+0).

    The first +0 means that this weapon has no magical enchantment to its hit
    chance, ie how likely it is to hit a target.

    The second +0 means that this weapon has no magical enchantment to the
    damage it deals. Example:
    a Long Sword (2d6) (+5,+6) would add 5 to your hit chance, which isn't very
    much, but still better than nothing. Probably worth more is the fact that
    it also adds 6 to your damage dealt!
    This means on each attack it will deal 2d6 +6 damage, which would be
    anything from 2+6 to 12+6, ie 8..18. As you can see, this is a considerable
    improvement over 2..12 of an unenchanted Long Sword.

    Note that training weapon-related skills will also add to your overall
    +damage bonus. So your character might have +34 to-damage using a mere
    Long Sword (2d6) (+9,+15), with the remaining +19 damage coming from your
    'Sword-mastery' skill that you trained.

    Also note that often it can be better to wield lighter weapons instead of
    heavier weapons, if you can attack more often during each round with them.
    Example: A light dagger might allow you to attack 3 times, while a heavy
    two-handed sword will only allow you one swing each turn. Here you will
    have to do some math with the weapon dice, your total +damage from weapon
    and skill, and the number of blows/round you get with each weapon, to find
    out which setup is best for your character at a given time.

a Long Bow {+,0} (x3) (+0,+0)
    Ranged weapons all have a 'multiplier' given in the first pair of round
    brackets, and the (+hit,+dam) enchantments already known from normal melee
    weapons.

    The multiplier, here x3, means two things:
    a) how far you can shoot
    b) by how much the damage dealt by your arrow (or shot or bolt, depending
       on the weapon type) will be multiplied.
    This means that enchanting a ranged weapon's damage is especially effective
    because the +damage bonus will also be multiplied by the weapons's factor!
    Example: a Long Bow (x3) (+2,+4) will actually add not +4 but 3x+4 = +12
    damage to each shot! This is why archers should try to visit store 5 as
    soon as possible to buy some 'Scrolls of enchant weapon to-dam' from it,
    to enchant their bows or other ranged weapons.

a Wooden Torch {+,0} (with 2500 turns of light)
    Not much new here, except that this item has a 'timeout' given in turns.
    After having this item equipped for 2500 turns (about half of that in
    seconds, very roughly), the torch will be depleted and not produce any
    more light, so you can drop/destroy/sell it, or press SHIFT+f to add
```

a fresh torch from your inventory to your almost depleted one, thereby
refueling it (this makes sense if you are using a torch that provides
special magic powers).

Finally, about digging tools: If you buy a shovel or pick from store '1' to
dig up treasure veins, it looks like this:
a Pick {+,1} (0,+2) (+1)
    The to-hit and to-dam bonus slightly increase the item's digging power.
    The main factor though is the (+1). For digging tools, this bonus describes
    their main digging power. (Each (+1) point is worth 20 points of either
    to-hit or to-dam enchantment effect regarding digging.)
    Also, the weight of your digging tool also has some effect, the heavier the
    better (each lb is worth as much as 1 point to-hit or to-dam enchantment).
Later on in the game you might find 'ego' digging tools, for example:
a Pick of Digging {+,9} (+5,+9) (+1) (+3)
    It's basically same as the normal pick, except it has a second (+3) mod at
    the end. This belongs to the 'of Digging' suffix and, same as the (+1),
    further increases the digging ability, in the same way the (+1) does.
    So overall you can just view it as if it was a Pick (+4) (1 plus 3).
(See (5.17) for details about digging.)

While you can (via Shift+w) equip a digging tool in your weapon slot and then
use it as both, a weapon and a digging tool, you won't get mastery-specific
boni applied as digging tools count as neither of any of the weapon classes.

Asides from basic items with simple enchantments as shown above, you will also
find items with "ego powers" (such as the aforementioned Pick of Digging).
These have "named" powers added as prefix and/or suffix to their name. Each
item can have up to two ego-powers that way, one prefix and one suffix. Items
with two ego-powers are dubbed "double-egos" in TomeNET slang.

Finally, at the top of the item pyramid you will find "artifacts". These can
have way more powers than most ego items, even more than double-egos.
There are two types of artifacts, true (or 'static') artifacts and random ones.
While true artifacts are predefined in a list (you can invoke it with ~ 6), are
unique (only one instance of each true artifact can exist in the world at a
time) and expire after a certain time after having been found, random artifacts
never expire and are completely randomly generated so you cannot predict its
powers when you find one, you will have to use *identify* on it to find out.

For more information on item types see (5.7).

(3.4d) Item trading rules and exceptions

The following item sharing rules apply to a standard server configuration.
It is possible that a server runs certain alterations of some aspects.

Trading items between characters of different mode

Usually items cannot be exchanged between characters of different modes, eg
everlasting mode, pvp mode and other modes.
Normal mode and unworldly mode characters can exchange items though, they are
basically unified as 'non-everlasting' mode aka 'scoreboard mode'.
They too cannot exchange items with pvp mode characters though.
Game pieces are an exception and can always be used by anyone.

(If the server is running a non-standard configuration, it might be possible
for everlasting or pvp characters to actually pick up items from other modes
but not vice versa.)

Trading zero-level items

Level 0 items, which are either starter items, special boss drops or event
reward items can only be used by the first owner and are unusable by anyone
else. Certain event parchments can actually be traded despite being level 0.

Exceptions for emergency cases

Certain items can always be traded, no matter the item level or owner mode (ie
everlasting vs non-everlasting vs pvp). They will in turn receive a 100% value
discount on trading. Those items are:

Torches, food, scrolls of satisfy hunger, oil flasks, Word of Recall scrolls.
These items will get a 100% discount when they are exchanged between modes.

An exception for level 0 items are the following starter items:
Torches, food, scrolls of satisfy hunger.
They too will get a 100% discount and their level will actually change to 1.

Other items that can always be picked up by anybody:
-Amulets of the Highlands (used in the Highlander Tournament event)
-Game pieces (eg chess, heavy ball)

Special restrictions

Items usually cannot be sent via telekinesis if the target player does not
meet the item's level requirements.
True artifacts usually cannot be picked up by a player who does not meet the
item's level requirements, and they cannot be picked up by 'winners'
(characters who have beaten Morgoth) either.
Some items can only be used by 'winners', these items cannot be sent via
telekinesis to a non-winner either.

Dungeon-specific exceptions

In the ironman deep dive challenge (IDDC) and in the Nether Realm dungeon,
items can actually be traded between any character mode.
Within the IDDC, item levels don't even have any effect!
For the Nether Realm, the items must have been found within the Nether Realm.
As soon as a character leaves the worldmap sector of the Nether Realm, the
items lose their ability to be traded between incompatible character modes.

(3.4e) Money

Your money is displayed as pieces of gold in TomeNET, traditionally abbreviated
to 'Au' for latin 'Aurum', meaning 'gold'. 'Au' is also the chemical symbol for
gold in the periodic table.

Any type of money on the floor is always denoted by a '$' symbol, and you can
drop money from your inventory to the floor by pressing the '$' key, and use
the letters 'k/K' and 'm/M' to denote 1000x and 1000000x, eg you can drop 2m
or 2m43 or k6 to drop 2 million Au, 2.43 million Au or 600 Au.

If you find money in any other form than gold pieces, such as copper or gems,
it will always just display the equivalent gold value and be treated as such.
For example if you take a pile of copper it will say how many gold pieces you
found..worth of copper. So you don't need to calculate anything, all money

numbers in the game are always in gold pieces.

It is a good idea to 'invest' money in your character!
For example by buying consumables such as potions and scrolls, better equipment
(especially look at player stores for this, by pressing ˜P, that is tilde key
to open the knowledge menu and then SHIFT+P to open the player store search in
your web browser), or scrolls to enchant your equipment to-hit, to-damage and
also to-ac (armour class).

If you run out on money, you can make some basic amounts quickly by just going
to the Training Tower in Bree, which often has some copper or silver piles just
lying around waiting to be picked up.
When in the dungeon, know that magic devices such as wands and staves can sell
for quite a lot. Just make sure to identify them before selling because the
shops will pay extra money for their amount of charges.
Heavy armour and weaponry also sells for good cash, again make sure to always
identify any item that gets pseudo-identified (aka 'felt') as {good} so you
will receive the full worth of its enchantments and not just the base price.

Money is vital if you are everlasting mode and have the 'instant resurrection'
feature enabled in the temple: It costs a fee to activate when you die. If you
don't have enough money (your carried money and your banked money is added up
for this, so you don't have to worry about how it is distributed) then you will
not get auto-resurrected and instead just turn into a ghost.

(3.5) Preparing the first time for fighting enemies

Before you enter a dungeon by stepping onto a staircase leading into the earth
(looks like this: '>') and pressing the staircase symbol '>' you will have to
buy some more items for the following reasons:
At the very beginning a single enemy who is a little bit stronger could kill
you easily without you having a chance to escape. At the same time,
slaying strong opponents at the very beginning will give very much experience,
thus making your character rise in experience levels and in power very
quickly!
Going deep down into the dungeon with a very low character level in hope of
meeting a monster that gives lots of experience while at the same time is not
too hard to kill is called "diving" and often is kind of suicide while
sometimes very rewarding.
However, buying certain items will greatly raise your chance of escaping from
dangerous situations alive or even slaying tough opponents. Also, by buying
an item (like magic potions or scrolls) your character will remember what it
'looks like' and instantly recognize it if you find some of the same type in
the dungeon. If you find a potion/scroll unknown to your character you will
have to either use it or sell it to a shop or use a scroll of identify to find
out what it is.
So to prepare for hunting in the dungeon, buy:
-Potion of Heroism (maybe just one, for when you encounter a unique monster)
-Potion of Cure Light/Serious Wounds
-Scroll of Phase Door
 The more you can buy of those the better. At least buy one potion of Heroism
 and Cure Serious Wounds.
And if you still have spare money (this one costs a lot) a
-Scroll of Word of Recall. (See "(0.3) Important inscriptions, Word of Recall"
 for more info.)

If you are interested in more tips about preparing inventory and equipment, you
could check out chapter (8) Tactics & Strategy.

(3.6) Creating basic macros & inscribing items, predefined macros
----
Macros are absolutely obligatory, you _will_ need them, so read this
carefully and if something isn't explained well, ask your fellow players to
clarify.

In turn-based single-player rogue-like games you always have enough time to
press "q" (quaff a potion) followed by the according inventory slot, for
example b) (if there is a potion of cure critical wounds in the second
inventory slot).

However, TomeNET is multiplayer and real-time. This means you don't have
enough time to look at your inventory and search the correct letters for items
which you might need *this instance* to avoid certain death. Often situations
get hectic, for example if all of a sudden dark-elven warlocks come around
the corner while you are engaging a pack of wolves, then you need kind of a
panic button that quickly transports you out of trouble.

To comply with this need, a macro system has been implemented, allowing you to
program freely choosable keys of your keyboard to perform a series of other
keypresses or commands when pressed. These macros can also interact with
certain items of your inventory by using "item inscriptions". You can inscribe
items (with the '{' key) as often as you like to.
To remove an inscription again, use the '}' key.

Note that there is a fast method to create macros: The Macro Wizard.
If you don't want to dive into macro creation too much, just use it instead to
easily create macros for you. Press % to enter the macro menu and then z to
start the wizard, which will guide you through macro creation in easy steps.
Don't forget to 's' save your macros afterwards. The game will suggest a
filename that is your character's name with an attached '.prf' suffix, you
should just press ENTER key to accept that suggestion, as this will make the
macro file automatically loaded whenever you log on with that character.
See (3.7c) for more info on the macro wizard.

Predefined macros:

There are also a few predefined macros on some keys, so you can use these
right from the start without creating any additional macros of your own.
Some require you to inscribe an item to use with it (press '{' to inscribe):

```
Key        Purpose of the Macro                   The macro   Inscription
                                                  itself      on the item(s)
----------------------------------------------------------------------------
F1  fire with ranged weapon at closest target     \e)*tf-
    (you can inscribe your ammunition:  != to pick it up automatically)

F2  quaff a potion inscribed @q1                  \e)q1       @q1
F3  quaff a potion inscribed @q2                  \e)q2       @q2
F4  quaff a potion inscribed @q3                  \e)q3       @q3
F5  read scroll inscribed @r1                     \e)r1       @r1
F6  read scroll inscribed @r1                     \e)r2       @r2
F7  read scroll inscribed @r1                     \e)r3       @r3
F11 throw item inscribed {bad} at closest monster \e)*tv@bad\r-  {bad}
F12 use any kind of item.                         \e)*t/1-    @/1
    If it's a ranged magic device then use it on the closest hostile target.
    (Your magic device ability determines your chance of successfully using a
    magic device, so it won't take you too many tries to activate, see (7.10))

;   Guide search                                  :/?\s
```

```
[    Repeat last chat input                    :^P\r
X    Swap equipable items inscribed @x0        w0
,    Reply to last private message             :+:
```

For example warriors will start with a potion of berserk strength. It is very
typical for newbies to completely forget about using it. So first thing you
can do is to press '{' key to inscribe the potion, when prompted type in this
inscription for it: @q2
Now whenever you press the F3 key (compare the table above) your character will
try to quaff a potion inscribed @q2, which will be your berserk strength potion
or any other potion you inscribe @q2, for example a speed potion. Note that
only the first item that matches the inscription is used, so you cannot drink
multiple potions at once this way by inscribing them all in the same way.
If your character finds (or buys) a scroll of phase door, just inscribe it @r1
and voila, likewise you will be able to phase by pressing the F5 key then.
Now the F11 key macro actually throws an item that is inscribed "{bad}" at the
closest monster. This can be used to throw bad potions that you don't want to
drink and that can't be sold at monsters, to possibly affect them negatively.
And the most tricky one maybe, the one on the F12 key:
It works with any kind of item. If you inscribe food @/1 then pressing F12
will eat it. If you inscribe a potion or scroll, then it will quaff or read it.
But to make the most use of it, you probably want to inscribe a magic device
you find, like a wand or a staff. If used with wands (or other items that
require a target), this macro will automatically target the closest monster.

Continuing about manual macro creation..

A quick note about inscribing items:
Inscriptions aren't just used for macros, but also just for yourself to help
you remember properties of an item.
Inscriptions don't just help you to remember the abilities of certain items,
they can also interact with the macro system and other aspects of the game.
Chapter (0.3) has a list of important inscriptions.

Usually if you want to quaff your potion of Heroism or read a scroll of Phase
Door, you would press keys 'q' 'c', q for quaff, then c for third inventory
slot for example, or 'r' 'd' (r for read, then d for the fourth inventory
slot, if your scroll resides here).
However, if you just picked up another potion, your inventory order might be
changed and you had to remember the new positions of your vital potion and
scroll.

Now we are going to create three macros that will instantly quaff the potions
or read a scroll of recall, no matter where in the inventory they exactly are,
on a single keypress! Inscribe the potion of Heroism "@q1", the scroll of
Phase Door "@r1" and the potion of Cure Light Wounds "@q2".
It should look like this now:
b) a potion of Heroism {+,1} {@q1}
c) a potion of Cure Light Wounds {+,1} {@q2}
d) a scroll of Phase Door {+,1} {@r1}

Now we will create macros that make use of these items. Invoke the macro menu
by pressing '%' key. Then choose "(a) Enter a new action" and enter the
following two characters and press Enter:
q1
Now choose "(h) Create a hybrid macro", then press the F1 key.
Now enter a new action, this time q2 instead of q1. Create another macro, this
time hit F2. Then Enter the third macro, r1, and choose F3 key.
Have your TomeNET client save the macros to a file on your hard disk, in your
TomeNET directory at \lib\user by choosing "(s) Save macros" and entering a

filename, or simply confirming the shown default file name which is the same as your character (recommended!).

Now if you press F1 you will automatically quaff the potion of Heroism, F2 for Cure Light Wounds and F3 to read the scroll. You are ready to enter the dungeon now. If you still have some spare money, buy a flask of oil to fuel your lantern if it runs out, as well as some rations of food in case you get hungry.
The next time you log on, you may load your previously saved macro file by invoking the macro menu again ('%'), choosing "(l) Load macros" and entering the filename. If you saved the macros to the same name as your character, they will be automatically loaded, saving you that hassle.

An even simpler way to create macros is the 'macro wizard' described in (3.7c).

The macro recorder:

Note that instead of entering an action string (such as 'q1' or 'r5'), the macro menu also provides a 'macro recorder', which when invoked will record all your key presses until you enter the macro menu again. Then the keys you pressed will be the default action that you can directly bind to a trigger key by choosing normal, command, or hybrid macro.

Note that while it is probably overkill to create macro hotkeys for items which aren't as important as healing or teleportation, inscribing them can still be helpful because it allows you to easily access them.

Example: You inscribed your flasks of oil @F1 . Now if your lantern is running low on oil you just type the keys 'F' (to fill) and '1' instead of having to search your inventory for the correct slot letter the oil flasks reside at. Same goes for other items that aren't used in time-critical situations during combat but nevertheless regularly, like scrolls of identify.

If two items have the same inscription, for example Potions of Cure Critical Wounds @q1 and Potions of Healing @q1, the item which is above the others in your inventory is chosen. So in this example you'd first use up all CCW potions, then use the healing potions because CCW are located above healing potions in your inventory. You can uninscribe items with the '}' key.

Loading macros automatically:

If you save your macros to a filename that is the same as your character's name and add a '.prf' at the end, it will be automatically loaded as you join a game with your character, which is very helpful!
Example: If your character is named 'Kinkan', save the macros to Kinkan.prf to have them loaded automatically.
Note: If you're using a Linux version, remember that the file system is case-sensitive, so don't save your macros to 'kinkan.prf' since your character actually starts with a capital 'K' or the file won't be loaded. Make sure the filename and character-, class-, race- or trait-name are exactly the same ('Dwarf.prf', 'High-Elf.prf', 'Ranger.prf', 'Enlightened.prf'..).
Another option is to save the macros to a file named 'global.prf' (all lower case letters). This is a special macro file that will always be loaded, for all characters of yours.
You can also save macros to <racename>.prf, to <classname>.prf and to <traitname>.prf, like Warrior.prf to have them being auto-loaded on all characters of that class/race/trait.
Last but not least, characters that change shape (Mimicry) can autoload macro files that depend on their form name (in addition to their character name) by

naming them '<character name>^<form name>.prf' eg "Gandalf^Greater Balrog.prf".
Priority order (latter one overrides prior one):

These files are meant to store client options and configuration,
you should NOT use them for macros:
----
pref.prf (global for all OS and users on the system)
*.opt files (client options configuration files, ending on ".opt")
pref-<operating system>.prf (loaded if under the specific operating system)
graphics-<operating system>.prf OR font-<operating system>.prf OR
graphics-<dimensions>.prf OR font-<dimensions>.prf
                              (loaded if using graphics / ascii font on the
                               specified system)
user-<operating system>.prf (loaded if under the specific operating system)

These files can be used for saving your macros to without problems:

'global.prf' (is always loaded for any character the player logs in with.
              be sure to use all lower-case letters, not 'Global.prf'!)
<race>.prf (for the specific race)
<trait>.prf (for the specific trait, particularly useful for Maiar)
<class>.prf (for the specific class)
<character name>^<form name>.prf (for that character and its current form)
<character name>.prf (for the specific character the player logged in with)

It is recommended to use only race/trait/class/character/character+form
preference files for storing your macros.

Command macros:

Command macros are only executed if the game isn't currently waiting for a
specific input, for example "quaff which potion?" or while you're typing chat
messages. That means they won't "disrupt" any other command which is currently
being run. This is convenient for keys which you use in chat, but can be
dangerous if you define vital macros as command macros.
It is recommended to make your most important macros normal macros or at least
hybrid macros (for example a "panic key" macro). Command macros don't work
in shops.

Hybrid macros:

Use 'create hybrid macro' instead of 'create normal macro' in case you don't
want the macro to appear on hitting the corresponding key in a normal chat
message (for example useful for '-' key so it won't prevent you from
inscribing your Word of Recall scrolls).
Hybrid macros still work within input requests such as "quaff which potion?",
just not in STRING INPUT such as chat lines, polymorph-codes or money amounts.
Hybrid macros don't work in shops.

Delete macros:

If you accidentally bound a macro to a key which wasn't free, for example
the key 'r' which is used to read a scroll, you can reset the key by
-pressing % to invoke the macro menu
-choosing '(d) - delete macro'
-pressing the key wich you want to reset.

(3.7) Creating macros for ranged attacks & abilities (spells)

Note: This section is becoming pretty advanced. If you want to try an easier
method but miss a nice fundamental explanation on the way macros work, you
may just jump to (3.7c) now, where the comfortable macro wizard is explained!

Those macros basically consist of three parts.
1. Clearing the keyboard buffer (to avoid your character locking up in
   an attack queue if you hammer the trigger button for a ranged attack).
2. Designating a target.
3. Attacking the designated target.
What does the macro look like? (Note: Keys could vary depending on your
keymap definitions. Firing might be 't' instead of 'f' if you use the
rogue-like key set etc.)
For..
a) casting a magical spell
   Press 'm' to see your choices of casting magical spells. Let's assume you
   see this menu then:
       a) check dodge chance
       b) cast a spell
   Now we want 'b'. Press it to see a list of your magical books in your
   inventory. Let's assume you have learned spell 'a)' from book 'b)' in
   your inventory. Since the order of your books could change if you pick up
   new items or drop old ones, we will inscribe your magical book that is
   currently at position 'b)' like this (press '{' key to inscribe):
   @m2
   The '2' is our own choice. We could've used 7 or 0 if we wanted to. Note
   that it must be a single digit! @m20 does not work.
   Now we can create the macro.
   -Press '%' to invoke the macro menu,
   -press 'a' to enter a new action,
   -enter: \e)*tmb2a-
    This means: \e)   clear the keyboard buffer
                   *t   designate the closest enemy as the target for the
                            spell (if there is an enemy)!
                   m   invoke the ability menu
                   b   choose 'b) cast a spell'
                   2   use the magical book which is inscribed @m2
                   a   use spell 'a)' from this book
                   -        use previously designated target as direction, if
                            that target is actually valid. Otherwise cancel the
                            spell!
   -press ENTER key to accept that macro,
   -now hit 'h - create a hybrid macro'
   -hit the key you want to bind this macro to, for example the 'F1' key.
    F-keys are a good choice for macros, since they're not used otherwise.
   -To save your macros, press 's - Save macros' and enter a filename of
    your choice. If you want your macros to be loaded automatically when you
    log in with your character, save them to '<yourname>.prf'. For example
    to 'Gandalf.prf' if your character is called 'Gandalf'.
    If your macros are not automatically loaded, you'll have to do it
    manually after logging in, by pressing % and choosing 'l - Load macros',
    then specifying the according filename.
   Note that if your character gains additional abilities that show up
   in the 'm' menu, it might happen that 'b) cast a spell' becomes
   'c) cast a spell' which would require you to redefine your macros.
   Fortunately there is a way around this, by using Ability Codes instead of
   letters to pick a skill to use. See 'Ability codes' below.
   Further, in (3.9b) a way of casting spells (or using items in general)
   without relying on inscriptions at all will be explained!
b) throwing an item at a monster (or player)
   Throwing would be done by pressing 'v', followed by the item and either

```
          one of the 8 directions or '*t' to designate the closest enemy as the
          target.
          The macro:
          -Press '%' to invoke the macro menu,
          -press 'a' to enter a new action,
          -lets assume the item you want to throw is at position 'c)'.
           It's 'c) 3 potions of blindness'.
           You could now either specify the slot 'c)' in the macro or you could
           inscribe the potions @v1 and replace the c in the macro string by a 1.
           Inscribing has the advantage that if the potions change their location
           in your inventory you could still throw them. If you use 'c' you'd just
           throw the item at position 'c)' even if the potions are currently 'd)'.
           Examples:
           enter:    \e)vc*t        or      \e)v1*t
           This means:   \e)       clear the keyboard buffer
                         v         throw an item
                         c   OR  1
                                   choose 'c) 3 potions of blindness' OR
                                   choose the item for throwing which is currently
                                   inscribed @v1
                         *t        designate the closest enemy as the target!
          -press ENTER key to accept that macro,
          -now hit 'h - Create a hybrid macro'
          -hit the key you want to bind this macro to, for example the 'F2' key.
           F-keys are a good choice for macros, since they're not used otherwise.
          -Don't forget to save your macro by pressing 's - Save macros' if you
           plan to use it again.
    c) firing your equipped ranged weapon (sling, bow, crossbow)
          The keys we need are 'f' to fire and a direction key or *t to simply
          target the closest enemy.
          The macro:
          -Press '%' to invoke the macro menu,
          -press 'a' to enter a new action,
          -Since ammunition for firing or a boomerang is always at a fixed position
           in your equipment, we do not need any inscriptions on the weapon or
           ammunition - the game knows which item we want to use since there's only
           one possible choice.
           enter:   \e)*tf-
           This means:   \e)       clear the keyboard buffer
                         *t        designate the closest enemy as the target!
                         f         fire an item (boomerang, if equipped) or
                                   fire ammunition (if launcher & ammo is equipped)
                         -         use previously designated target as direction, if
                                   it's still valid, otherwise cancel firing!
          -press ENTER key to accept that macro,
          -now hit 'h - Create a hybrid macro'
          -hit the key you want to bind this macro to, for example the 'F2' key.
           F-keys are a good choice for macros, since they're not used otherwise.
          -Don't forget to save your macro by pressing 's - Save macros' if you
           plan to use it again.
    d) zapping a magical rod or aiming with a magical wand
          Rods are used by 'z' (zap a rod) and wands by 'a' (aim a wand),
          followed by the item and either one of the 8 directions or '*t' to
          designate the closest enemy as target.
          The macro:
          -Press '%' to invoke the macro menu,
          -press 'a' to enter a new action,
          -lets assume you want to aim the wand at position 'c)'.
           It's 'c) a wand of magic missiles'.
           You could now either specify the slot 'c)' in the macro or you could
           inscribe the wand @a0 and replace the c in the macro string by a 0.
           Inscribing has the advantage that if the potions change their location
```

in your inventory you could still throw them. If you use 'c' you'd just
throw the item at position 'c)' even if the wand currently is at 'd)'.
Examples:
enter: \e)*tac-   or   \e)*ta0-
This means: \e)   clear the keyboard buffer
               *t   designate the closest enemy as the target!
               a   aim a wand (or 'z' to use a rod here)
               c   OR   0
                        choose 'c) a wand of magic missiles' OR
                        choose the item which is currently
                        inscribed @a0   (or @z0 for a rod)
               -        use previously designated target as direction, if
                        it's still valid, otherwise cancel firing!
    -press ENTER key to accept that macro,
    -now hit 'h - Create a hybrid macro'
    -hit the key you want to bind this macro to, for example the 'F2' key.
     F-keys are a good choice for macros, since they're not used otherwise.
    -Don't forget to save your macro by pressing 's - Save macros' if you
     plan to use it again.

What happens if you leave out the '\e)' part?
Well, that means the commands that aren't processed yet will stay in the
buffer and wait for execution. Example:
You hit the macro *tf- 30 times rapidly. Now your character will shoot 30
times with his bow. However, since he's quite slow, this might take him 30
seconds! You now sit in front of your keyboard and watch your character
process all the remaining 30 shots. If suddenly an enemy appears that needs
you to teleport away because it's too dangerous, you couldn't press any key
until the 30 shots are finished. The character is 'locked'.
The ')' in the macro '\e)*tf-' clears all previous keypresses and hence
allows you to hammer the macro without fearing a lock.

(3.7a) Ability codes

A problem with the 'm' key is that it not only brings up your magic spells
but a menu containing all skills you can use. Those can be arrow fletching
or dodging for example.
Now you would have to rewrite your macros each time you gain another ability,
since entries in 'm' menu might shift if a new skill gets inserted somewhere.
To avoid this, you can directly choose which skill (ie spell-casting) you
want to use in your macros, by specifying the "ability code"!

Here is a list of all available ability codes:
3   Use innate power (for mimicry users)
4   Toggle Fire-till-kill mode, usable by anyone. See (5.2a).
5   Fighting techniques (see (7.12))
6   Shooting techniques (see (7.12))
8   Check your dodge chance (for dodging skill)
9   Check intercept chance (for martial arts or interception skill)
(included in '6' now: 9   Craft ammunition (for archery skill))
10   Set a monster trap (for trapping skill, see (4.7))
11   Cast a magic spell / recite a holy prayer
12   Draw a rune (for runecraft, see '(7.8b) Runes & Runemastery')
13   Change combat stance (for combat stances skill, see (7.2))
14   Check your chances of parrying and blocking (for melee fighters,
        see (7.11) for details about these abilities)
15   Toggle 'Aura of Fear' if you have trained the according skill.
16   Toggle 'Shivering Aura' if you have trained the according skill.
17   Toggle 'Aura of Death' if you have trained the according skill.

After the ability code has been entered you need to press Enter to confirm it.

In a macro, this is done by '\r' (one of the so-called escape sequences).
Example for a macro that directly specifies the ability code to cast the magic
spell "a) Manathrust" from book "a) Beginner Cantrips" on the closest monster:

\e)*tm@11\r2a-

What does that mean?
\e -> escape any pending input request, if there is any
            (so we don't have to press ESC before casting the spell in case we're
             currently 'L'ooking around or something)
)   -> clear the keyboard buffer (removes all pending keypresses that haven't
            been processed yet due to slow character speed, so we become instantly
            ready to perform our Manathrust spell _now_)
*t -> choose the closest monster as target
m   -> invoke an ability
@   -> specify an ability code directly
11 -> the code for 'cast a magic spell/recite a holy prayer'
\r -> press Enter to confirm
2   -> cast from book 2 (inscription on the book must be @m2)
a   -> cast spell "a)" (Manathrust)
-   -> use previously designated target as direction, if it's still valid,
            otherwise cancel the spell!

(That macro basically does the same as:
*tmb2a-
..assumed that entry 'b)' in the ability menu (invoked by 'm') is
'b) Cast a spell'. Except for escaping and clearing the keyboard buffer.)

An even better way to cast spells is to not rely on book inscriptions, but to
cast spells by name instead. That way you won't have to redo spells when your
books change. See (3.9b) for details, or (3.7c) for the 'macro wizard', which
uses cast-by-name by default for all macros you create in it (yet can also
handle call-by-inscription).

(3.7b) Quick'n'dirty macros

Macro actions can be complex and hence time-consuming to enter and prone to
errors furthermore.
To allow you to quickly hack in macro actions, there's the Quick'n'Dirty
option in the macro menu, which will accept short cut characters instead of
the usual full macro.

On entering the macro action, those characters will be automatically expanded
to their real functionality. They are:
  P for using a mimic's innate power
    Example: Pd
    Uses innate power 'd)', which is the first real innate spell after the
    three polymorph powers themselves, which always comprise a) to c).
  I for using a mimic's 'transform-into-specific' power.
    Example: I191
    This will become \e)m@3\rc191\r (transform into a Grizzly Bear).
    Clients of versions greater than 4.4.8c also support entering a monster
    name instead of its code, example: I@Fruit bat\
  F for employing a fighting technique
    Example: Fa
    (Use fighting technique 'a)', which usually is 'sprint'.)
  S for employing a shooting technique
    Example: Sa
    (Use shooting technique 'a)', which is probably 'flare'.)
  M for casting a spell
    Example: M@Phase Door\

```
   Becomes  \e)m@11\r@Phase Door\r  (cast spell 'Phase Door'.)
 R for drawing a rune
   Examples:  Rcbaa  or Rccaa  to draw 2 or just 1 rune.
   (The last two 'a' being spell modifier and spell form respectively.)
 T for setting up a trap
   Example:  T13
   Set up the monster trap inscribed '@m1' or '@1' loaded with item inscribed
   '@m3' or '@3'. (Becomes '\e)m10\r13'.)
 s for changing a stance
   Example:  sa  (switches to stance 'a)' ie balanced combat stance.)
 @...\ for using call-by-name (spell/item name must be between '@' and '\')
   (Examples have been given above, in some spell casting explanations.)
```

All other keys are taken over unmodified, like 'f' for firing a ranged weapon.

Also, '\e)' is automatically prefixed, and the most fitting macro type
automatically chosen (depending on the trigger key).

Additional examples:
Example 1: Firing your ranged weapon would just be..
```
      *tf-
```
   (which gets expanded to '\e)*tf-'.)

Example 2: Assumed your book is inscribed @m1 as usual, and you want to cast
   spell a). What you can simply enter in the q'n'd field is:
```
      *tM1a-
```
   and it will automatically be expanded to the real macro '\e)*tm@11\r1a-'.

Example 3: Assumed you have the spell Manathrust somewhere in your books and
   want to cast it by name, what you enter in the q'n'd field is:
```
      *tM@Manathrust\-
```
   and it will automatically be expanded to '\e)*tm@11\r@Manathrust\r-'.

(3.7c) The macro wizard

The easiest (and therefore most limited) way to create a macro is to invoke the
built-in macro creation wizard. If you are new to the game and too impatient to
figure out how to create macros manually, you might want to give this a try.

To invoke it, enter the macro menu by pressing '%', then press 'z' to bring up
the wizard.

The wizard will lead you through three steps with detailed on-screen
instructions, allowing you to create macros from a couple of pre-defined
command choices which should cover almost all situations.

If the option 'Rogue-like commands' is set to 'yes' when creating a macro in
the macro wizard, rogue-like command keys will be used in the macro action.

(The macro type, ie command/hybrid/normal will be chosen automatically for you,
same as when using Quick'n'Dirty macro creation.)

NOTE: Whenever the macro wizard asks you to enter a partial name of an item to
      use in the macro you may alternatively enter an item inscription instead
      if you prefer that!
      This works simply because item inscriptions are part of the 'item name'
      which the macro wizard parses.
      Example:
      If you create a macro to quaff a potion and the wizard asks you to enter
      the potion name or part of it you may instead just enter: @q1
      and the resulting macro will attempt to quaff potions inscribed @q1.

Note about spell-cast macros regarding spell tiers:

Since the macro wizard uses spell names you should be aware how spell tiers
will be handled:
If you specify a particlar tier, eg "Manathrust II" (tier 2, as denoted by the
roman number II), then the macro will only work if you carry exactly this spell
with you (and have learned it, of course). However, if you do not specify a
spell tier but just the generic name, eg just enter "Manathrust" for the spell
name then the macro will attempt to automatically cast the highest spell tier
currently available (that means it is in your inventory and you have learned it
and so could in theory cast it, provided you have enough MP and are not blinded
or confused etc) to you. So if you carry for example Manathrust I but also
the 2nd tier Manathrust II and your 'Mana' school is trained high enough to
unlock Manathrust II then it will automatically attempt to cast II (and fail
the attempt if you don't have enough MP for it or are blinded etc!).

(3.7d) Specifying directions and targets

Whenever you use an attack spell or a wand or rod that cast bolts or balls,
the game prompts you to enter a direction.
Similarly, friendly spells such as 'cure wounds' require you to target another
player (or yourself).
So there are different targetting methods you can choose from:

In our macros so far we have answered the 'which direction' question by
specifying '*t' instead of an actual direction ie one of 1,2,3,4,6,7,8,9.
We have learned that '*' means 'acquire target' and 't' means 'choose closest
hostile target'. If there are two targets that are equally close, one that is
awake is preferred over one that is alseep.
The '*' key can also be pressed as a command key, ie on its own without any
direction request from the server. Press '*' and it will ask you to set a
target, which you can do by pressing 't' again to choose the closest hostile
entity.

There are, however, more ways to specify a direction or to use the target
command, especially since client 4.4.6 which added the '-' option, and 4.4.6b
which added the '+' option.
Details follow:

The 'Set Target' command (key '*') that sets a target for spells or item uses
that follow, or which can be invoked as a sub-command from a 'Direction?'
request, may be answered with..

  -'q' key to drop current target without acquiring a new one.
  -'t' or '5' key to choose closest hostile target.
  -'p' to target a grid position manually via movement keys (1..9),
       confirm with 't' or '5' key.

The 'Direction?' request from commands that require a direction, may be
answered with..

  -a direction key such as 1,2,3,4,6,7,8,9.
   Note that direction '5' will only aim at yourself if you have no valid
   target set. Otherwise, the '5' key will aim at your target instead.
  -'*' key to invoke built-in target command (see above).
  -'-' key to use a previously acquired target or cancel the spell/item use/
       shot if there is no valid target currently set. The '-' option is only
       available in client version 4.4.6 and higher.
  -'+' key, same as '-' except that it won't cancel the action if no valid
       target was found, but prompt you for manual input instead (hit ESC to

```
         cancel, 5 to target your own grid, or any direction key to fire into
         that direction).

         Note that the key '-' is not a command key, but just gets ignored when
         pressed elsewhere than in direction-requests. This means that you can
         create 'hacky' macros, for example such as *t/1- that will work with
         both, magic devices that take a direction and those that don't, since
         the '-' will just be ignored for those that don't.
```

Friendly targetting:

```
Sometimes you want to target a friendly player. For this you can use '('.
That key currently prioritizes the most wounded player, if any, otherwise the
closest friendly player.
After this target has been set, you can refer to it with '-', '+' or '5' same
as for hostile targets you set with '*' explained above.
```

Example macros:

```
  *tz0-    Will zap rod 0 at the closest hostile entity. If there is none,
           the rod will not be zapped, conserving the rod's energy.
  z0*t     Zaps rod 0 at the closest hostile entity. If there is none, the
           rod will be zapped anyway, with yourself as target. This could
           be useful if it's for example a Rod of Fire Balls and you are
           being attacked in close combat by an invisible monster.
  *qz05    Your current target is cleared and the rod 0 is zapped at your
           own location, ie '5'. This could be useful if you want to clear
           out piles of loot with a rod of acid balls, effectively destroying
           all lesser items that cannot resist acid and melt from it.
 (m@11\r@Cure Wounds\r-
           Will cast the spell 'Cure Wounds' (from the Holy Curing school)
           at the most wounded friendly player. Will not do anything if no
           player is nearby. Replace the '-' by a '5' to target yourself
           if no other player is around.
```

(3.8) Example macro sets

```
(For the meaning of '\e)' see below (3.9). I recommend to have all your
macros start with the '\e)' sequence to avoid character lock-ups due to
queued keypresses that have to be processed.)
```

An example macro set for fighters or archers:

```
This macro set is already in your /lib/user folder! If it's not there,
download the latest client from www.tomenet.eu or our personal pages.
You can load this macro file by hitting % to invoke the macro menu,
then enter 'l' to load a macro file, and specifying its filename,
which is depending on your operating system:

linux_fighter.prf    or    windows_fighter.prf
(On Mac OS X use linux_fighter.prf.)

If you plan on using it for a longer time, immediately save it again
with the filename being identical to your character name, example: Killer.prf
if your character is named 'Killer'.
(You can save macros by choosing '(s) Save macros' in the macro menu.
Note: The example macro sets are write-protected to avoid overwriting.)

Of course you can just use any other potion/scroll instead of those mentioned,
```

as long as you put the according inscription on that item.
(To inscribe an item press '{' key, to uninscribe press '}'.)

Key	Purpose of the Macro	The macro itself	Inscription on the item(s)
F1	fire with ranged weapon at closest target (you can inscribe your ammunition: != to pick it up automatically)	\e)*tf-	-none-
F2	quaff cure critical wound or healing potion	\e)q1	@q1
F3	quaff speed potion	\e)q2	@q2
F4	quaff potion of resistance, an important thing later in the game. Since these are too expensive in the beginning, you could just buy potions of resist heat instead which are offered for little money in store 5, and inscribe them @q3 accordingly. They can already be very helpful.	\e)q3	@q3
F5	read scroll of phase door	\e)r1	@r1
F6	read scroll of teleportation	\e)r2	@r2
F7	read scroll of identify	\e)r3	@r3
F8	use a staff of teleportation (magic device must be high enough or you will keep failing; also see (7.10))	\e)u1	@u1
F9	quaff a restore life levels potion	\e)q4	@q4
F10	zap some rod (magic device must be high enough or you will keep failing; also see (7.10))	\e)z1	@z1
F11	eat something. (Draconians could inscribe some firestones (see (5.9)) instead of normal food, to quickly boost their powers if needed.)	\e)E1	@E1
F12	use a magic device on the closest target (Magic devices are wands, staves or rods. Your magic device ability must be good enough or you will keep failing; also see (7.10))	\e)*t/1-	@/1

As you can see this fighter is supposed to be able to use quite some magic
for support in addition to fighting. Especially helpful are Rods of Perception
or of speed. Not all warriors are bright enough to use magic items easily, nor
are players always willing to spend many points on the 'Magic Device' skill.
If you dislike the use of magic your character would have to rely completely
on scrolls of teleportation instead. Just make sure you have confusion and
blindness resistance then! (Those two aren't needed to use a staff.)
If you play Draconian, kill Dragonriders because they tend to drop a large
amount of firestones. If a difficult combat starts, just eat several of them
to get a larger amount of extra powers.
(All macros in the example set were defined as hybrid macros.)

The above macro set slightly changed to fit
additional needs of a low level istar or other casters:

This macro set is already in your /lib/user folder! If it's not there,
download the latest client from www.tomenet.eu or our personal pages.
You can load this macro file by hitting % to invoke the macro menu,
then enter 'l' to load a macro file, and specifying its filename,
which is depending on your operating system:

linux_caster.prf   or   windows_caster.prf
(On Mac OS X use linux_caster.prf.)

If you plan on using it for a longer time, immediately save it again
with the filename being identical to your character name, example: Killer.prf

```
      if your character is named 'Killer'.
      (You can save macros by choosing '(s) Save macros' in the macro menu.)
      Note: The example macro sets are write-protected to avoid overwriting.)

      Of course you can just use any other potion/scroll instead of those mentioned,
      as long as you put the according inscription on that item.
      (To inscribe an item press '{' key, to uninscribe press '}'.)

      Key          Purpose of the Macro                    The macro    Inscription
                                                           itself       on the item(s)
      ------------------------------------------------------------------------------
      F1   fire with ranged weapon at closest target       \e)*tf-        -none-
           (you can inscribe your ammunition:   !=
           to pick it up automatically)
      F2   quaff cure critical wound or healing potion      \e)q1          @q1
      F3   quaff speed potion                               \e)q2          @q2
      F4   quaff restore mana potion                        \e)q3          @q3
      F5   read scroll of phase door                        \e)r1          @r1
      F6   read scroll of teleportation                     \e)r2          @r2
      F7   read scroll of identify                          \e)r3          @r3
      F8   use a staff of teleportation                     \e)u1          @u1
      F9           \e)m@11\r@Detect Monsters\rm@11\r@Sense Hidden\r   -none-
           A combo macro: Cast spells 'Detect Monsters'
           and 'Sense Hidden' from book Beginner Cantrips.
           Since this macro casts two spells, it uses up
           two of your character's turns to complete.
           (Note that this macro uses 'cast-by-name', ie specifies the spell names
           instead of relying on book inscriptions, making it very flexible!)
      F10  zap some rod                                     \e)z1          @z1
      F11                                \e)m@11\r@Globe of Light\r    -none-
           Cast Globe Of Light spell.
      F12  use a magic device on the closest target         \e)*t/1-        @/1
           (Magic devices are wands, staves or rods.
           Your magic device ability must be good enough
           or you will keep failing; also see (7.10))
      +                                 \e)*tm@11\r@Noxious Cloud\r-    -none-
           Cast Noxious Cloud spell on nearest target
      -    Cast Phase Door.                   \e)m@11\r@Phase Door\r    -none-
      0    Cast Manathrust at nearest target \e)*tm@11\r@Manathrust\r-    -none-
```

This low level istar might be armed with a sling to support his yet weak
magic, so the F1 macro makes sense. Assuming that he uses the numpad keys for
movement, the keys +, - and 0 were used to allow quick access to his basic
spells. - and 0 use his startup book 'Beginner Cantrips' while the macro on
the + key requires that he bought a spellbook of noxious cloud.
(All macros in the example set were defined as hybrid macros.)

(3.9) Macros with special keys

You can use so-called 'escapes', meaning a combination of '\' and a regular
key to emulate some special keys in your macros:
```
\\              the backslash itself. Prevents it from being interpreted as
                the beginning of an escape sequence.
\e              equals the 'ESC' key.
\s              equals the 'SPACE' key. You can also just type in regular
                spaces, which will be converted automatically.
\r or \n        RETURN/ENTER or LINEFEED. Makes no difference.
                Example:
                :hi!\r:hi!\n   makes your character say 'hi!' two times.
)               clears the keyboard buffer (all previous key presses that
```

```
                          still have to be processed will be forgotten).
   ^                      Prefixed to any key this will lead to a CTRL + <thatkey>
                          combination. For example a macro '^q' will exit the game.

   Example:
   :Hi all!\r             This macro writes 'Hi all!' to everyone.
   \e)*tf-                This macro will press escape to leave any potential
                          running input routine, clear the buffer, fire a shot at
                          the closest enemy. You can hammer this macro madly while
                          playing without fear of your client processing the key
                          presses forever, locking you in a position till your last
                          arrow has been shot, since each time you hit the macro,
                          it will clear the keyboard buffer (')' symbol) from all
                          previous entries.
                          The 'running input routine' means:
                          If you previously pressed 'q' to quaff a potion, the game
                          will now ask you 'Which potion?' and wait for your input.
                          If you now see an enemy approaching before you decide which
                          potion to quaff, you would usually have to press ESC to leave
                          the quaffing input and start firing arrows then. By
                          integrating the ESC key into the macro ('\e') this step is
                          done automatically.
   *I recommend to have all macros start with the '\e)' sequence.*

   Miscellanous escape sequences:
   \x??                   Convert the hex code into an ASCII character. For example
                          \x41 (hex 41, dec 65) will become the 65th character of the
                          ASCII charset which is a capital 'A'.
   \^                     The caret '^' or 'accent circonflex'.
   \b                     stands for the BACKSPACE key.
   \t                     stands for the TABulator key.
   \0?? or \1?? or \2?? or \3??
                          stands for an octal code. The code will be converted into an
                          ASCII character similar to \x?? hex mode, so \101 becomes 'A'.
   \w??                   Waits (asynchronously) for ?? tenth seconds. (eg. 20 -> 2 s)
                          Use this for macros which contain several commands in a row
                          which depend on each others execution. You might have to
                          adjust the delay to your personal latency, depending on your
                          internet connection and speed at which your character acts.
                          NOTE: You must always specify TWO digits. For example if you
                                want to wait for 200 ms, you need to enter "\w02" and
                                NOT "\w2"!
                          Setting a too high delay is actually not necessarily bad:
                          For the most common use cases, wielding/taking off/swapping
                          items or polymorphing yourself, the server will actually send
                          an internal confirmation to the client when that action has
                          finished processing and the client will then exit the \w delay
                          early, so you're not losing any time that way. So if you have
                          a network connection that suffers of continuous lag spikes it
                          might even be an advantage to crank up the \w times. Actually
                          you should just switch your ISP though.
   \W????                 Similar to \w?? but differs as follows:
                          It takes four digits instead of two, allowing for much longer
                          delays, and the delays are interruptible manually, in two ways:
                          Press ESC to cancel and abort the running macro.
                          Press SPACE to cancel the delay and resume the running macro.


   (3.9a) Creating a chat macro for your party
   -------------------------------------------
   Using public chat for party coordination can prove annoying to other players
   and as well confusing to your fellow party members since it's sometimes hard
```

```
    to read if people are chatting vividly.
On the other hand, entering your chat lines in this format
   <Party name>:<Text>
all the time can get annoying since you have to repeat the party name over and
over, although you can use just the first four letters or so as abbreviation.

There are three different ways to easily talk to your party.
1.) use the party wildcard '!'.
    Simply start your chatline like this !:blabla..., using the '!' in place
    of the party name. The text will be sent to your current party (if any).
2.) Hit ':' key to enter chat, now press TAB to switch to party chat mode.
3.) Create a macro to chat with a specific party, so you can write a
    party-message by hitting a single key, party-chatting becomes as easy as
    hitting ':' for normal chat.
    Enter the macro menu ('%'), enter a new action ('a'), enter the macro
    according to your party name. For example, if your party is called
    'Scarlet Knights', enter this string:
        :Scarlet:
    hit the Enter key to accept it, create a command macro ('c'), choose a
    key you wish to use for party chat from now on, and save your macro ('s')
    to a file which is loaded automatically, like '<Your charname>.prf', for
    example Kinkan.prf.
    Using longer or shorter (at least 4 letters) strings works too of course,
    as long as there isn't a party of similar name which could get confused
    with yours.
The best way in my opinion is to combine the two ways and to set up a macro
which types   :!:   for you on a single key press automatically:
    Enter the macro menu ('%'), enter a new action ('a'), enter the macro:
        :!:
    hit the Enter key to accept it, create a command macro ('c'), choose a
    key you wish to use for party chat from now on, and save your macro ('s')
    to a file which is loaded automatically, like '<Your charname>.prf', for
    example Kinkan.prf. This way, no matter what your party is called, you
    will always be able to chat to it by pressing a single key.


(3.9b) Alternative macros: Calling objects by their name
--------------------------------------------------------
An alternative way to utilize macros is to not rely on item inscriptions, but
instead call the target object directly by its name!

This is actually the default behaviour of the 'Macro Wizard' (invoked by % z
keys) and the recommended way, as it is more flexible, although command-key-
based macros could be seen as more clean (these macros use the @[<KEY>]<NUMBER>
format with the key being optional, also called a 'tag' or tag-based macros).

If your client version is 4.9.1 or older, the name-based macro is also be the
only way that works with subinventory (such as potion belt, or antistatic
wrapping, etc), newer versions can use tag-based macros fine.

The text specified can either be an item name, as it appears in your inventory,
or a spell name if you want your macro to cast a spell. It can be a partial
item name too, including the item's inscription, so it could also be a tag
that is inscribed on an item.
When asked "Aim which wand?", "Read which scroll?", "Cast from which book?" etc
you can also press '@' key to directly type in a name.
Note: In the special case of books, you will then be able to type in
a spell name instead of a book name, and the game will search your books for
that spell automatically.

So, instead of inscribing your potions of Healing '@q1' and having a macro
'\e)q1' you could also just have a macro '\e)q@Healing\r'.
```

Or you could make a macro '\e)q@@q1\r' which would quaff any potion inscribed '@q1', treating that inscription as a simple text comparison rather than a tag.

Or, instead of inscribing a Beginner Cantrips book '@m0' and macroing the spell Manathrust with '\e)*tm@11\r0a-' you could also just make a macro '\e)*tm@11\r@Manathrust\r-' without the need to inscribe your book.

In fact you could make a macro '\e)*tm@Cast a spell\r@Manathrust\r-'.

Another example: '\e)m@11\r@Phase Door\r'.

IMPORTANT: Keep in mind that call-by-name is actually case-sensitive!
(So in the example above, 'Manathrust' would not work.)

Additional details:

The text you provide for matching is treated as a partial text (sub-string) that must occur anywhere in an inventory slot text. Only those inventory slots are tested for this, which actually contain an item of fitting base type (tval) for the action that is being executed.

Example: You make a macro   z@Gold-Pl\r -this will be processed as follows:
The command is 'z' to zap a rod. So only inventory slots that contain rods will be looked at, the rest is ignored.
Now all inventory slots that contain rods will be tested for whether they contain the text piece 'Gold-Pl' somewhere.
So if you carry any Gold-Plated rods in your inventory they will be zapped.

Note that since it's really just all about partial-text-matching, you could inscribe some other rods 'Gold-Pl' so the text matching would succeed, although they aren't 'real' Gold-Plated rods. (!)

Note about spell-cast macros regarding spell tiers:

If you specify a particlar tier, eg "Manathrust II" (tier 2, as denoted by the roman number II), then the macro will only work if you carry exactly this spell with you (and have learned it, of course). However, if you do not specify a spell tier but just the generic name, eg just enter "Manathrust" for the spell name then the macro will attempt to automatically cast the highest spell tier currently available (that means it is in your inventory and you have learned it and so could in theory cast it, provided you have enough MP and are not blinded or confused etc) to you. So if you carry for example Manathrust I but also the 2nd tier Manathrust II and your 'Mana' school is trained high enough to unlock Manathrust II then it will automatically attempt to cast II (and fail the attempt if you don't have enough MP for it or are blinded etc!).

(3.9c) Disabling or using CapsLock and NumLock as macro keys (POSIX only)

There might or might not be a way to do this on Windows too, but for now, here is a way on POSIX (Linux/Mac OS X) to use your CapsLock and NumLock keys as actual keys in TomeNET instead of it just being a useless modifier keys. Or you could just disable CapsLock so it won't interfere if you accidentally fat-finger it in the heat of battle.

This utilizes the command 'xmodmap' which is usually provided by either the package x11-server-utils or bash-completion.
xmodmap allows remapping a key and combinations of this key getting pressed together with modifier keys (shift, alt, etc).

You need to figure out the key code of the key to modify and the available

modifier keys:

     xmodmap -pm
will list all the all modifier keys on your system.
     xmodmap -pke
will list all currently defined keybinds. Grep it to see what capslock and
numlock are currently bound to, so you can restore them afterwards.

On my system the keycode for capslock is 66 and for numlock 77. Verify this
via 'xmodmap -pke | grep Caps_Lock' and 'xmodmap -pke | grep Num_Lock'.
The results of these commands will also be important for restoring the keys'
behaviour afterwards.
They should read:
     keycode 66 = Caps_Lock NoSymbol Caps_Lock
     keycode 77 = Num_Lock NoSymbol Num_Lock
but might also turn out differently, depending on your system, for example:
     keycode 66 = Caps_Lock ISO_Next_Group Caps_Lock ISO_Next_Group Caps_Lock
                   ISO_Next_Group Caps_Lock ISO_Next_Group

We see at least three 'columns', as in the first example these are 'Caps_Lock',
'NoSymbol' and then 'Caps_Lock' again.
The first column is the key pressed on its own, the second together with the
Shift key, after that it can depend on your system, see further down in this
chapter for details.

Now you could disable capslock like this, simply by setting it to NoSymbol:
     xmodmap -e "keycode 66 = NoSymbol NoSymbol NoSymbol"
...then run TomeNET, and afterwards restore capslock with
     xmodmap -e "keycode 66 = Caps_Lock NoSymbol Caps_Lock"

Or you could reconfigure numlock to actually become a normal key, by mapping it
to some key that you usually don't use, especially in the specific combination
with a modifier key:
     xmodmap -e "keycode 77 = acute grave period"
...run TomeNET, afterwards restore numlock to normal:
     xmodmap -e "keycode 77 = NumLock NoSymbol NumLock"

Depending on your system you can specify a larger number of modifier-affected
key definitions than just the 3 'columns' in these xmodmap-keycode-commands.
The meaning of the columns are, quoting from the xmodmap man page:

"Up to eight keysyms may be attached to a key, however the last four are not
used in any major X server implementation. The first keysym is used when no
modifier key is pressed in conjunction with this key, the second with Shift,
the third when the Mode_switch key is used with this key and the fourth when
both the Mode_switch and Shift keys are used."

This usually translates to:
     Key
     Shift+Key
     mode_switch+Key
     mode_switch+Shift+Key
     AltGr+Key
     AltGr+Shift+Key
but unfortunately can also turn out differently depending on your system,
especially on laptops. Sometimes the mode_switch key is the AltGR key.
Also, despite the man page saying "up to eigth" some systems might have
more columns even, usually with non-western keyboard layouts.

Note that CTRL is not present. Control cannot be remapped this way, if you
want to use it, you'd have to remap the left and/or right ctrl key itself
first to another shiftkey such as mode_switch, and then map keys to to that

combo of mod_switch and the key you wanted to press together with CTRL.
The obvious drawback is that this will disable ctrl being actual ctrl on your
system while the remapping of ctrl to mode_switch (or whatever other shiftkey
is active).

(A sometimes tool useful for reading key codes is 'xev' from 'x11-utils'.)

(3.10) Experience, level-ups and skill points

By killing monsters your character gains experience. In general, harder
monsters on deeper dungeon levels give more experience than easy kills.

If your character accumulates a certain amount of experience, it will gain
a 'level-up', meaning that you become noticably more powerful than you were
until now.
Each character level requires your character to accumulate more experience
than was needed for the level before, up to millions of experience points!
All characters start the game at level 1. At level 50 they are supposed to
fight the bad boss of the game, Morgoth, Lord of Darkness.
Depending on race and class, characters need to kill a different amount of
monsters in order to reach the next level. Yeeks get experience fastest,
while Maiar are slowest. (See (7.4) and (7.5).)
The exact amounts you need are shown in the subsequent paragraph (3.10a).

Each time your character gains a new level, it also gains 5 skill
points that you can distribute on your character's skills, press 'G' to invoke
the skill chart where you can raise skills of your choice. Do this at a safe
place, so your character won't be attacked and killed while you are looking
at the skill chart. The different skills are described in (7.2). Which
skills your character may specialize in depends on his class,
and sometimes also on his race; skills that are not available to your
character's class are greyed out and cannot be raised.
On the skill chart you can press 'Up'/'Down' keys to select a skill and
'Right' key to invest one of your spare skill points into it. Choices cannot
be undone, so be careful here.
For details about skill point distribution and the different skills see (7.2).

Hanging out on easy dungeon levels compared to your character level (for
example a high level 50 character on an (to him) easy dungeon level like 60)
may result in diminishing returns of experience points for killed monsters.

On the other hand, killing monsters of higher level than the player's level
will give bonus experience. (The xp calculation uses the m-level, so fighting
leveled-up monsters due to deeper dungeon floors will yield bonus experience
accordingly, also see 'mlevel' in (0.4).)

Experience is shared automatically in 'parties', see (7.9).

Note that if your experience is drained (it will be displayed in yellow instead
of in light green to indicate that it is drained), your maximum experience ie
the amount you used to have before getting drained still profits by 10% of any
experience you gain, so it is not completely wasted if you don't have a potion
of restore life levels at hand, or some other means to restore your experience
back to normal. Yet it is highly inefficient as you waste 90% of the experience
gained and you should use some means to restore your XP as soon as possible
before continuing to kill monsters.

If you died and turned into a ghost you will still gain experience from killing
monsters, but all experience gains from any source are cut to 50% while you are
dead.

Recommended minimum depths for optimal experience gain

These are only minimum recommended depths above which your experience gain
will – depending on your character level – suffer quite a severe reduction.
Your character might not always be strong enough to survive on these depths.
In that case, despite the experience penalty, you should consider moving to
easier dungeon levels anway until you found decent items and maxed out your
vital stats (constitution, etc).

Note: Your depth display in the bottom right corner of the main window will
indicate the appropriateness of your current depth in relation to your
character level by its colour:

- If you're on a far easier depth, it'll be dark grey, indicating that you
  cannot expect to gain experience here.

- If you're on a slightly easier depth, it'll turn yellow, to tell you that
  you're getting closer to the depth required for normal experience gain, but
  there is still a penalty.

- On the minimum required depth for normal experience gain, or deeper, it's
  plain white.

(On a side note, while Word of Recall is pending, your depth indicator will
actually turn orange, since it's also used as a Word of Recall indicator.)

Here is a list of this relation between character level and the minimum dungeon
level required for normal, non-penalised experience gain, showing some steps:

```
 Character level  |  Dungeon level
--------------------------------------------------------------------------------
        1..19         optimum exp is gained anywhere, depth doesn't factor in!
         20               15  \ exponential increase of optimal depth
         23               17  |
         25               18  |
         28               22  |
         30               25  |
         35               30  |
         38               36  |
         40               40  |
         41               43  |
         42               46  |
         43               50  |
         44               54  |
         45               59  |
         46               65  |
         47               72  |
         48               81  |
         49               92  /
-------  50  --------    100  \ -------  Must beat Morgoth to reach level 51+!
         55              110  | medium linear increase (moderate depth increase)
         60              120  /
         65              130  \ fast linear increase (steep depth increase)
         66              134  |
         70              150  |
         74              166  /
         75              170  \ slow linear increase (easygoing depth increase)
         80              175  |
         85              180  |
```

```
             90              185  |
             95              190  |
             98              193  /
             99              no exp gained (this the maximum reachable player level)
```

If you are below the optimum depth, your experience gain will decrease.
The experience gained will be multiplied by 2 / (2 + leveldifference).
So for 1 level missing to optimum depth you would get 2 / (2 + 1) = 67% of
the optimum experience, at 2 levels difference you'd get 50%, 40% at 3, etc.
At level 64 and higher, no dungeon except for the Cloud Planes and the
Nether Realm (see (4.5c)) will be deep enough to deliver optimal experience
and after attaining level 70 only the Nether Realm - by far the deepest
dungeon in the game - can deliver optimal experience points.

These depth restrictions regarding experience gain are applied to all dungeons
except in Ironman Deep Dive Challenge and Halls of Mandos (which is Ironman).

(3.10a) Experience points table

This table shows how many experience points a character needs to attain each
character level. Keep in mind that depending on choice of race and class
characters main earn experience at a faster or slower rate than others.

A character who gets his experience drained below zero will die. Ghosts (dead
players) continuously lose experience points, aka they are fading. If they fall
below zero experience points they die permanently.

At level 50, characters may still accumulate experience points until 1 point
below the experience needed for level 51. To eventually advance further they
will need to defeat the game boss, Morgoth, the Lord of Darkness (see (1.3) and
subsequent subparagraphs for details).
Since characters receive a royal title on defeating Morgoth, the level range
past level 50 are often referred to as "post-king levels", while the life time
of a character during levels 1 to 50 is often referred to as "pre-king"
accordingly.

The highest possible level is 99. Characters of level 99 are impervious to any
type of life force (aka experience) draining attacks or effects.

In general, the amount of experience points required to advance from current to
next character level tends to increase with each further level gained.
Occasionally, the subsequent level might actually require the same gain of
experience points than the previous one, but it will never require less.

Lev.	Experience	Lev.	Experience	Lev.	Experience	Lev.	Experience
1	0	26	17500	51	7000000	76	147000000
2	10	27	25000	52	8200000	77	162000000
3	25	28	35000	53	9400000	78	178000000
4	45	29	50000	54	10800000	79	195000000
5	70	30	75000	55	12600000	80	213000000
6	100	31	100000	56	14600000	81	233000000
7	140	32	150000	57	16800000	82	255000000
8	200	33	200000	58	19200000	83	279000000
9	280	34	275000	59	21800000	84	305000000
10	380	35	350000	60	24600000	85	333000000
11	500	36	450000	61	28000000	86	363000000
12	650	37	550000	62	31500000	87	395000000
13	850	38	700000	63	35500000	88	429000000
14	1100	39	850000	64	40000000	89	465000000
15	1400	40	1050000	65	45000000	90	503000000

```
16        1800      41     1300000     66      50500000     91     544000000
17        2300      42     1550000     67      56500000     92     588000000
18        2900      43     1850000     68      63000000     93     635000000
19        3600      44     2150000     69      70000000     94     685000000
20        4400      45     2500000     70      78000000     95     738000000
21        5400      46     2900000     71      87000000     96     796000000
22        6800      47     3400000     72      97000000     97     859000000
23        8400      48     4000000     73     108000000     98     927000000
24       10200      49     4800000     74     120000000     99     999000000
25       12500      50     5800000     75     133000000      -
```

(3.11) Death, ghosts and looting

Death messages

Depending on how a player died, there are different kinds of death messages:
- "committed suicide"
  The player committed suicide to delete his character permanently.
- "retired to a warm, sunny climate"
  This is like suicide, but what happens if winners attempt to suicide:
  They simply retire. The character is deleted permanently same as suiciding.
- "was defeated by"
  The everlasting player was killed but got auto-resurrected because he had
  the "instant resurrection" feature enabled in a temple.
- "was killed by"
  The player was killed.
  If the message is enclosed in asterisk pairs, it was a permanent (no-ghost)
  death, so the character is permanently deleted now.
  If the message was not enclosed in asterisks, the player turned into a ghost
  and is probably hoping to get rescued and revived now.
- "was annihilated by"
  Same as "was killed by", just different wording.
  This message appears if the damage taken with the death blow was very high.
- "was vaporized by"
  Same as "was killed by", just different wording.
  This message appears if the damage taken with the death blow was extreme.
- "was destroyed by"
  The player was permanently killed so his character has been deleted now.
  Instead of the asterisk-paired "was killed by" message (which indicates
  permanent death same as this message does) this message is used exclusively
  for insanity-induced deaths.
- "ghost was destroyed by"
  The player's ghost was destroyed (ie 'killed').
  This means the character is now permanently deleted.
- Some special, random death messages when the player gets killed by the game
  boss, Morgoth, Lord of Darkness.

Death

If a player dies, an automatic chardump is generated in /lib/user called
'<charname>-death.txt' (see (9.2)) which you can view with any text editor.
Also, a screenshot is made automatically, displaying your situation, saved
to '<charname>-death-screenshot.xhtml'.
(You can view xhtml files in most webbrowsers.)

Normal/everlasting characters will turn into ghosts if they die. When you
become a ghost, your title will change to 'Ghost' until you get revived.
Depending on the server configuration, ghosts of a 'normal mode' player

can usually be resurrected only 2 times, so a normal player has 3 lives
before permanently biting it.
Unworldly/hellish characters don't have a ghost and are completely destroyed
if they die.
Everlasting characters may also use the 'Instant Resurrection' feature offered
by town temples, see (4.5a), which will avoid turning into a ghost.

Ghosts are very fragile, but can pass solid walls, float up and down freely
using the < and > keys, their melee attacks can cause fear and they gain a few
special abilities listed further below under 'Ghosts' (such as infra-vision).
Ghosts only receive half XP points and they do not share XP with party members.

If a player ultimatively dies on a dungeon or tower floor, ie he didn't turn
into a resurrectable ghost but got completely erased, then that particular
floor he "perma-died" (also termed "ghost-died") on will remain static for
a while, instead of being regenerated.
This allows other players to go down there later and retrieve his items or
money, however, whatever killed him/her will probably also still be down
there!

The time a level stays static is usually 2 minutes * dungeonlevel.
Example: A player dies on -300 ft in The Orc Cave dungeon.
         In The Orc Cave, the first floor at -50ft is alreay like -500ft ie
         level 10 (compare (4.5)). The player died 5 floors deeper at -300
         so we have to add 5 more floors to 10, so the player died at dungeon
         level 15 in fact. 2 minutes times 15 = 30 minutes time for others to
         go there and pickup his loot until the level randomly changes again.

Levels below 9 (eg for Barrow-Downs less deep than -450ft) are usually exempt
from remaining static and will regenerate normally, meaning the loot is lost
after a couple of seconds.

Sauron's floor (the bottom of Mount Doom) is special and will only stay static
for 60 minutes to avoid possibly blocking other players for a long time who
want to try and defeat him.

Notes: If a player enters a static-by-death floor, the floor timer will be
       reset and start counting down the full duration again, prolonging its
       staticness. This timer-reset happens the moment a player enters that
       floor. How long he stays or when he leaves again has no effect.

       The same timing that applies for static-by-death floors is also valid
       for static-by-save&exit floors, ie floors where a player logged out
       instead of doing that in town.
       So if you logged out because your character was stuck, make sure you
       don't log on too early or you will reset the timer as mentioned above.

       What happens to your loot

If you die, all of your items are dropped to the floor at the place of your
death. Additionally, 0-4 random items from your inventory and sometimes even
one random item from your equipment might get destroyed on death, but most of
it is waiting for you to pick it up again after someone came and revived you.

Note however that if you float up or down with your ghost while noone stays on
the level to keep it, the level will usually immediately change and be lost and
all your items with it!
(Only a ghost's death or death of a character which has only 1 life will turn a
floor static as described further above.)

If you stood in a place where there is no room for your items to drop, for

example inside a dense forest (green tree fields) or mountain regions (brown ^
fields) then your items will be scattered randomly over the whole level.

Watch out for nearby monsters that have the ability to pick up items, they
might pick up your loot too, and they don't always drop all items they picked
up again when you slay them, possibly resulting in more permanent item loss.

Last but not least, non-validated players and characters below level 3 don't
drop their items on death, their loot will vanish forever. (The level depends
on server settings, so check them via ˜i to verify.)

If you are an everlasting-mode player you can enable 'instant resurrection' in
any town's temple (see (4.5a)) in which case you will not drop your items on
death but just respawn near the temple on death, provided you had enough funds
at the time of death to pay the fee of getting automatically resurrected.
The usual loss of 0-4 inventory items and sometimes one equipment piece will
still occur though as it cannot be avoided. And the experience loss is even
greater with instant resurrection than with normal deaths.

Ghosts

You can continue playing as a ghost, getting a slight experience penalty,
but that's not recommended. Instead, you should go for resurrection!
Ghosts also do not share experience with party members on the same floor.

Ghosts can float up and down freely (just hit '<' or '>' key as if you take
a staircase), so they can quickly float out of the dungeon without having to
search for staircases. However, on some servers, a ghost cannot float down to
very deep dungeon levels which he hadn't visited yet when he was still alive.
So 'Ghost-Diving' (means: simply continuing playing as a ghost) is somewhat
limited there.

That will bring you back to life at the cost of experience (35% usually).
There are 3 ways to be revived:

-the ghost can visit a temple (green '4' in town). The temple priest will also
 give him some money. The temple priest will turn the ghost away without
 resurrecting it, if the town isn't the last one visited by the player when
 he was still alive. ('The temple priest turns you away')
 If you want to do this but don't want to lose your items that dropped in the
 dungeon where you died, either have someone wait down there for your return or
 ask someone to pick up your items before your ghost leaves the dungeon level.

-wait down there for another player to come to your ghost and (doesn't work
 inside vaults!) read a 'Scroll of Life' when standing directly next to you.

-wait down there for another player to come to your ghost and (doesn't work
 inside vaults!) speak a prayer of 'Resurrection' when standing directly next
 to you. This method costs you the least amount of experience penalty, which
 gets reduced depending on the level of the resurrection spell.

By any means of resurrection, the ghost will then return to the world of the
living under the cost of a lot of experience but at least the player can resume
playing. If the ghost dies, the character will finally be erased permanently,
watch out!

Ghosts slowly lose experience, if they go below 0 they will fade and the
player will be erased completely.

Ghosts have some special abilities, these are
-they can see invisible creatures

-life force can hardly be drained from them
-they cannot be paralyzed
-they spot warm-blooded creatures easily (aka +5 to infra-vision)
-they resist darkness effects, cold, blindness, fear and confusion
-they are immune to poison and don't suffer from continuous disease
-they cannot be cut since they don't bleed
-they resist insanity attacks
-they can pass solid walls and mountains
-they can levitate
-they cannot use items
-they cannot carry items except for the Book Of The Dead.

Ghosts can access ghost powers with 'U' (currently not available, sorry) or
with CTRL+X if using rogue-like key set.
Those powers drain your experience. If you use them too often you might lose
character levels even, and if you eventually run out of experience you will
fade away and permanently cease to exist without a chance of resurrection
(which means your character is erased then same as on ghost-death or unworldy
character's death).

Getting help

Don't hesistate to ask other players online for help. You can press '@' to see
who is currently logged on. To try and get the attention of someone who seems
to be afk, you can try the /page command. It will make his game client beep
three times.
Write in normal chat (so everyone can read it) that you need help, the dungeon
you are in, and the depth you are on, eg: "Help! I died in Mordor -50 ft!"
Make sure your ghost is in a safe spot, preferably within walls, so most
monsters will be unable to attack you. Avoid moving around until the player you
called for a rescue confirms that he has cleared out the monsters and tells you
where you should move next.

Note that certain items can be traded cross-mode (ie between everlasting and
non-everlasting players) to make rescues easier! These are:
- Basic food and ale
- Torches
- Flasks of Oil
- Scrolls of Satisfy Hunger
- Scrolls of Word of Recall
These items will be 100% discounted on cross-mode trade, so they become
unsalable to stores, but at least you can use them!

(3.12) Character timeout and account timeout

Character timeout:
If you do not log in a character at least once every 365 days the system will
automatically delete it along with its houses, to keep the database clean.
So make sure you don't let your characters time out this way!
(There will be an expiry warning about 60 days before this happens when you
log on with any of your characters, to remind you.)
Depending on the server settings, there might be a backup that allows
restoration of deleted characters and their house contents to some extent.

Character restoration:
Usually, characters of level 35 and higher are backed up, including contents
of their houses, while characters below 35 are just erased without trace.
To get a character restored, you'll have to notify an admin to check if there
is a backup available and restore it. When the admin notifies you of successful

restoration, you'll have to create a new character of the same name as the one
that got deleted and was now restored. Race, class, stats etc do not matter,
only the name counts, it must be identical.
When you log on, you'll then find you're on your restored character.
Houses per se cannot be restored though, only their contents are. So you will
have to actually buy new houses. The good news is that the value of your houses
is also reimbursed, as part of the restorable house contents.
So, to obtain the house contents, use the "/request" command. It will fill your
inventory with the items that were in your houses when they got deleted.
When your inventory is full, drop the items somewhere (like inside a newly
bought house) and repeat the command, until it eventually says that there are
no more items available.

Account timeout:
If your account holds no characters for 30 days the account itself will be
deleted and thereby freed up again.

(4) The world
=============
(4.1) Running, picking up items, fighting

To move around, use the number pad keys 1,2,3; 4,6; 7,8,9.
You can also use the arrow keys to move, but the numpad is better since it
allows you to move diagonally too, which is very important.

If no monsters are within your line of sight, or those which are are soundly
asleep, you are able to "run".
This feature was introduced to let you quickly cross empty areas, while it will
cease to work as long as you fight monsters. To run, press SHIFT+<direction>
or type '.' followed by a direction. Running using SHIFT+<direction> will
only work if Numlock is turned off. Numlock is the key labeled 'Num' above the
number key pad on the right side of your keyboard. Usually a green lamp will
indicate whether Numlock is on or off.
An exception is the town of Bree, where you are always able to run, even if
enemies are nearby.

If you want to pick up an item from the floor, step on that field and press
'g' (or press '5' on the numpad, while NUMLOCK must be on). For more
information about finding, identifying and selling items, see (5.7).
However, note that the keys can vary depending on your system configuration.

You can attack a monster with your equipped melee weapon by simply moving on
the monster's field, ie 'bumping' into the monster.
A much better choice however, is to either just stand still and let the monster
approach you, or -if the monster is asleep- just move next to the monster
instead of bumping into it. In both situations, as soon as there is a monster
directly next to you, you will automatically attack it!
This is an important feature, called "auto-retaliation", see (4.1a) below!

If you want to use ranged attacks then you have several choices:
a) casting a magical spell ('m')
b) throwing an item at a monster (or player) ('v')
c) firing your equipped ranged weapon (sling, bow, crossbow) ('f')
d) zapping a magical rod or aiming with a magical wand ('z', 'a')
For most types of ranged attacks you'll need to designate a target.

As soon as you finish casting an attack spell or if you press 'f' to fire an
arrow/bolt/pebble/shot the game will ask you for a target or direction.
You can now either press one of the 8 direction keys to fire into that
direction, or you press the asterisk '*' followed by a 't' to designate the

closest enemy as your target, which usually is what you want.
Since version 4.4.6 the game also supports '-' to fire at a previously set
target if it still exists, or cancel the action; 4.4.6b further added the '+'
key; see (3.7d) for details about targetting.

To learn how to create a macro instead of typing all these letters every time
you want to launch a ranged attack, look at '(3.7) Creating macros for ranged
attacks', or -much simpler- at '(3.7c) The macro wizard'.

(4.1a) Auto-retaliation

If you stand still and an enemy is on an adjacent grid (directly next to you,
no space between you and the enemy) then your character will automatically
attack it with the equipped melee weapon.

Starting in 4.9.3 there is an option 'instant_retaliator' that toggles the
behaviour of auto-retaliation and of fire-till-kill, in Gameplay Options 1:

- If on, your character will instantly attack anything adjacent (or targetted
in the case of fire-till-kill) if you have spare energy, up to two turns at
once if your character was standing around idly before.
This is how auto-retaliator and FTK have always worked so far.

- If off, your character will make sure to keep 1 turn of energy in reserve.
If you move next to an enemy this might result in your character waiting for
one turn to recuperate the movement energy before it starts auto-attacking or
firing-till-kill. This is the new way, choosable starting in 4.9.3.

Why you might want to choose the new way ie turn it off:
 The advantage of having this turned off is that the stored up energy can be
 used to break out of auto-retaliation or fire-till-kill almost instantly, for
 example if you hit your teleport macro.
 So it guarantees a fast escape without having to wait for energy recuperation
 and thereby greatly increases survival chances for classes that don't split
 their energy on attacks like melee or archer-type classes do. Istari are for
 example strongly affected by this option.
 Also, if this is on, as your character won't instantly auto-attack if you
 step next to an enemy, this allows you to easily walk past sleeping monsters
 without your character starting to attack them and thereby waking them up.

-- More about auto-retaliation: --

Instead of melee attacks, you can also configure the auto-retaliator to use
other items. To do so, you use '@O...' (the letter 'O', not the number zero!)
item inscriptions:

Note: To inscribe an item press '{' key, to uninscribe press '}'.
Note: You cannot use any sort of teleportation or recall for auto-retaliation.

Weapons:
    @Ox   Don't auto-retaliate with it.
                 It's recommended for spell-casters who just wear a weapon to
                 profit from its magical abilities to always inscribe it @Ox
                 so it won't accidentally get destroyed when fighting a Nazgul
                 and the auto-retaliator won't take over.

Ranged weapons:
    @O   Auto-retaliate with it (shooting ammo).
                 (Note: @O can either be on your ammunition or on the bow.)

Magic devices:

```
        @O          Auto-retaliate with it. (Wands, staves, rods.)
                    Note that you cannot use self-relocation magic such as teleport
                    or word of recall for auto-retaliation.
                    You can restrict auto-retaliation to town-only by adding a 't'
                    after the '@O' like this: '@Ot'.

    Spell scrolls, books or crystals:
        @Oc         You will auto-retaliate by casting the spell 'c)' from this
                    book (or any other spell, change the inscription accordingly).
                    You can restrict auto-retaliation to town-only by adding a 't'
                    after the '@O' like this: '@Otc'.
                    IMPORTANT: If you cannot cast spells from the book or you
                    inscribe an unsuitable item, auto-retaliation will be disabled
                    completely!
                    If the spell letter, in this example 'c', is omittted, the
                    first spell in the book will be chosen.
                    Note that you cannot use self-relocation spells such as
                    phase door, teleport or word of recall for auto-retaliation.

    If you want an auto-retaliation-enabling inscription to only work while you are
    around a town (in town or in the town area aka housing area), add a 't' after
    the 'O', examples: '@Ot', '@Otb'.
    (Note that 't' cannot be combined with 'x'.)

    Alternative to @O inscriptions, can be used on magic devices and for spells:
        @Q          If you want to fall back to melee-autoretaliation in case you
                    cannot cast right now (or out of charges/energy on magic
                    devices), use a 'Q' symbol instead of the 'O'.
                    Examples: '@Qt', '@Qtb'.
                    This is useful for classes that may use attack spells yet can
                    perform decently in close combat, such as paladin or
                    mindcrafter.

    Aside from inscriptions there are also three commands for auto-retaliation:

    Melee:
        /ar [t]+   or   /ar -
                    Turn melee auto-retaliation on or off, see (0.2b) for details.
                    Optionally use 't' for 'in town only'.
        /ar help    Shows details for the /ar command.

    Mimic powers:
        /arm [Q][t]<power>   or   /arm -
                    Auto-retaliate with a mimic power, see (0.2b) for details.
                    Optionally use 't' for 'in town only',
                    and/or 'Q' for 'fallback to melee if cannot cast'.
        /arm help   Shows details for the /arm command.

    Runes:
        /arr [Q][t]<a-f><a-f><a-h><a-f>   or   /arr -
                    Auto-retaliate with a runespell, See (0.2b) for details.
                    Optionally use 't' for 'in town only',
                    and/or 'Q' for 'fallback to melee if cannot cast'.
                    The four mandatory parameters: rune, rune, mode, type.
        /arr help   Shows details for the /arr command.



    (4.2) Level and owner of items
    ------------------------------
    If you press 'l' to look at an unknown item that lies on the floor, you'll
    see something like this:
```

```
You see a Long Sword {?} (2d5)

The '{?}' indicates that this item has not yet been 'identified'.
That means we don't know yet if it has certain magic abilities or if it's
even cursed. We just know what we can see with our very eyes, that it is
undoubtful some Long Sword, and all Long Swords do a base damage of 2d5.
For more information about finding, identifying and selling items, see (5.7).
If you pick it up it will be displayed in your inventory like this:

e) a Long Sword {+,?} (2d5)

Note the additional '+' symbol. It means that you're now the 'owner' of that
item because you were the first one to pick it up.
Now you want to find out if the sword has any magic abilities. So you read
a Scroll Of Identify (or a Staff of Perception for example). The sword now
looks like this:

e) a Long Sword {+,6} (2d5) (+1,+5)

Now we know all about it. It's a magical Long Sword (magical because its
magical to-hit and to-dam boni are not 0,0 but 1,5. That means it's an
enchanted Long Sword that magically adds +1 to your hit chance and +5 to
the damage, doing (2d5)+5 damage per hit) that requires its wielder to be
at least level 6 in order to use it.

-Now if you're the owner of the sword then you are able to use it even if your
level is lower than 6 !

-If you give this sword to someone else who is level 4
that person won't be able to use it because he's not the owner.

-If you give the sword to someone who is level 6 or higher, he will become the
new owner! Now you're unable to use the sword if you're level 5 and he gives
it back to you.

-To the owner an item has the '+' sign displayed in its name. Every other
player who looks at the item sees the owner's name instead. Example:
If you drop the sword to the ground and 'l'ook at it, you'll still see this:

e) a Long Sword {+,6} (2d5) (+1,+5)

but if someone else looks at it, assuming your name is 'Mithrandir', that
person will instead read:

e) a Long Sword {Mithrandir,6} (2d5) (+1,+5)

-Last but not least a nasty scenario:
Your character (named 'Mithrandir', level 20) dies and loses his Bluesteel
Blade {+,20}. Now you're a ghost and decide to ask a fellow player (named
'Mugash', level 30) if he can defeat the monsters that killed you and bring
your items to town.
He agrees, you float up to town (remember that ghosts can simply float up
and down anytime by pressing < and >) and revive in the temple (green '4').
If you revive, you'll always lose a bunch of experience. So your level is
now 18 instead of formerly 20.
The level 30 player kills all monsters and picks up your stuff. Since your
valuable Bluesteel Blade requires level 20 the level 30 player becomes its
new owner because he's not lower than 20. He arrives in town and drops the
sword for you.
You pick it up, and whooops it's a Bluesteel Blade {Mugash,20} and you're
level 18. You can't wield it anymore! So the right choice would've been to
```

ask Mugash if he can buy a 'Scroll of Life' and revive you in the dungeon
after he killed off all mobs, to avoid him touching your items and becoming
the owner.

For more information on item basics see (3.4c) and for more advanced item
details see (5.7).

(4.3) Dungeon and tower types

To enter a dungeon, you look for the staircase symbol '>', step on it and press
the '>' key to enter. Same for entering towers, except their staircase goes
upwards instead of downwards, and hence is a '<' symbol instead of '>'.

To see a list of all dungeons you have discovered so far, press ~ 8.
To see a list of all dungeon knowledge, including their locations, accumulated
by players on the server so far, visit the Mathom-house in Bree (see (4.5a)).

In Bree, there is often a so-called Training Tower, which is represented by a
dark green '<'. Enter it by pressing the '<' key.
The training tower allows you to 'die' without suffering major consequences
(except for a slight loss in experience and gold), and is easier in general.
An experience penalty might be applied for killing monsters in the tower
(usually 50%). You might ask other players in game (use ':' to chat) where/if
there is a newbie tower (also called 'Training Tower'), or you might search for
it yourself. It's usually in Bree, to the lower right of the town centre.

In general, when you take a staircase or use Word of Recall, your character
will temporarily get a high Armour bonus (+100) and a chance to deflect enemy
attacks and to reduce their damage, for a very short duration.
This is an extra protection (called 'stair GoI', compare (0.4)) to help
surviving nasty surprises when entering a new dungeon level.
Keep your scrolls of teleportation ready anyway!

While in a town, you can invoke a map that shows the staircases upwards
and downwards by pressing SHIFT+'M' (ie capital M).
If you leave a town and explore the wilderness, M will bring up a map showing
you towns and areas that you have explored so far.
If you are in a dungeon, M will bring up a minimap of your dungeon level
instead.
If you want to look at the world map while in town or in a dungeon, press '~'
key and choose "Wilderness map".

Before you enter a dungeon, make sure that you have equipped a light source!
Note the bright dots around you, these are lightened fields within the
radius of your light source. To look around your current dungeon/tower level
or town, press 'L' and use direction keys to move your view panel. ESC key
bring you back to normal view mode.

The wilderness actually bears many interesting dungeons apart from the usual
well known town dungeons.

When you enter the dungeon 'Barrow-Downs' in the starting town Bree, you will
note in the main window instead of "Bree" your actual depth is displayed,
telling you on which dungeon level you are. Each dungeon level is 50 feet
deeper.
Monsters have approximately the same level as the dungeon level they appear
on. You should try to figure out how deep you can go without dying.
The dungeon depth I can recommend is between 1/3 (if you are _very_ weak) of
your own character level and 3/4 of your character level. You can also go
deeper, in case you want to try diving quickly. On 750 ft you can often find

hounds (their symbol is a 'Z' for 'Zephyrs'). These don't have many hit points
but give a lot of experience, making them a valued target for divers.

For a list of dungeons and towers, see (4.5).

Dungeon types

There are different types of dungeons, indicated by different
staircase colours (also visible on the world map):

-Normal dungeons. The main dungeons below the five cities Bree, Minas Anor,
 Gondolin, Lothlorien and Khazad-dum are such regular dungeons.
 Normal dungeons/towers are marked by a white < or > symbol.

-NO_RECALL_INTO. You may not recall into this dungeon/tower. You can use
 recall to get out of it though. Probability travel works towards the surface
 but not towards the dungeon bottom/tower top. To Telekinesis the same
 restrictions apply as for NO_RECALL. Ghosts may float freely.
 Staircases are yellow.

-NO_UP. These dungeons won't allow you to go upwards, similar to ironman,
 just without the penalty of permanent ghost-death. You are allowed to
 use Word of Recall as well! Ghosts of dead players can float upwards.
 No-up dungeons/towers are marked by an orange < or > symbol.

-NO_RECALL. These dungeons don't allow you to use Word of Recall nor
 probability travel to change the level. The staircases are the only way.
 Sending items via telekinesis to a player who is currently in a no-recall
 dungeon/tower will only work if both players are on the same dungeon floor.
 Ghosts of dead players can still float up/down.
 (Killing Sauron is an exception, allowing you to recall from Mount Doom!)
 No-recall dungeons/towers are marked by a red < or > symbol.

-FORCE_DOWN. Same as NO_UP, but you can only recall at the bottom of the
 dungeon, similar to ironman (except for the no-ghost death penalty).
 Force-down dungeons/towers are marked by a light red < or > symbol.

-Hellish. Players suffer no-ghost deaths inside hellish dungeons.
 Even if they're everlasting, meaning that if you die in such a dungeon or
 tower you won't turn into a ghost either but get destroyed completely.
 Hellish dungeons/towers are marked by a fire-like flickering < or > symbol
 (red/yellow).

-Ironman. Same as hellish. Also:
 Ironman dungeons or towers won't allow you to recall or to use
 staircases that lead upwards or probability travel backwards!
 Sending items via telekinesis to a player who is currently in an ironman
 dungeon/tower will only work if both players are on the same dungeon floor.
 To leave an ironman dungeon/tower you'll have to get to it's bottom or top
 respectively. There might be possibilities to use Word of Recall even if
 you're not at bottom/top yet, depending on the server/dungeon type.
 In general you will recognize levels which allow recalling by a green message,
 saying "You don't sense a magic barrier here..." (compare (4.8)).
 Ironman dungeons/towers are marked by a dark grey < or > symbol.

 NOTE: In the case of Ironman-server settings, you can usually recall INTO town
 dungeons every (n*1000)+50 ft, n starting at 0. Example: -50 ft, -1050 ft,
 -2050 ft, etc. Also, ALL dungeons will usually not allow recalling OUT until
 you reach a floor that is equivalent to at least dungeon level 20. Examples:
 At least -1000 ft in Barrow-Downs, at least -550 ft in The Orc Cave.
 (See (9.6) for more information about Ironman settings.)

-NO_DEATH. The Training Tower in Bree has this flag. Players who die inside a
 no-death dungeon won't turn into a ghost if they 'die' but just be teleported
 back to town! They still lose about 20% experience (and gold) though.
 They will not lose their winner (King/Queen/Emperor/Empress) state though.
 No-death dungeons/towers are marked by a green < or > symbol.
 NOTE: The NO_DEATH flag has no effect on PvP mode characters, they will die.

-Dungeons that allow neither recalling out, nor floating or providing stairs!
 There is usually only one such dungeon and that is the 'Death Fate'.
 Its entrance is a dark-flickering staircase.
 However, there might still be a way to get out again!
 (The 'Death Fate' dungeon does actually not count as an 'ironman' dungeon and
 provides some special stuff, see (4.5c).)

-Experimental dungeons. There might be an experimental dungeon available, which
 has special flags that are very unusual:
 - NO_TELE (monsters and players cannot teleport)
 - NO_ESP or LIMIT_ESP (either no ESP at all or ESP range is limited to 10),
 - NO_SUMMON (monsters and players cannot summon).

 Such experimental dungeons have light umber coloured staircases (same colour
 as is used for maxed stats/abilities, ie light brown/bronze).
 Experimental dungeons do not belong to the canon game and you enter on your
 own risk! (Well, you actually enter any dungeon at your own risk, so..)

 If an experimental dungeon also has Ironman, Hellish or FORCE_DOWN flags its
 staircase will instead be dark grey and flicker orange.

If a dungeon has several of these flags listed, the latter ones will override
the staircase colour. So a hellish NO_RECALL_INTO dungeon has hellish-looking
staircases.

Sometimes you might find ruins of old staircases that don't lead to any
dungeon or tower. Those have no further functionality and are coloured grey
(make sure you don't confuse them with an ironman dungeon accidentally).

If you're looking for a challenge dungeon regarding deep diving without
recalling in between, you might want to check out 'The Halls of Mandos'
or the 'Ironman Deep Dive Challenge' (see (4.13) for details).

Overview:

Dungeon type	Death?	No-ghost?	Recall	Staircase	Prob travel	+Exp
Normal	yes	(char)	yes	yes	yes	+ 0%
No death	no	no	yes	yes	yes	-50%
No recall	yes	(char)	no	yes	no	+10%
No rec down	yes	(char)	upwards only	yes	upwards	+ 5%
No up	yes	(char)	yes	downwards	downwards	+ 5%
Force down	yes	(char)	at bottom only	downwards	downwards	+10%
Ironman	yes	yes	at bottom only	downwards	no	+15%
Hellish	yes	yes	yes	yes	yes	+10%

(Note: Staircase directions - ie upwards/downwards - are inverted for towers.)

(4.3a) The jail

The jail is a dedicated house that does not allow imprisoned characters to
escape until a timer runs out, after which they will be freed.

The jail was originally built for punishment of the following felonies –
although depending on the server's configuration some might be disabled while
others might get added:
    -Swearing
     Still the most common felony, it will usually only result in a pretty
     short time of imprisonment.
     Foul language will be filtered by '*' characters to other players, except
     if they have turned the filter off in their clients (also see (3.3)).
     It's possible that not all foul language might result in jailing, but most
     of it certainly will.
    -Spamming the chat (aka 'talking too much')
     Very rare to trigger, also results in a pretty short time of imprisonment.
    -On server settings where players have to declare that they are ready for
     pvp, attacking a non-pvp player will result in a long time of imprisonment
     Trying to shoot someone who's on a safe grid will also result in a medium
     duration of imprisonment.
     (These settings are not enabled on the main servers.)

If you commit multiple felonies, whether you are already in jail or not, the
punishment adds up (except that it doesn't matter how many swear words occured
in one chat message).

There can be multiple jails. The player will be imprisoned in the one closest
to him. Also, players will only get caught if they are getting close to a town.
If you are far away from town, your punishment will be delayed until you move
close to a town gain, then you will be jailed "for old crimes" accordingly.

Note that jails (if the server has one) don't allow any sort of teleportation,
nor will you turn into a ghost if you get killed there, instead you will get
destroyed completely (basically same as if you were a no-ghost mode char).

A jail often has an ironman tower or dungeon inside, constituting an escape
tunnel. If you don't feel like sitting out your punishment you could try taking
your chances to escape. If you make it out alive you'll be a free man or woman.

(4.4) Terrain

Terrain features in the main window:

Town buildings-
Consisting of red or yellow '#' (roof) and white '#' (wall), these cannot be
damaged or destroyed and some of them contain the basic town stores (numbers
1 to 9 marking the entrance) as well as special stores (+ sign marking the
entrance). See (4.5) for details about stores.

Floor-
Dots '.' rensemble empty floor. Green dots are grass, brown ones dirt, grey
ones stone or ash. Note that the colour also depends on the season – in summer
or autumn, some grass might appear as yellow, when it's been suffering in the
heat. ;)
Red dots are lava, violet dots nether mist. These can be dangerous to cross!
See a bit below for more details.

Trees and bushes-
Thick trees are rensembled by (mostly green, depending on the season) '#'.
To pass them you need to either levitate over them or to be an Ent, shepherd of
trees to whom they will slightly bow aside to make room, a yeek, or a trained
ranger or druid. Trees can also be burned up. Dead trees and bushes are '*'
symbols.

Staircases-
'<' and '>' are staircases leading upwards or downwards into towers or dungeons. (Press the according key to walk the staircase. Whenever you take a staircase, you'll receive the 'stair GoI' buff, see (0.4) for details on that.)
To discover a dungeon (or tower), you need to locate its entrance staircase.

Doors-
Light brown '+' are closed doors, ' are open or broken doors.
(Use 'o' to open, 'c' to close and 'B'/'F' to bash/force doors.)

Void Jumpgates-
Violet '+' are void jumpgates that teleport you elsewhere.
Press '>' key to use them.
Jump gates are always connected in pairs. Note that draconians are susceptible to the void, taking damage when they pass through jump gates.
Also, monsters can try to intercept you when you attempt to use a void gate.

Stores-
Store entrances are represented by coloured numbers '1'..'7', '9' and '+'.
See (4.5) for details about stores.

Rubble-
':' is rubble. Characters with high enough archery skill who use a sling-type weapon can stand next to rubble and use their 'Craft Ammunition' ability to create sling ammunition from it.

Dark Pits-
Dark grey '^' are pits that can only be crossed if you have feather falling or levitation ability. Bree is protected by pits around the outer tree wall.
These pits cannot be disarmed (because they don't count as trap, as opposed to the actual 'chasm traps' and 'pit traps') or destroyed.

Walls-
White '#' are permanent walls which cannot be damaged or destroyed, or in some special places can be ice walls (which can be destroyed).
'#' and '%' of different grey tones are granite walls, magma intrusions, quartz veins and can be tunneled into and take damage from earthquakes.
Yellow '#' are sand walls, red/brown '#' are indestructible lava walls which may occur in some remote places..

Water-
On the world surface but also in some dungeons there's lots of water (blue '~' fields). It can be dangerous to cross it if you're not good at swimming or if you cannot levitate :) Further, nasty creatures are said to live in the seas.
Ents cannot drown in water since they completely consist of wood.

Mountain chains-
Brown '^' fields are massive and very high mountains. To travel these you need a climbing set or another item that gives you climbing abilities. Dwarves can intrinsically travel through mountains. In dungeons '^' rensemble solid structures of massive rock that reach nearly up to the top of the huge dungeon levels, climbing these is as hard as climbing mountains above ground.
White '^' are extremely high mountain chains that cannot be climbed.

Lava-
Red dots '.' are shallow lava, which will do heat damage to your character in regular intervals.
Red/orange/yellow '~' is deep lava, which deals a lot of heat damage.
The fire damage lava inflicts might also destroy items in your inventory in case you're not immune to fire or at least double-resist fire — potions of resist heat are a cheap way to attain double resistance for a short time.
(See (5.6) for more information about resistances, double resistance

and (5.10) for details about item destruction by elemental effects.)

Fountains-
'_' are fountains. To drink from them use /sip command or press the '_' key.
See (0.2) for more details.

Nether mist-
Violet dots designate nether mist. However, this usually only occurs in the
Nether Realm, a place which is exclusively accessible to winners.
Nether mist deals nether damage periodically, similar to how lava deals fire
damage.

Terrain features on the world map:

Towns   yellow 'T'
Grassland   green '.'
Forest   green '*'
Dense forests   dark grey '*'   - danger of getting stuck (*)
Swamps   violet '%'
Lakes   are displayed as blue '~' fields on the world map.
Rivers   light blue '~'
Coast areas   yellow ','
Oceans   blue '%' fields.   - might be hard to traverse (***)
Wasteland   umber (bronze) '.'
Mountains   dark grey '^'   - danger of getting stuck (**)
Volcanos   red '^'   - danger of getting stuck (**)
Deserts   yellolw '.'
Icy waste   white '.'

(*) You could get stuck in the trees if you enter such a sector;
     a digging tool or just using a sword or axe will allow you to hack down
     the trees relatively easily though to get you out of there.
     Note that levitation also allows you to pass trees easily.
(**) You might get stuck in there if you enter such a sector without being
      able to climb. Especially nasty in case of volcanos, since the fiery
      ground might burn your items. Use Word of Recall to get out of here.
(***) If your backpack is too heavy for you to swim then it'll be a big hassle
       to try and cross deep water without drowning. In that case just get an
       item that allows you to levitate and you'll be fine. (See (4.15) for
       details about swimming).

(4.5) Towns, shops, the dungeons and dungeon bosses

To view a list of all towns and dungeons you have discovered, press ~ 8 .
Dungeons which have a dedicated final boss will indicate at the end of the
line whether you have "conquered" them yet (aka slain that boss) or not.

To see a list of all dungeon knowledge, including their locations, accumulated
by players on the server so far, visit the Mathom-house in Bree (see (4.5a)).

If you create a new character, it will start in 'Bree', a town located at
position 32,32 on the world map (same position on all servers!).

The world map, ranging from 0,0 (bottom left corner) to 63,63
(top right corner), bears several other towns that you can find and
explore. These towns often contain different shops (some are said to offer
Identify service or even a cure to Black Breath) and harder dungeons.
For a list of towns and their local dungeons, see (4.5b).

However, they might also be a very dangerous place to stay, compared to Bree.
In general you can say the harder the local dungeon entrance of a town the
more dangerous monsters can spawn within the town! Bree is the only town that
contains just more or less harmless townsfolk.
The worst are Khazad-dum and Lothlorien, if you go there be _very_ cautious.
Monsters that appear here might look like harmless novice paladins or snagas
but are in fact of a higher level and more powerful. Also, dangerous monsters
can spawn in those towns: While Gondolin and Minas Anor can already have nasty
Mindcrafters, Khazad-Dum and Lothlorien may also spawn the infamous Grand
Swordsmasters which have killed many characters that went AFK outside the inns.
However, it has been observed that people who figured out how to climb high
mountains travelled to Khazad-dum despite their low level for a strange
reason >:-).
Even if you decide to stay in Gondolin, which is relatively harmless,
don't go afk for a longer time or even a snaga archer might kill you with his
ranged attacks. Always a nasty surprise..

Despite the hazards of higher level towns, towns in general act as a safe zone,
preventing PK/PvP attacks (ie attacks done by a player against another player)
and stop your character's food consumption, meaning that you cannot die by
starvation while in town. Towns also put experience drain on hold, which is
important for players wearing Nazgul Rings Of Power for example.
Dungeon towns behave like normal towns in these regards.

(4.5a) Shops and their services

Each town has several shops, displayed as numbers '1'..'9' and some '+'.
(There are some special variations of these shops too, located in dungeons.)
The 1-9 standard shops that recur in almost every town are..

General Store   1   Sells food, lanterns, ammunition, cloaks and shrooms.

Armoury   2   Offers various basic armour. Rarely excellent pieces.
                        Also offers to repair damaged armour (which is cheaper
                        than enchanting it, except for rather expensive items).

Weaponsmith   3   Offers various basic weapons. Rarely excellent pieces.
                        Also offers to repair damaged weapons (which is cheaper
                        than enchanting it, except for rather expensive items).

Temple   4   Player ghosts will be revived here, and receive some
                        money. The temple also sells a selection of blunt
                        weaponry, scrolls and potions.
                        The temple priest will also attempt to cure, heal or
                        feed you if you enter the temple in bad condition.

                        Since 4.4.9 the temple also offers you to toggle
                        'Instant Resurrection', a new feature that is only
                        available for everlasting players and will immediately
                        resurrect a player at the temple when he dies, removing
                        the need to wait for some other player to come and
                        rescue him. In turn, the experience penalty will be
                        50% instead of the usual 35%. Insta-res also keeps all
                        your items except for the usual chance to lose a few of
                        them on death, which is the same as for normal deaths.
                        However, the player will need to have enough cash to
                        pay an instant resurrection fee when he dies, which is:
                        Dungeonlevel * dungeonlevel * 10 + 10 gold pieces.
                        Eg at -50ft Orc Cave it's 10 * 10 * 10 + 10 = 1010 Au.
                        The money is automatically deducted from the purse or
                        the bank account as required. If the player does not

have enough money in total then resurrection will fail
and the player will remain a ghost in the dungeon as
usual when not using instant resurrection.
Instant resurrection does not work in no-ghost dungeons
(ie ironman or hellish) and dungeon levels (ie floors
where Morgoth is) or in the Nether Realm.
You can use the /ex command to check whether instant
resurrection is enabled, it will tell you if so. Then
it will additionally display the fee needed for your
current dungeon level, displayed in red if you don't
have enough funds. Or if you aren't in a dungeon it
will instead display the maximum dungeon level your
current funds would suffice for.

Some example fees for quick reference:

Barrow-Downs -1000 ft	4010 Au
Barrow-Downs bottom	12260 Au
Orc Caves bottom	5300 Au
Mordor bottom	43570 Au
Mount Doom bottom	98020 Au
Angband bottom	161300 Au
Cloud Planes top	222020 Au
Nether Realm -50 ft	275570 Au
Nether Realm bottom	384170 Au

Alchemy Shop   5   Sells various scrolls and potions.

Magic Shop   6   Sells wands, staves, rings and amulets.

Black Market   7   Sells many different items, mostly very good ones.
This shop is very expensive and buys for very little
in return. Better not sell your items to this shop,
as long as a regular store will pay you better.
Some items cannot be sold elsewhere though.

The black market randomly offers practically any item,
although some can be extremely rare (for example high
dragon scale mails or scrolls of artifact creation)
with very few exceptions. These items never appear:
- Golem-creation related items (massive base materials,
  limbs, command scrolls).
- Talismans (amulets of luck).
- Magic or ethereal ammunition.
- Runes, except in the Secret Black Market (dungeon).
- Items that can only be used by winners (WINNERS_ONLY)
- Items of base value not greater than 50 Au.
  (This means that cursed ego items where the ego power
  value is 0 can also not be generated, same as for any
  other shop. No shop offers items worth 0 Au.)
- Potions of experience, invulnerability, learning,
  chauve-souris, cure insanty (any tier).

The Inn   8   In Bree it's The Prancing Pony. Inside the inn,
players are relatively safe from monsters.

Bookstore   9   Sells books for istari, priests and all other (hybrid)
magic users. Bookstores in higher-level towns on
average also tend to sell higher-level spells (this is
a bookstore-specific specialty, other town shops do not
differ in this way).
The 'o'rder command you can use in town stores is
especially useful in bookstores as it allows you to

order specific spells and prayers you are looking for.

Then there are various shops that just use a normal door '+' symbol, these are different everywhere. Some examples are mainly..

Inn	The first inn you see is the spawn point of newly created characters: The Prancing Pony in Bree. While the '8' is just the entrance into the tavern, the '+' is the actual bar where you can order things from the innkeeper. All inns are safe zones where you cannot get harmed by monsters from outside, and items dropped inside in inn will persist and not time out. If you go AFK in a town you should always do so in the local inn to be safe.
Mayor's Office (Bree)	Allows you to turn in deed parchments you won in tournaments or on other occasions for a reward. Also, you can receive an extermination order here (see (4.13) about those). There are other major buildings in different cities that will provide extermination orders too. It also houses the guild administration office where you can get your guild's name officially changed. Then it has a list of the strongest heroes known. Last but not least you can check out a list of noteworthy occurances that may happened lately.
The Mathom-house	This is located in the same building as the Mayor's Office, the biggest building in Bree. It allows donation of items (irrevocably), functioning similar to a museum.

Most importantly though it holds a list of all known dungeons and their exploration states, under 'Exploration history':
As soon as someone on the server locates the entrance staircase to a dungeon or tower for the first time, it will be listed here for everyone to see.
Likewise, the first time someone enters the dungeon, its starting depth will be made known here too.
The first time someone visits the final (deepest) floor of the dungeon, this information will also be added.
And lastly, if someone meets the dungeon's boss, its existance be recorded here too. If a dungeon has no boss then visiting its final floor will already result in the information being recorded here that it has no final guardian.

Note that if any of the canonical standard dungeons (those in d_info.txt, which are accessible via normal staircases from the world surface) are not yet found, there will be a notification line at the end of the list of dungeons, saying:
"- The Mathom House heard rumours about further undiscovered dungeons! -"
If you manage to discover any unknown dungeons, you will receive a reward from the Mathom-house for your efforts in exploration, the bigger the fewer dungeons are left to discover!

The Mathom-house also has another function, 'Exploration reports':
This just lists how frequently dungeons have recently

been visited, which decays over time again.
In general, dungeons that haven't been visited for some
time will yield extra experience bonus for players that
go there, quad-tiered over +0%, +7%, +13% and +20%.

The Merchants Guild	An NPC run guild that offers two services, a bank account to deposit your money in so you won't lose it accidentally on a dungeon trip, and a mail service that allows you to send money or an item to other players for a fee, and optionally impose a price on an item you send that the receipient must pay you in return for accepting it. Several towns have a subsidiary, you can globally access your bank account and mail from any of those. (Of course, should your character die permanently then its account balance will be erased too.) Explanation of the mail system's details: You can choose to send money or an item to another character. All usual trading restrictions apply. It costs a small fee depending on the value sent, which can also be imposed on the receipient (COD, collect on delivery) if the sender wishes so. Further, when sending an item, you may optionally force the receipient to pay a price in order to receive it which will be sent back to you by the Merchants Guild, making it useful for asynchronous item trading too. Mail will arrive after about a minute real-time and then allow for a one week real-time span to get picked up by the receipient. If it expires it will be sent back and again the original sender has one week to pick it up. If this time frame expires too the mail will be erased and therefore the money or item will be lost irrevocably. If the receipient dies before he can pick up the mail then the mail will be returned to the sender too who then again has one week to pick it up until it expires and gets deleted irrevocably. If the mail gets returned to the sender for any reason but the sender character no longer exists, the mail will also get erased irrevocably.
Rune Repository	(This shop might not exist or only exist in very specific locations in certain game verions.) Sells and buys runes used by Runemasters.
Casino	Minas Anor has a casino. Go and try your luck! (There are various gambling opportunities, and also the ancient board game 'Go' which can be played on a 9x9 board for a one-time fee on each difficulty level. Get your Go game records emailed to you via "/kifu" (japanese) or "/gibo" (korean) command, same thing.) For details about the gambling rules of the casino, see subsequent (4.5a2) paragraph.
Minstrels Haven	Mass Identify Service (Identify Possessions): Will identify all items you currently carry for a fee. See (5.7) for more information about identification.
Library	*Identify* Service, will *identify* an item for a fee.

See (5.7) for more information about ID, *ID*, shops!

Earth-Dome   Herbal Healing Service.
                      Will cure black breath for a high fee. (See (4.11a) for
                      more information about Black Breath.)

Sea-Dome   Morph Restoration Service.
                      Restores your form to normal in case you were
                      polymorphed (for example by a potion of Chauve-Souris).

Star-Dome   Offers service to identify all your items at once.
                      Also offers a recharging service for magic devices.

Valarin Temple   Restores all drained attributes and experience.

Enchant Services (found in various stores, for different item types):
                      These will enchant weapons, arrows, or armour you have
                      equipped.
                      For weapons, this will attempt to enchant a main-hand
                      or off-hand (if dual-wielding) weapon, for armour this
                      will look through all armour slots. When an eligible
                      item is found, it will be enchanted.
                      Cursed items, artifacts and items that cannot be
                      enchanted are not eligible and will be skipped.

                      Only one item is enchanted at a time, so if you have
                      three enchantable pieces of armour that aren't in
                      perfect state, you'll have to take the enchant service
                      three times.

                      The resulting enchantment bonus of the item is your
                      character level divided by 5 and 5 added to that, with
                      the result capped at a maximum of +20, therefore
                      reached at level 75.
                      At level 50 the enchantment would be 50/5 + 5 = 10 + 5
                      = 15, which is the maximum enchantment reachable by
                      using *enchant* scrolls.
                      Ammunition can never be enchanted above (+15,+15).

                      Note that enchant services will not break curses.

Mining Supply Store   In the hazardous city of Khazad-Dum is a store that
                      offers some goods found to be useful by the miners
                      in the mountain depths.

The Mirror   Donate gold and pray to the gods.
                      (EXPERIMENTAL: allows a fallen winner to solo-reking.)
                      This is a special option which allows fallen kings and
                      queens to get their fate changed by the gods:
                      Their Morgoth kill will be undone so they may challenge
                      him once more, to regain their royal title!
                      (In game slang, this is called 'solo-rekinging'.)
                      This service is useful if you do not have any team mate
                      who still hasn't killed Morgoth yet, to kill Morgoth in
                      a party together with him, which is the traditional way
                      of obtaining a lost royal title again.

                      To gain the favour of the gods and have your fate
                      changed you will need to donate at least 5 million gold
                      pieces.
                      In addition to this you can either donate another 5
                      million or you can wait for about 2 weeks (real time,

you don't even need to be logged on!) or you can
gain about 5 million raw experience points or a mix of
all these, up to your personal preference. The two
weeks begin to count immediately after you have died.
'Raw' experience means that it's simply the amount of
experience shown in the monster spoiler (~7) and the
only other factors are the monster's clone state and
you being on appropriate depth (grey depth indicator
will prevent gain completely and a yellow one will
reduce gain accordingly).
Your race and class which may usually diminish your
experience gain (worst for Maiar) do NOT factor in, so
the amount of monster slaying is exactly the same for
everyone. However, YOU will need to kill the monster!
Kills done by party members will not count for you.
So even if your character is at the exp cap at level 50
and does not seem to gain any more experience, this
'raw experience' will still accumulate and count for
obtaining the favour of the gods.

Even if you just donate 0 gold, as a fallen winner you
will still see feedback messages about the remaining
amount of gold to donate and experience points to gain
for your fate to change.
So if you are just missing XP or time, just check back
regularly until it tells you in a bright green message
that your fate has finally been changed:
"You feel your fate has been changed!"

The conversion rates are, as mentioned above:
1 minute of time passed = 250 Xp = 250 Au.
Some random examples to gain the gods' favour:
a) pay 10M straight.
b) pay 5M, wait for about 2 weeks.
c) pay 2M, wait for about a week, gain 2.5M raw exp,
   pay 3M more.
d) gain 4M raw exp, pay 6M gold.

Lose Memories I / Lose Memories II (EXPERIMENTAL):
The Mirror also houses magicians that have another
extraordinary ability: To reset one of your skills!

WARNING: This will NOT work on the following skills,
which are considered essential core skills that would
allow for cheezing a character's progression path:
- Martial Arts, Sword/Blunt/Axe/Polearm mastery,
- Sling/Bow/Crossbow/Boomerang mastery,
- Magic Device.

However, this will ONLY work when you have attained a
maximum level of 35, not earlier and not later, and it
will only work once per character!
If you die and thereby lose levels, as long as your
top level reached is exactly 35 you are still eligible.

The magicians there have two spells available for this
procedure..
A) Lose Memories I:
   An advanced spell that wipes some of your memories,
   while still keeping your brain flexible enough to

retain the skill points.
                          As an unfortunate side effect, you will also lose 5
                          levels worth of your character's experience, leaving
                          you at level 30.
                       B) Lose Memories II:
                          A highly complex spell that chirurgically wipes only
                          the desired memories, so you keep level 35.
                          This spell is quite costly though and the magicians
                          will ask for a fair compensation of 1.5 million Au
                          for their service.

The Soothsayer   Presage fate. Will tell you a random rumour.
                       Also tends to sell potions of restore mana, albeit not
                       cheaply at all.

..and various miscellaneous store services, of which some currently may
not have an actual effect.

Price limits:

Shops that buy and sell items will have a price limit that they will pay for
an item a players wants to sell. The limit varies from 50,000 to 300,000 Au
depending on the shop owner. The shop owners change regularly, if a shop makes
you a bad offer (the cap price) just wait for the owner to change or visit a
different shop. Shops in different towns are run by different owners although
they may use the same number '1'..'9' and '+' for their entrance symbols.
If the item is worth more than 300,000 Au maybe you can find a fellow player
who is wealthy and in urgent need of your items.

Item orders

The basic town stores also allow you to order specific basic items that they
usually offer in their store template. These items will come without any
hit/damage/ac enchantments or ego powers, but in their plain versions.
To order an item, enter a store that provides this option:
  'o) Order an item'
Then specify number and name of the item, examples:
  potion of restore strength
  20 scrolls of identify
  spell crystal of psionic blast
and you will be prompted with the price you'd have to pay upfront, then you
can accept or decline. If you accept, the money will be deduced from your purse
and the shopkeeper will let you know how long the delivery of your order will
approximately take, in in-game time. So if it takes "about an hour" that will
be much less in real world time for you to wait.
Note that for spells and runes you don't need to type out the full item name!
Just typing the spell name or rune name will be sufficient.

Items that are very common in that store will cost about the same amount of
money that you'd pay when buying them the regular way, while items that occur
only very rarely in a shop can be much more expensive to order.
Ordering a pile of items instead of just one will prolong the delivery time.
You can only have one order in process at any time. If you want to order a
different item you will have to wait until your order is delivered and fetch
it.

When you enter a shop where you had an order placed and the item has arrived
then it will be automatically placed in your inventory. If you meanwhile
purchase the same type of item in the shop's regular stock that will not affect
your delivery in any way.

The delivered item will carry an inscription containing the shop name.
It is possible that the item arrives earlier than expected, as part of the
store's regular stock. In that case the shop owner will inform you and hand you
out as many of those items as possible (if you have ordered a pile of them),
that amount will then automatically be deduced from your outstanding order.

To cancel an order, visit the store where you ordered it, press 'o' againand
type "cancel". You will lose your deposited money though!

The '/ex' slash command shows if you still have an active order and at which
store in which town exactly.

While blacklisted, your item orders will not be processed but on hold until
your blacklist timer runs out. Even if the ordered item is in stock it will
not be handed to you.

Shop scumming:

Shops regularly change their inventory on a random basis: Roughly every 33
seconds there is a chance that some items might get dropped and/or some new
items might get added to the store inventory.
This "store maintenance" stacks up to 10 times while no player is actually
visiting the store.
That means that shop-scumming can be done as fast as checking every ˜33 seconds
for best results if you don't mind the effort, and on the other hand allows for
pretty relaxed scumming by checking about every 5 1/2 minutes.
Or anywhere between 33 seconds and 5 1/2 minutes, as you personally prefer.

See (5.7) for more information about ID, *ID* and shops!

(4.5a2) The casino

The casino is a very special 'store', located in Minas Anor and in the special
dungeon towns in the Ironman Deep Dive Challenge at 2000 and 4000 ft.

It provides a variety of games that you can play for money.
Most of these are pure luck, but there's also the ancient board game of Go,
which you can play on a 9x9 board.

Below you'll find the gamling rules, you can also view these in-game when
entering the casino and pressing 'r' there:


```
        /-------------------------------------------+
        |            Tome-NET Gambling Rules        |
        +-------------------------------------------/
```

Welcome to the TomeNET Casino!

The games 'In-Between', 'Craps', 'Spin the Wheel' and 'Dice Slots', which are
true gambling, and the 'Go Challenge', which instead is complete-information
mind game, are available for playing.

For all the gambling games, you can bet up to 1000*level AU per game, except
for players below level 10 who can bet up to 100*level AU.
So eg at level 9 you could bet up to 900 Au, and at level 10 up to 10000 Au.

The game of Go however has fixed bets for each stage that you cannot change.

```
================================================================================

In-Between
----------


Three 10-faced dice (ranging from 0 to 9) are used. Two black, one red.

First, the dealer rolls the two black dice.
Then you roll the red die - you win if the roll is 'in between'
the two black dice and you'll receive the payoff at odds of 3 to 1.

eg.
if two black dice are 0 and 7, and you rolled 6, you win.
if two black dice are 7 and 4, and you rolled 5, you win.
if two black dice are 2 and 9, and you rolled 1, you lose.
if two black dice are 2 and 9, and you rolled 2, you lose.


================================================================================

Craps
-----


Two 6-faced (cube) dice are used for this game.

You cast the two dice; if the sum of rolls is 7 or 11, you win at once.
if the sum is 2, 3 or 12, you lose at once ("craps!").

If the sum isn't one of the numbers above, you cast them once more.
If the sum matches to the first sum, you win.
If the sum is 7, you lose.
In all the other cases, you reroll till you roll the first sum or 7.

If you win, you'll be paid at odds of 1 to 1.

eg.
[2, 3](5) {first roll}
[3, 3](6) {reroll - still not settled}
[4, 1](5) {you win}

[5, 6](11) {you win with the first roll}


================================================================================

Spin the wheel
--------------


A wheel with 10 numbers, 'zero' to 'nine' is spun.

You bet on exactly one of the numbers, except on 'zero' which is forbidden.

However, if you don't want to choose a number yourself, you can just choose
'zero' to have the casino pick a random number ranging from 1 to 9 for you.

If the wheel stops at your number you receive nine times (9x) your wager,
so the payoff odds are 9. The 'zero' always loses.


================================================================================

Dice slots
```

This game requires upfront payment of the wager.

Three random slots are spun and can stop at one of six symbols:
 'Lemon', 'Orange', 'Sword', 'Shield', 'Plum' and 'Cherry'.
They have different values:
 Lemon 1, Orange 2, Sword 3, Shield 4, Plum 5, Cherry 6.

To win, you must either get
 - 3 identical symbols,
 - 2 cherries or 2 plums as the first two symbols,
 - 3 arms (swords or shields).

If you have 3 identical symbols, the payoff is:
 Lemon: 4x.
 Orange: 6x.
 Otherwise the square of the symbol's value!

If you have 2 cherries in slot 1 and 2, the payoff is:
 The third slot's symbol's value plus three.
If you have 2 plums in slot 1 and 2, the payoff is:
 The third slot's symbol's value plus one.

If you have 3 arms (swords or shields), the pay off is 2.

Last chance for salvation:
If two slots show the same fruit (not shields or swords) you get
your wager back, so you come out with neither profit nor loss.

eg.
if orange, orange, orange appears, you win at payoff 6.
if cherry, cherry, cherry appears, you win at payoff 36 (ie 6 * 6).
if cherry, cherry, sword appears, you win at payoff 5 (ie 3 + 2).
if plum, plum, cherry appears, you win at payoff 7 (ie 6 + 1).
if shield, sword, sword appears, you win at payoff 2.
if lemon, cherry, shield appears, you lose.

===

Go challenge

Two different short video tutorials on YouTube:
https://youtu.be/qhBQasS5IRI
https://youtu.be/gECcsSeRcNo
Nice read: http://users.eniinternet.com/bradleym/America.html
On Android (free): Go Free or GOdroid, on iOS: Little Go or Igowin for example.
Western online Go servers (english language): www.gokgs.com, www.online-go.com.

You will play the ~3000 year old asian strategy game of Go, also often
dubbed 'the divine game', on a 9x9 board against an opponent that gets
picked for you based on your past results, for cold hard money!
It is actually called Baduk in Korea, Igo in Japan and Weiqi in China. 'Go' is
the western name, derived from the japanese name by omitting the first kanji.
However, it almost means the same: The surrounding (encircling) game.

You pay a wager only once on each of the 8 difficulty levels. You may then
play for free until you manage to win on your current level. If you win you
will be paid twice your bet and advance into the next difficulty level.

Progress: Two players take turns placing black and white stones on the board
respectively. Those stones cannot be moved once placed, they can however be
captured (explained below). There is no limit to the stone supply.
Black moves first (which is an advantage).

Goal (chinese rules):
Surround as much 'territory' as possible with your stones (territory just
means an area of the board). Each grid you surround counts 1 point, and
every stone you place also counts 1 point. The player who ends up with more
territory wins.
(Note: Online Go servers and tournaments usually use japanese rules by default:
Under those rules, your own stones don't count as points but in turn prisoners
count as points. The result is almost always the same as under chinese rules!
The reason the casino uses chinese rules is that japanese rules are more
troubling for Go bots to handle.)

Capturing: A stone has up to four 'liberties', which means free board grids
adjacent to it: North, south, east and west. If the opponent places a stone
on the last liberty of your stone, it is removed from the board.
Friendly stones that are adjacent to each other horizontally or vertically
(just not diagonally) count as 'connected' and share their liberties,
forming chains of stones that can grow quite large and end up with a lot of
liberties. A chain of stones is also captured accordingly if ALL of its
shared liberties are occupied by opponent stones.
Note that stones on the edges of the board have less than 4 liberties.

Ko rule ('Eternity'): Repetition of a board position is forbidden. If you
want to 'capture back' (common application of the Ko rule), you will have
to play elsewhere first to change the board layout.

Pass: If a player wishes to skip his turn (usually pointless except at the
end of the game) he may pass instead of playing a stone.

End of the game:
-A player may lose on time if his clock runs out before he made a move.
-A player may resign the game if he feels he's too far behind.
-If a player feels there are no more good moves left to play, he passes.
 Now if both players pass consecutively then the game ends and the territory
 of each player on the board is counted to determine who wins.
 (If white passes first, he gets +1 point added to his final score. This sort
 of makes up for black's advantage of playing the first move in the game.)

Examples on a 5x5 board (o = stone, . = free grid):
WHITE stones are written as 'x' and BLACK stones as 'o'.

ooox.
o.ox. The black group has only 1 liberty left (the '.' inside),
ooox. if w plays on that '.' the whole black group is therefore captured.
xxxx. The white group has 8 liberties on its outside so it's quite safe yet.
.....

.o..o Due to having at least 'two eyes' (two _separated_ enclosed liberties)
..ooo neither group can be captured since it would require two moves at once.
oooxx A group that has at least two eyes is therefore said to be 'alive'.
xxxx. Since there is nothing left to do, both players will pass and the game
x.x.. ends. The score is: black 13 - white 12. Black wins by 1 point.

Strategy:
-Stones have a balance between securing territory (if they stand lower, ie on
 3rd line) and radiating influence (if they stand higher, ie 4th line or more,
 which can't really happen well on small boards such as 9x9 though).
-Moves on the first line should be avoided in the beginning of the game,

because they neither secure territory below them, nor do they have influence
because they are much too far away from the centre.
-Typical opening moves on 9x9 are within the imaginary square C3,C7,G7,G3.
Other moves, ie moves on the 1st or 2nd board lines, are too close to the edge
to be good openers.
-Separate & Connect is an important principle:
Cut stones of your opponent apart from each other if possible.
Keep your own stones somewhat in connection, so they can support each other.
-Note that the Ko rule (see above) prevents you from immediately recapturing a
single stone of your opponent, which just captured your own stone, since the
previous board position would be repeated by that. So, play elsewhere first,
then you may recapture.
-Usually Go is played on a 19x19 board, which allows for a huge amount of
strategy. Smaller boards are used for non-serious games, 9x9 somewhat common,
whereby the games become purely tactical and lack much of the 19x19 strategy.

You can use the /kifu or /gibo command to have the game email you your Go game
records!

Enjoy!

(4.5b) Towns & town dungeons

Here is a list of towns and their corresponding local dungeons:

Town	Depth/Level of the town itself	Local dungeons	Depth/Level of the local dungeon	Maximum Depth (local)
Bree	0 ft/ 0	The Training Tower(*)	+50..+100/ 1..2	100 ft
		Barrow-Downs	50..1750/ 1..35	1750 ft
Gondolin	1000 ft/ 20	Mordor	1700..3300/34..66	1650 ft
Minas Anor	2000 ft/ 40	The Paths of the Dead	2000..3500/40..70	1550 ft
		The Ash Mountains	2950..4750/59..95	1850 ft
Lothlorien	3000 ft/ 60	Angband	3350..6350/67..127	3050 ft
Khazad-dum	4000 ft/ 80	Angband	3350..6350/67..127	3050 ft

(*) In the Training Tower, you cannot die for real (except for PvP mode chars).

The deeper you decend into the dungeons, the more the passing of time itself
will be slowed down to make it easier to fight very fast monsters. By the time
your character enters those depths, it should already have boosted speed so
the slowdown won't bother you but come in handy. For example if you enter
Mordor you will notice a slowdown to to approx. 1/2 standard time.
See (4.14) for more information about the in-game time system.

Some advice regarding towns and town dungeons can be found at (8.6).

(4.5c) Dungeons

This paragraph is about dungeons that don't belong to any town.
For dungeons that belong to specific towns, see the paragraph 'Towns' above.

To see a list of all dungeons you have discovered so far, press ˜ 8.
To see a list of all dungeon knowledge, including their locations, accumulated
by players on the server so far, visit the Mathom-house in Bree (see (4.5a)).

The staircase colour of a dungeon indicates the dungeon type, compare (4.3).

'Depth/Level' describe a dungeon's starting level and final level. Depth is

actually just a different way for expressing a dungeon floor level, so they're
redundant: Each dungeon level corresponds to 50 ft.

So for example Orc Cave starts at dungeon level 10 and ends at dungeon level 23
which means:
The first floor (ie -50 ft) in The Orc Cave is the same difficulty level as the
tenth floor (ie -500 ft) in the Barrow-Downs dungeon (which starts at level 1).
Since The Orc Cave goes from level 10 to level 23 that means it has 14 floors,
so its final floor will be -700 ft which is of the same difficulty level as
-1150 ft Barrow-Downs (ie level 23).

```
Dungeon                         |      Depth / Level      |  Maximum Depth
                                |     relative to Lv.1    |     (local)
--------------------------------+-------------------------+------------------
Death Fate              (**)    |    50..  50 ft /  1..1   |      50 ft
The Halls of Mandos     (*****) |    50..5000 ft /  1..100 |    5000 ft
The Orc Cave                    |   500..1150 ft / 10..23  |     700 ft
Mirkwood                        |   550..1700 ft / 11..34  |    1200 ft
The Old Forest                  |   650..1300 ft / 13..26  |     700 ft
The Helcaraxe                   |  1000..2050 ft / 20..41  |    1100 ft
The Sandworm Lair               |  1100..1500 ft / 22..30  |     450 ft
The Heart of the Earth          |  1250..1850 ft / 25..37  |     650 ft
The Maze                        |  1250..1900 ft / 25..38  |     700 ft
Cirith Ungol                    |  1250..2550 ft / 25..51  |    1350 ft
The Land of Rhun                |  1300..2050 ft / 26..41  |     800 ft
The Mines of Moria              |  1500..2500 ft / 30..50  |    1050 ft
The Small Water Cave            |  1600..1750 ft / 32..35  |     200 ft
Submerged Ruins                 |  1750..2550 ft / 35..51  |     850 ft
The Illusory Castle             |  1750..2600 ft / 35..52  |     900 ft
The Sacred Land of Mountains    |  2000..2250 ft / 40..45  |     300 ft
Erebor                          |  2500..3050 ft / 50..61  |     600 ft
Dol Guldur                      |  2850..3550 ft / 57..71  |     750 ft
Mount Doom                      |  4250..4950 ft / 85..99  |     750 ft
The Cloud Planes        (***)   |  6500..7450 ft /130..149 |    1000 ft
Nether Realm            (****)  |  8300..9800 ft /166..196 |    1550 ft
Ironman Deep Dive Challenge (*) |    50..6350 ft /  1..127 |    6350 ft
```

The official main server usually has one or several 'ironman' dungeons
(see (4.8)), their entrances (stairs) waiting to be discovered by some bold
explorers.

Such custom dungeons appear as 'Wilderness' in the "Recall depths and Towns"
list. There may also be certain special dungeons, related to events or jails,
that show up under according names in the list.

There may or may not be further special/exotic dungeons that are not part of
the "normal" game or gameplay.
See (4.3) under "Dungeon Types" -> "Experimental dungeons" for more details.

(*) The Ironman Deep Dive Challenge or short IDDC is a special, independant
ironman dungeon, that has a special ruleset and is distinct from the rest of
the game. For more information, see (4.13), Ironman Challenge.

(**) Death Fate:
 Will this be the end of you as you cannot seem to spot a way to escape? Or is
 there some kind of ancient secret hidden in here?
 Notes: Death in here is like in the Training Tower, but with additional random
 inventory damage like form a 'normal' death; equipment is safe though.
 Death Fate unstatices immediately after you leave.
 (PvP mode characters die permanently, same as they do in the Training Tower.)

(***) Cloud Planes details:

To enter the Cloud Planes a player must carry the 'King'/'Queen' title,
acquired by beating Morgoth, Lord of Darkness.

(****) Nether Realm details:
 -To enter the Nether Realm a player must carry the 'King'/'Queen' title,
  acquired by beating Morgoth, Lord of Darkness.
 -Each floor in the Nether Realm gives a +2% bonus to experience from monster
  kills. So hunting at -350ft in there will give a +14% exp bonus. (This bonus
  is actually multiplied by the usual floor boni, instead of added. So you will
  get even much more exp when hunting on a floor with a lot of 'bad' special
  flags.)
  To any floor experience boni that might occur, an additional 5% bonus is
  added because the whole dungeon is flagged NO_RECALL_INTO, meaning it cannot
  be entered via Word of Recall (you may recall out of it though).
 -Note that the amount of experience is already very high even without this
  depth-bonus, since creatures in the Nether Realm are of a very high level.
 -Instant resurrection does not work in the Nether Realm.
 -It is possible for everlasting and non-everlasting characters who usually
  cannot form a party to actually team up in the Nether Realm! This is called a
  cross-mode party, for more information see (3.4d).

(*****) Halls of Mandos details:
 -Halls of Mandos are Ironman (no-ghost) and you cannot leave until you reach
  the final floor, dungeon level 100.
 -Getting out of the Halls of Mandos will be complemented with an entry
  into 'Noteworthy Occurances' list.
 -Extermination orders in the Halls of Mandos will (same as for the IDDC) have
  its monster level depend on the floor level rather than on the player's
  level.
 -There are various shops similar to those found in normal towns, appearing
  randomly in the dungeon. Some might offer certain goods cheaper than usual.
 -Similar to IDDC, minimum floor depth vs character level regarding experience
  gain is not enforced: Normal experience is gained on any depth regardless of
  your character's level. But unlike in IDDC this is only true for characters
  up to level 49. Characters of level 50+ will receive depth-restricted XP.
 -Same as in the IDDC there are no live-spawns and floors become stale after
  relogging to the same depth but a newly generated floor.
 -The Halls of Mandos are barred to any unique monsters and to Unmakers!
 -Various more or less basic stores, including a library, will spawn in
  addition to the usual dungeon stores. Also (like in the IDDC) a deep supply
  store can spawn on very deep floors.
 -An IDDC-exclusive character is (under the usual server settings) also able to
  enter the Halls of Mandos instead of the IDDC!
 -Depending on local server settings, the Halls of Mandos might have special
  or unusual dungeon flags, such as 'disallow any teleport', 'limit ESP range'
  and 'disallow any summoning', making gameplay quite distinguished from other
  dungeons.

(4.5c2) Example dungeon depth relations

Here are some examples of relations of dungeon level difficulties.

This does not take into account the dungeon 'theme', ie types of walls, floors
and other terrain and preferred/disallowed monster types.
It is purely about the depth, ie the dungeon floor level, and therefore the
basic average monster level encountered on those dungeon floors.
(The average level of monsters you can expect there is always the same as the
level of the dungeon floor. With a few random exceptions sometimes.)

 -The Orc Cave -50ft is same depth as Barrow-Downs -500ft, aka dungeon level 10.

-Mordor -50ft is dungeon level 34, while Barrow-Down's deepest floor at -1750ft
 is actually dungeon level 35 (1750ft/50ft).

-Path of the Dead -50ft is dungeon level 40, which is the same dungeon level as
 Mordor -350ft, ie 6 levels 'deeper' (34*50ft + 6*50ft).

-Angband -50ft is dungeon level 67, while Mordor's deepest floor at -1650 is
 dungeon level 66. Pretty seamless.

-Path of the Dead bottom at -1550ft is the same dungeon level as Angband -200ft
 ie dungeon level 70.

(4.5d) Dungeon bosses

Most dungeons have a dungeon boss (FINAL_GUARDIAN) at the final floor, which
in most cases has a chance to drop a specific artifact (FINAL_ARTIFACT) or
(in rare cases) a specific non-artifact item (FINAL_OBJECT).
If a boss cannot or will not drop a final artifact, a random stat potion is
dropped instead (in addition to the usual loot).
Last but not least some of the dungeon bosses have 'DROP_GREAT' flag, which
means you will usually get especially good loot from them in general.
For details on how bosses and other monsters spawn also see (6.1a).

Morgoth and Zu-Aon always drop certain fixed artifacts, and at a 100% rate.
All other dungeon bosses can only drop their specific artifact if it has not
already been found, and even then they only have a static 1/3 (1 in 3) chance
to drop it (this flat 1-in-3 chance overrides any 'rarity' that may be
specified in the artifact spoiler file a_info.txt - that rarity value only
counts for artifacts not dropped by dungeon bosses).

The bosses have different probabilities to appear on a floor, but none of them
is overly rare (Azog being one of the rarer ones), so just reset the level a
couple of times until you find the boss (by leaving the level, waiting for a
little bit, then entering it again).

Dungeon bosses ONLY appear at the final (deepest) floor of their respective
dungeon, and they can only spawn at level generation time, never "live" and
can never be summoned either (not even on the "correct" floor).
Last but not least unlike "normal" unique monsters, dungeon bosses will never
respawn for winners.

Dungeon bosses have especially high hit points and yield an extraordinary
amount of experience points when you defeat them. Apart from the specific
artifact drop the higher level ones also tend to drop great items in general.

Dungeon bosses will bump the floor feeling up to at least 'special', same as
any other unique monsters do (see (4.8) for more info about floor feelings).
In the IDDC they will cause an additional floor feeling (that is displayed
together with any other floor feelings): "You feel a commanding presence.."

Here is a list of all dungeon bosses and the artifacts they are guarding:
(Some names have been shortened to fit.)

Dungeon, sorted by depth	Boss	Artifact (or extra loot)
------Town dungeons-----------		
The Training Tower (A)	-	-
Barrow-Downs	Wight-King	Stone of Lore
Mordor	-	-
The Paths of the Dead	Feagwath	Doomcaller
The Ash Mountains	-	-
Angband	- (B)	-

```
      ------Non-town dungeons-------+--------------------+------------------------
Death Fate                          | -                  | -
The Halls of Mandos     (C)         | -                  | -
The Orc Cave                        | Azog               | -
Mirkwood                            | Saenathra          | - (A random chest)
The Old Forest                      | Old Man Willow     | Boomerang of Beor
The Helcaraxe                       | White Balrog       | Pike 'Til-i-arc'
The Sandworm Lair                   | Sandworm Queen     | Armour of the Sandworm
The Heart of the Earth              | Golgarach          | Space-time Anchor   (D)
The Maze                            | Minotaur           | Helm of Hammerhand
Cirith Ungol                        | Shelob             | Smallsword 'Sting'
The Land of Rhun                    | Ulfang the Black   | Sabre 'Careth Asdriag'
The Mines of Moria                  | Balrog of Moria    | Quarterstaff 'Ruyi Bang'
The Small Water Cave                | Watcher in the Water | Trident of Wrath
Submerged Ruins                     | Ar-Pharazon        | Amulet 'Toris Mejistos'
The Illusory Castle                 | King in Yellow     | Helm of Knowledge
The Sacred Land of Mountains        | T'ron   (level 72!) | Coat of T'ron
Erebor                              | Smaug              | Arkenstone of Thrain
Dol Guldur              (E)         | Shadow of Dol Guldur | Ring of Durin
Mount Doom              (E)         | Sauron, the Sorcerer | -
The Cloud Planes                    | The Living Lightning | - (Lightning items)
Nether Realm                        | Zu-Aon  (F)        | Ring of Phasing
```

(A) In the Training Tower, you cannot die for real (except for PvP mode chars).

(B) Angband does not have a designated final boss, but the unique monster
Tik'srvzllat does not appear before depth 127. Since Angband ends at depth 127,
you can find him on the final floor (if he actually spawns).
In this light, Tik'srvzllat could be seen as Angband's final boss.

Also, Morgoth, the Lord of Darkness is encountered in Angband at -1700 ft or
deeper. See (1.3), (1.3a) and (1.3b) for more information.

(C) The Halls of Mandos are barred to ANY unique monsters!

(D) The space-time anchor is a special light source that can be activated to
create a temporary anti-teleportation field of radius 12 that will prevent all
teleportation from and to, and stall all Word of Recall attempts within.

(E) While Sauron, the Sorcerer, boss of Mount Doom, does not drop any
specific artifact, he is still a required kill before you are able to encounter
Morgoth, the Lord of Darkness (compare (1.3), (1.3a) and (1.3b)).
When you kill Sauron, you will be able to recall out from that dungeon level!
(Usually you cannot recall into/out of Mount Doom.)
Note: If you kill Sauron, you will automatically also get kill credit for the
Shadow of Dol Guldur, meaning that the Shadow won't spawn for you anymore if
you didn't kill it before killing Sauron.
Also, you cannot find The One Ring anymore if you already killed Sauron.

(F) Zu-Aon's teleport-to attack has special transdimensional power and
actually defeats anti-teleportation, space-time anchors and cannot be mitigated
by saving throw or teleportation resistance either.
It can however be defeated regularly by holy martyr or by anti-magic fields
which -as usual- can prevent the spell from coming into existence in the first
place.

Last but not least there are rumours that some adventurers have encountered
their own mirror image that suddenly came alive and attacked them! As so often
with rumours, solid details are hard to get a hold of, but there were mentions
of nigh unsurpassable mountain chains that arose in the midst of forests.
While that sounds like a dangerous fight, according to reports of survivors a
win supposedly results in the equivalent effect of three potions of experience.

(4.6) Pits and vaults

Usually monsters are found on their corresponding depth. You can press ˜7 to
find out which monster occurs where. However there are some exceptions, where
you can find monsters "out-of-depth" (ood), meaning that you will encounter way
more powerful enemies than would usually occur on a particular depth.
That can be very dangerous but also very rewarding. Out-of-depth monsters
sometimes occur inside of so-called "pits" and very likely inside "vaults".

Pits are large rooms, surrounded by a rectangle-shaped passage, containing
monsters picked by a pit-specific criterium (troll pit, zoo pit...).

Usually pits are very welcome means for gaining experience or items, like orc
pits at low character levels, troll pits at low-medium character levels,
dragon pits at high character levels and to an extent greater demon pits.

Some pits have a rather bad threat/reward ratio though, such as treasure pits
(containing jellies, molds and mimics that look like treasure, not actually
real treasure), humanoid pits, undead pits (called 'graveyards' – the problem
is that they contain a lot of wall-eaters, which is hard to handle sometimes),
zoos (animal pits, that often contain multiple nasty quylthulgs) and chapels
(lesser angels, but also knight templars which may summon more dangerous angels
if unlucky).
Kennels (canines and hounds) are usually safe, but at higher level you should
watch out for aether hounds and gravity hounds which may breathe gravity for
tele-to effect.
Many rather mid-level demon pits may contain wall-eating lesser balrogs, but
with some effort can be cleared without much hassle, especially if you have
wraithform at your disposal.

Vaults are (sometimes extremely large) fixed structures of rooms and passages,
often surrounded by permanent walls that cannot be damaged except for a few
entrance spots made of normal granite wall. However, some vaults are open or
just barred by (hidden) doors and do not require special tunneling effort to
get into, or are not even surrounded by stone walls at all.

Depending on your font if you have trouble discerning permanent walls from
granite walls, consider enabling the option =2 permawalls_shade which will
display permanent walls in a different colour.

Vaults are usually filled to the brim with traps and nasty monsters. Using
means of trap detection and monster sensing allows you to spot vaults easily,
if its wall structure or permanent walls (not all vaults have those) doesn't
already give it away.
Another very early indication for a vault on your dungeon level are the floor
feelings displayed in yellow colour, see (4.8).

Among the most dangerous vaults are "no-teleport" (or for short "no-tele")
vaults. These prohibit all teleportation effects including 'word of recall'.
That means when you get into a bad situation you cannot easily escape!
No-tele areas will give you certain warning indicators when you enter them,
see "Vault feelings" in (4.8), the first one listed ("still air").
Note that on a floor where Morgoth currently resides, all vaults will turn into
no-tele vaults, even if they normally aren't!
Creatures who teleport you towards them are unable to teleport you onto a grid
that is 'no-tele', so you needn't worry about that when facing a no-tele vault.
(This is actually true for any kind of teleportation in the game.)

A vault can be a real adventure of its own! If your character isn't very

powerful compared to the dungeon level or you aren't sure what you're facing,
you better stay out of vaults. It heavily depends on the vault structure itself
too of course, some are hard to control while others allow you to take out foes
one by one without much effort to prevent them from ganging up on you.

Note that some monsters can destroy walls and thereby dig their way out of a
vault, if they are awake. So in case of dangerous vaults you better stay at a
distance or even leave the level. This is especially true if you get the level
feeling "What a terrifying place.." (also see (4.8)).

Besides pits and vaults, there are also special rooms with features inside that
look interesting but are just normal rooms nevertheless.
Also see 'Pit', 'Vault' or 'Room' in (0.4).

(4.7) Traps & trap kits

About traps:

Traps are hidden until either set off, found by searching or detected by magic.
They can be on the floor, on doors or on chests. Note that practically all
chests you find (except for ruined ones) are trapped. So first find the trap on
it, then disarm it, and finally open it.

At the beginning you will encounter traps that can do little damage, some will
decrease your stats temporarily, they are annoying but not a big danger.
However, later on traps will become extremely nasty and you should either get
a very high searching skill or make sure that you have staves, spells or
scrolls that can detect traps. If you encounter a dangerous trap do not try to
disarm it if you are not very sure that you can do it without setting it off,
or if you don't at least know that setting it off won't have too bad effects
(some traps aren't very harmful, so you can just keep trying to disarm them).

If you manually disarm a trap (ie via the disarm command instead of relying on
magic spells or magic devices that do the disarming for you) you will get a
certain amount of experience points depending on the trap type; it can pay off
to disarm a large patch of traps.

Note that detected traps might be obscured visually if there are items lying on
top of it. In this case you can either look at the grid and you will see the
item name prefixed with a "^" smybol and postfixed with either "(trapped)" if
you don't know the trap type yet or the actual trap's name if you do, to
indicate that the grid below the item(s) is trapped. You can disarm traps even
if there is something on top of them, the grid does not have to be clean.
Another way to spot all traps currently covered by items is to toggle Searching
Mode via 'S'. This will slow you down but make you search for traps on every
step you take and at the same time prioritize displaying all known traps over
items.

Later on, disarming traps will become an essential part of the gameplay. Vaults
will have *lots* of traps and if you haven't got superior disarming skills (or
wands of disarming / trap destruction) every single move of your character will
have to be planned! This can be especially annoying and dangerous if there are
multiplying or extremely tough monsters inside the vault. If your searching
ability is 'Heroic' or 'Legendary' you will discover most traps instantly just
by coming close to them without having to explicitly search for them.
If you look at an object that is on an already detected trap, you will be
notified about the trap by an ^ symbol in front of the item name and the trap
type appended to it in { } brackets. It looks like this:
^ A potion of Constitution {Chaos Ball Trap}

Trap symbols ('^') come in different colours. Here's an overview:
  blue   stat traps (STR/INT/WIS/DEX/CON/CHR) in three difficulties:
                  1) only reduces an attribute temporarily, heals on its own.
                  2) reduces an attribute, requiring you to use restoration.
                  3) permanently reduces an attribute. Counter with stat
                     potion.
  bright white   teleport traps
  orange   dungeon/trap rearrangement traps
  violet   summoning traps
  yellow   traps that affect your items or money or give you items
  red   character status-affecting traps
                  (sometimes also damage, drain or stat-reduce your character)
  green   elemental bolt traps
  light blue   elemental ball traps
  light red   arrow/bolt/dagger traps
  white   miscellaneous traps

While many traps have obvious effects, here are some less obvious ones:
  Bowel Cramps   If you don't have FA you get paralyzed instantly.
  Calling Out   Calls the highest level monster on the floor.
  Ale Vendor   It doesn't hand out free ale, you're paying for it.
  Seasoned Traveller   Does not touch items of value 150 Au or more.
  Lost Labor   All non-uniques on the floor turn into 100% clones.
  Despair   Your stats are reduced and you get an Augmentation
                          and a Death potion placed in your inventory.
                          Make sure you quaff the correct one!
  Cleaning   Deletes all nearby unowned loot.
  Animate Coins   The animated coins are from your own purse..
  Remittance   You share some of your money in your purse with
                          everyone online of compatible mode (not in IDDC).

Note that there are even some beneficial traps that grant an item or boon.

About trap kits:

The 'Trapping' skill allows a player to set up 'monster traps'.
The ability to set up a trap can be accessed by pressing the 'm' key
or by utilizing the macro wizard (press % and z to start it).

A monster trap consists of
-a trap kit (get a trap kit bag from the general store to save inventory slots)
-an item (or a stack of items) to load the trap kit.

Each kind of trap kit requires different items serving as ammunition:
Catapult Trap Kit   -   Sling ammo (fires with 3x base might).
  (orange)
Arrow Trap Kit   -   Arrows (fires with 3.5x base might).
  (red)
Bolt Trap Kit   -   Bolts (fires with 4x base might).
  (bright red)
Fumes Trap Kit   -   Potions. The effects are very similar to the
  (dark blue)   effects when throwing a potion at a monster,
                                the trap will greatly increase the potion's
                                effectiveness though, by generating a thick
                                fume that envelops nearby creatues and
                                possibly gets inhaled as well.
Magic Trap Kit   -   Scrolls or runes. Even scrolls that are usually
  (violet)   only used on other items might have effects on
                                certain creatures.
Device Trap Kit   -   Wands/Staves/Rods.

```
     (slate)                         The charges of wands and staves will be
                                     decreased by 1 each time the trap sets off.
                                     Rod-traps will have timeouts, same as the rod
                                     itself.


A normal trap kit can be loaded with 1 item of the according ammo.
After it went off (and is out of charges for device traps or out of ammo for
automatic traps) you can pick up the trap kit to use it again.
If it was a catapult/arrow/bolt trap kit you can often recover the ammunition
too, in case it didn't break. (Magic ammo and artifact ammo never break).


Note that if you use magic ammo or artifact ammo, you only need 1 as it is
neverending, except for 'Extra Shots' trap kits - because they fire multiple
simultaneous shots, they will require the appropriate amount of ammo.
Ego traps that damage specific monster types always come with extra shots too.


Extra shots means that the trap kit may fire up to +x additional shots after
its initial triggering; note that you will only see message feedback for shots
that actually hit the target, but no "miss" messages.
If you load a trap kit with less than optimal ammo, it will still work though.


Physical-missile trap kits, those are catapult, arrow and bolt trap kits, can
also be enchanted to hit and to damage with enchant weapon scrolls, same as any
other weapon.


Trap kits can have special (ego) powers:


Prefices:
---------
Automatic        - Can set off up to 99 times, with a 20% chance each time of
                   ceasing to function. Requires the according amount of ammo
                   though, if it's not a device trap kit. (AUTOMATIC_5 flag.)

Fully Automatic  - Sets off up to 99 times. Requires the according amount of
                   ammunition if it's not a device trap kit. (AUTOMATIC_99.)

Well-hidden      - Makes it harder for monsters to spot the trap.
                   This is the STEALTH flag, which uses the (+pval) bonus.

Complicated      - Trap gets an extra AC bonus, making it harder to disarm.
                   This AC bonus is given in [+AC] brackets as usual.

Obvious          - Curses the trap and makes it practically useless.
                   It has the STEALTH flag but a negative (-pval) malus.

Suffices:
---------
of Extra Might   - Fires with +x (bonus shown in round brackets) extra might.
                   ("It fires missiles with extra might.")
                   This flag increases the base might multiplier by +1.

of Extra Shots   - Fires +x (bonus shown in round brackets) extra shots/round.
                   ("It fires missiles excessively fast.")
                   This flag causes the trap to fire additional ammo each round.

for Dragons      - Only triggers against dragons.
                   Has a stealth bonus and fires +x extra shots/round (+x).

for Demons       - Only triggers against demons.
                   Has a stealth bonus and fires +x extra shots/round (+x).

for Animals      - Only triggers against animals.
```

Has a stealth bonus and fires +x extra shots/round (+x).

for Undead   – Only triggers against undead.
                          Has a stealth bonus and fires +x extra shots/round (+x).
                          Able to damage creatures in wraithform (PASS_WALL).

for Evil   – Only triggers against evil.
                          Has a stealth bonus and fires +x extra shots/round (+x).
                          Able to damage creatures in wraithform (PASS_WALL).

Trap kits can also have two special properties (flags):
KILL_GHOST   – trap kit will also harm creatures in wraithform (those are
                          all creatures that can pass solid walls, aka PASS_WALL flag).
                          Trap kits without KILL_GHOST flag cannot hurt these monsters.
                          This flag occurs on the Undead and Evil ego traps.

TELEPORT_TO   – after triggering, if the monster is still alive, it will be
                          teleported to the player.
                          This flag occurs on an artifact trap.

If monsters notice a trap they can try to disarm it:

– A trap kit that has the STEALTH flag will add the pval (the number in round
  parentheses, eg (+2)) to the trap's "stealth", making it harder for monsters
  to notice and disarm ("well-hidden").

– A trap kit that has an "armour class" bonus, shown in brackets (eg [+8])
  increases the trap's complexity, making it harder for monsters to disarm.

– Animals, empty-minded and stupid monsters have practically no chance to
  disarm traps. Rogueish or ranger monsters and similar have a good chance
  to disarm traps.

– Shooter traps (catapult, arrow, bolt) are somewhat easier to disarm than the
  other, more elaborate types.

– If your trap is located on a grid that is dark instead of lit, the monster
  will have a significantly lower chance to disarm it. In general, you always
  want to have your traps on non-lit grids for this reason, if possible.

You can disarm your own traps to get back the trap kit (and ammunition).
Make sure to check out the easy_disarm_montraps option or the /edmt command!

Tips for quick and easy handling:

It is a good idea to inscribe trap kits and their loads.
For example you could inscribe all trapping-related items != so you will pick
them up from the floor automatically when you want to retrieve trap kits that
went off.

Also you could inscribe the ammo/load items @m1 so you can macro them easily.

In the macro wizard you could even make a macro that prompts you for which trap
kit to use if you enter a blank line (just hit ENTER key) when it asks you
which item you want to load a trap with.

Last but not least when your trapper is low level and you pick up all sorts of
bad potions you could make a macro to load a fumes trap kit with a potion
inscribed @m1 . Now make another macro that lets you inscribe all the bad
potions you pick up @m1 so you won't have to do that manually for each of
them. That inscribing-macro could look like this:

```
{-@m1\r
```
where the '-' will cause the { inscribe command to prompt for inscription first
and the item afterwards, effectively simply asking you to specify the item.

(4.7a) Trap kit load effects

For most items loaded in monster traps the effects are sort of self-explanatory
and some items have no effect at all (eg detection magic) but here is a list of
those effects that might not be so obvious:

Flasks:
Oil   Fire damage
Acid   Acid damage and blinding effect

Potions:
Salt Water   Blind
Weakness   Reduces damage
Clumsiness   Reduces AC
Sickliness   Reduces HP
Ruination   Weakness + Clumsiness + Sickliness
Lose Memories   Confuse
Life   Holy fire vs Undead; heals non-undead

Scrolls:
Remove Curse   Dispel undead
Remove Curse   *Dispel undead*
Blessing   Holy fire
Holy Chant   Holy fire
Holy Prayer   Holy fire
Protection from Evil   Dispel evil
Rune of Protection   Holds a monster in place temporarily
Scroll of Life   Erases ghosts ('G')

Wands:
Wall Creation   Stone prison

Staves:
Remove Curse   Dispel undead

(4.8) Dungeon, floor & vault feelings

Dungeon feelings:

Dungeons that haven't been visited for a while will start giving a temporary
experience bonus, until the game perceives them as 'well explored' again.
If you enter such a rarely visited dungeon you will be notified about the
experience bonus by one of these dungeon feelings, displayed in light umber:

  "This place has not been explored recently.":   +7% experience gain.

  "This place has not been explored in a long time.": +13% experience gain.

  "This place has not been explored in ages.":   +20% experience gain.

These boni stack with boni from 'bad' (orange) floor feelings explained below.

Floor feelings:

Sometimes if you enter a new dungeon level your character will have a special
feeling about it, called 'level feelings' or 'floor feelings', displayed in
orange text.
These feelings are as follows:

  "You feel an imminent danger!" ->   This dungeon level is *way* higher
                                        than your character level.
                                        (Does not show in the IDDC.)

  "You feel a suppressive air." ->   You cannot use wraith form or
                                        probability travel on this level.
                                        (NO_MAGIC, +10% experience bonus!)

  "The air seems distorted." ->   You cannot use genocide on this level!
  (formerly 'feeling of peace')   (NO_GENO, +5% experience bonus!)

  "You lose all sense of direction..." -> You won't be able to auto-map this
                                        dungeon, meaning that you won't
                                        remember the dungeon layout.
                                        You can only see your nearby
                                        surroundings within your character's
                                        line of sight.
                                        (NO_MAP, +15% experience bonus!)

  "You feel like a stranger..." ->   You cannot use magic mapping nor
                                        clairvoyance here!
                                        (NO_MAGIC_MAP, +10% experience bonus!)

  "The walls here seem very solid." -> The dungeon structure on this level
                                        is unaffected by *Destruction* or by
                                        earthquake magic.
                                        (NO_DESTROY, +5% experience bonus!)

  "You feel that your life hangs in the balance!" -> ** DEATH IS PERMANENT! **
   (Displayed in bright red)   This only occurs on a level where
                                        Morgoth, Lord of Darkness resides,
                                        grasping the area with his untamable
                                        will to destroy.
                                        The whole dungeon level is converted to
                                        'no-ghost mode', meaning that players
                                        who die on this level will completely
                                        be erased, leaving not even their ghost
                                        to survive!
                                        So everlasting and normal players will
                                        die the same way as unworldly (aka no-
                                        ghost mode) and hellish ones!
                                        This effect persists even if Morgoth is
                                        no longer on the dungeon level.

  "You don't sense a magic barrier here..." ->   This message only occurs in
                                        Ironman or no-recall dungeons/towers.
                                        It lets you know that you may
                                        use Word of Recall on this floor!
                                        (This message is displayed in green
                                        colour, not orange.)

In addition to those orange level specialties, there are more feelings you
may get about the danger a level poses. Those only appear if you spent some
time (usually a few minutes) on the dungeon level you were coming from, so
they won't be helpful while stair-scumming or probability-travelling quickly.
(Exception: On Ironman-rule servers these will always be displayed, since all
dungeons are ironman and stair-scumming is not possible.)

The number telling you the current floor's depth (or a town name if you're in a
town) in the bottom right corner of the main window will get a light blue star
appended to it when you spent enough time on your current floor to receive an
extra feeling on entering the next floor. If you are in a town, the town's name
will turn light blue instead of a star appearing.
These extra level feelings (displayed in yellow) are:

  "What a terrifying place.."
       means a) there's a highly ood monster (20..40 levels above floor level,
       with 40 actually being the maximum possible ood level shift, compare
       ood explanation in (0.4)) or
       b) a great vault and some ood monster (10..19 levels) on the level.
       If you receive this message it will in most cases also change the normal
       music theme of that dungeon to a special 'terrifying' music, making it
       easier to notice quickly.

  "You sense an air of danger.."
       means there's a freely roaming ood monster (10..19 levels)
       on the level, and also the level has a vault on it somewhere.

  "Feels somewhat dangerous around here.."
       means there's a vault or a rather dangerous monster pit or nest
       on the level.

  "There's a sensation of challenge.."
       means there's a freely roaming slightly ood monster (10..19 levels)
       on the level.

  "There's a special feeling about this place.."
       means there's a unique monster on the level.
       (Dungeon bosses cause this feeling too, just like any unique monster.)

  "What a boring place.."
       means nothing of the above apply to this level.

Explanations:
"Freely roaming" means that the monster isn't generated inside a vault.
"Ood" means out of depth, ie a monster which is of higher level than the actual
dungeon level it spawned on.

Note that you will only get one, ie the strongest of these feelings applying
to your dungeon level, meaning feelings higher up the list will take precedence
over those below.

Also, the feeling of a dungeon level only indicate its status at the very
moment of the level being created initially!

This means the feeling will persist, even if its cause is removed or changed.
For example if the feeling indicates an OOD monster and you kill it,
you or following players entering that floor will still get that same feeling.
Or if a powerful monster spawns later on on an initially "boring place" level,
it'll remain to feel like a boring place, despite the new monster that might
actually make it pretty non-boring now..

You can check the floor feeling again anytime with the '/feel' command. If you
weren't eligible for receiving a floor feeling (because you didn't spend enough
time on the previous floor) then this command will just tell you:
  "You feel nothing special.".

If you are in the Ironman Deep Dive Challenge dungeon, you will get a feeling

informing you about the presence of a dungeon boss monster that belongs to the
dungeon theme in your current IDDC section.
This feeling appears in addition to the yellow floor feelings listed above:

  "You feel a commanding presence.."
     means that the dungeon boss of the current IDDC theme has been spawned.

Vault feelings:

Vaults can also bear a very dangerous feature that is displayed as dark grey
feeling as soon as you are about to enter the vault:

  "The air in here feels very still." -> Means that you cannot use any type of
                                      teleportation, including Word of Recall
                                      while inside the vault. Beware!
                                      Further, Wraith Form and probability
                                      travel won't work either!
                                      The fact that you are standing within
                                      a no-tele area is also indicated by
                                      your (xx, yy) position display on the
                                      lower left area of the main window and
                                      also your speed indicator on the bottom
                                      status line of the main window
                                      turning from light green to dark grey!
                                      Also, the music will in most cases
                                      change from the normal theme of that
                                      dungeon to the same music played on
                                      'terrifying' levels, for easier notice.
                                      (Morgoth's music will not change.)

As soon as you leave such a no-teleport-vault you'll receive this feeling:
  "Fresh air greets you as you leave the vault."

(4.9) Navigating on maps

The world map is divided into 64 x 64 world map sectors. Each of these sectors
contains 5 x 5 smaller subsectors (screens). Dungeon levels or tower floors
also can have up to 5 x 5 subsectors, same as 1 world map sector. (Use 'L' key
to look around your current worldmap sector/dungeon level, and you will see
the subsector coordinates displayed at the top line.)
Monsters cannot cross world map sector borders! Keep this in mind while
travelling, it might save your life.

Note that dungeon/tower levels are often smaller than 5 x 5 subsectors,
sometimes even just as small as 2 x 2.
While you are looking around with 'L' key, the current map sector is displayed
in the top left corner of the screen. This information can help other players
to find you in case you need help!

You can press 'M' to invoke a map that gives you a larger overview.
If you press 'M' in a dungeon, tower or a town, you'll see the complete 4 x 4
sectors. If you invoke the map while you're in the wilderness outside of towns,
you will see a part of the 64 x 64 world map, centered around your current
world map sector, displaying towns (yellow T), the sea (blue %), mountains (^)
and other information (compare (4.4)).
If you want to see the world map while in town or in a dungeon, press ~ key and
choose "Wilderness map".

In the main window around the very bottom left corner you will see two numbers

separated by a komma, these tell you your current world map sector.
In case you're currently in a town, the town's name will be displayed in the
bottom right corner of the screen.
(You can also see your coordinates by invoking the character screen with 'C'.)

If you're in a dungeon or tower, you will see your current depth/height in
feet. Each dungeon level or tower floor has a height of 50 feet.
Example: If it shows '-550ft' that means you've descended to the 11th level
of the dungeon. The deeper you go, the more nasty monsters will show up.
Negative depths in dungeons and positive heights in towers mean identical
monster difficulties. Example: In Bree there's a tower and a dungeon. In the
2nd tower floor on 100ft you will usually find the same monsters as in the
dungeon on level -100ft (2nd dungeon level).

(4.10) Houses

There are two types of houses, private houses and (very few) public houses.
Public houses have walls of slate colour or in the case of wood cabins brown
walls, while private houses have white walls. Public houses always have a light
brown house door and can be entered by anyone, they cannot be bought.

Private houses can actually be bought by a player, and their access can be
configured for example to allow everyone in your party to enter it.
Press 'h' to buy or sell a private house, or to change house parameters (for
example giving all your party members access to it). You need to stand directly
next to the house door to do this. The most common type of house access is
definitely party access - only the owner of the party can set this, and only
for houses he himself owns.

If you sell a house you get half the money back it cost you to buy it, or
actually even a bit less than half, depending on your charisma.
(When that house is sold, all items that are still inside are erased.)

The door colour of private houses will indicate the door permissions,
ie which players may access it:

-a light brown house door indicates that the house is currently unowned
 (so you can buy it if you have sufficient funds).

-a light green house door indicates that you are the owner.

-a dark green house door indicates that another character of yours is the owner
 which means that you are allowed to enter it too (provided your character is
 not of incompatible mode).

-a grey door indicates that this house is already owned by someone and you
 don't have access to it.

-a light blue door indicates that you may access this house because it's set
 to party access for your party.

-a violet door indicates that you may access this house because you're in the
 same guild as the house is owned by, ie the house is actually your guild hall.

-a yellow door indicates that you will have access to this house, as soon as
 your level matches the level restriction set by its owner.

Houses with party access allow further restrictions. Those are:

-a white door indicates that the door has a race and/or class restriction,

and you may access it because you match the race/class of the owner.
-an orange door indicates that you don't match a race/class restriction.

-a light red door indicates that access is restricted to either winners
 (Kings/Queens/Emperors/Empresses) or to fallen winners (winners who died and
 thus lost their title), and you may access it because you match the condition.
-a red door means that you fail to match above restriction.
(Note: The restrictions 'winners' and 'fallen winners' can be applied together
when setting house door restrictions. In that case, they will require anyone
who wants to enter to be either winner or fallen winner.)

-a dark grey door means that this house may only be accessed by no-ghost
 characters, that means either unworldly or hellish.

If you forgot which houses you own, type ~9 or use the /houses command to see a
list of your houses.
The house owner can always access his house and cannot lock himself out by
setting restrictions. The door will always be displayed light green to him.

Special gimmick: You can press 'h' or use the /paint command to paint your
house, see the "/paint" command in (0.2b) for more information.

Starting in 4.7.3a, you can add a custom tag to houses which will be displayed
in the houses list, to help you keep your houses organized. Press h 5 to tag.

WARNING:
Items on the floor within a house don't form piles! If you drop too many
items and space in the house runs out the dropped item may just disappear!

(4.10a) Player stores

Players can turn their houses into stores, which run automagically even while
they aren't logged on. Other players can enter your store and buy items, but
not sell any. You will receive cheques that you can turn in for money by simply
reading them with 'r' key, same as scrolls. You can also 'I'nspect them.
The prices customers will see listed when they enter your store are at least as
high as twice of the item's base value (or in other words half of normal Black
Market price, except that prices in player stores do not depend on race or
charisma). You can further increase an item's price by inscribing it, if
you like:

To turn a house into a player-store, simply put an item in it that carries the
  @S
inscription. This inscription means that this item will be put up for sale in
your store for the item's default price.
(Press '{' key to inscribe an item or '}' key to remove an inscription.)
As soon as a house contains at least one item inscribed this way, if a player
who does not have access to the house tries to open the door, he will be
presented with a store screen where he can buy those inscribed items.

The default price (the minimum price) of an item is 2x its base value that it
would cost in normal (non black market) town stores. This price cannot be
undercut in player shops. However, the following items are exceptions and have
a default price of only 1x their base value:
- Rings of Speed
- Scrolls of Artifact Creation
- Random artifacts
and spell scrolls even have a minimum price of only 1/2 of their regular value,
allowing undercutting the library.
To verify the appraised price, just inspect (Shift+I) an item inscribed '@S'
while you are inside your house.

If you want to set a higher price than the default price, you can inscribe the item with the price like this:
```
  @S20000
```
This will ask for 20000 gold, provided the minimum price isn't actually higher.

Instead of setting a price, you can also add to the base price, by using the following inscription syntax:
```
  @S+10000
```
This will add 10000 gold to the default price that is asked for.

Another way of increasing the price is by multiplying it with a percentage, which may range from 100 to 1000 depending on the server, like this:
```
  @S%150
```
This will sell the item for 1.5 times (150%) the default price.

Note that if you want to put up items with inscriptions longer than just the store-part, you need to terminate the store inscription with a dot or space. Examples:
```
  Hello@S10000.Customer
  @S Good stuff
```
This item will appear in your store with an inscription "HelloCustomer". The "S@..." part is always omitted. This way, you can add short notes to the items you offer.

You can use 'k' and 'M' to denote a multiplier of thousand and million respectively:
```
  @S3k  will sell for 3000,
  @S1M  will sell for 1000000.
```

If you want to keep the last item of a pile of items offered in your store, you can put a 'B' after the '@S', for 'base', eg:
```
  @SB
  @SB15000
```
(This will always cause 'mass cheques' (those inscribed 'various piled items') to be used for sales of this item, as the pile can never run out.)
You can also specify a number after the 'B' to set the exact minimum amount of items to keep (from 1 to 99). It must be terminated by a semikolon, eg:
```
  @SB5;
  @SB5;15000
```
Depending on the server settings, items inscribed @SB that are running too low, hitting the base stock limit specified via the B-tag and therefore stop being available for purchase in the store will be displayed in dark grey and possibly with the numerical prefix 'no more' and/or a price tag saying 'SOLD OUT'.

If you want to display items that are not for sale, eg create a 'museum', you can inscribe the items
```
  @S-
```
which will make them unsellable, yet they will be on display on your store.

You can also put up 'signs' in your store by inscribing a (non-massive) piece of wood "@S:" followed by the desired sign text. Signs are just for viewing and cannot be purchased by customers. For example inscribe it:
```
  @S:Welcome to my store!
```
Items in stores are sorted by their type. Inscribed store signs however are not sorted, and other items that are sorted in will pass them by when checking where they are to be sorted in. This allows you to rearrange the store signs at will, but might need some experimenting and shuffling around all other items till you achieve the desired result.

If another player buys your item, there will be a 10% fee that is cut from your

profits.
The rest of the price the customer paid will be imprinted into a cheque. This
cheque is then placed into an available spot in that house. To turn a cheque
into money, simply press 'r' to read it like you would read a scroll.
You can also 'I'nspect a cheque to find out how much it's worth.

There are two types of cheques:
Normally, if an item or a whole pile is bought by someone, the item or pile
will simply be replaced with a cheque accordingly, for you to withdraw.
If however the customer buys only part of a pile of items, then another type
of cheque will be used, called 'mass cheque' which uses one extra slot in your
house and combines all sales of partial piles of items.
While normal cheques are inscribed with details of the item that was sold, mass
cheques only say 'various piled items' or something similar.
So if you offer piles, make sure that you have at least one free space in your
house, or the cheque cannot be generated! In that case the purchase will be
cancelled and the customer will see a message:
"Sorry, the store is currently not open for sale. Please contact .. the owner!"

Usually, player stores may only pop up if a player doesn't have access to that
house door. If you want to test your own player store though, you can just
press 'h' key or use the /pstore command when standing next to your house door
(see (0.2b)).

To indicate that your house is a player store, you can use 'h' key or the
"/paint" command to paint your house entrance for other players to see!
Please see (0.2b) for more information about painting.

All items put up in player stores will be listed on the "Player store search"
webpage on the TomeNET website: Go to "Official Server Info" and there click
"Player Stores". This list is usually updated once per hour, so items you just
added to your store might not yet be displayed on the webpage. Similarly, items
you already removed might linger there for a bit more.

(4.11) Malicious effects (status effects) players can suffer

The player can suffer from various effects caused by monsters, traps or
himself. Against several of these effects the 'Saving Throw' ability helps
to decide whether it will be resisted or not (especially true for effects
that are cast by monsters on the player - see (7.3) for more details
on Saving Throw).
The various effects are:

For 'Fear', 'Blindness', 'Confusion' and 'Paralysis' - please see (5.6).

Hunger -Gorged   Your speed gets reduced by 10.

        -Full   While being /afk in 'Full' state or in normal state
                         (normal = no food state is displayed, the 'Full'
                         disappeared), your digestion will be stopped, allowing
                         you to remain afk as long as you wish.

        -Hungry

        -Starved (yellow) or 'Weak' in old game versions <= 4.8.0
                    You will regenerate hit points slower,

        -Starved (orange) or 'Weak' in old game versions <= 4.8.0
                    You will regenerate hit points slower,

```
             -Starved (red)    or 'Weak' in old game versions <= 4.8.0
              (starving)       You lose hit points and get paralyzed even with FA.
                               You will not regenerate hit points from resting.

                               If you hit a bowel cramps trap, you instantly enter
                               this nutrition state. 'Slow Digestion' (and of course
                               normal 'Free Action') will prevent insta-paralysis
                               from the trap.

          Note that you don't consume food in towns, in town areas, while AFK and
          not already hungry (or worse), and in the Arena Monster Challenge.
          Also see (7.16) for details about food consumption.

  Slowdown          Monsters can cast spells or breathe (inertia, gravity) to slow
                    the player down. This effect is temporary. 'Free Action' helps
                    a bit to reduce the effect from inertia breath.


  Stun    -Stun            Reduces to-hit and to-dam.
                           Reduces your martial arts damage (because you cannot
                           perform MA special styles while stunned).
                           Reduces chance for successful spell-casting.
                           Prevents you from intercepting a monster (see (7.2)
                           'Interception' skill).
                           Reduces chance to block or parry.
          -Heavy stun      Greatly reduces to-hit and to-dam.
                           Reduces your martial arts damage (because you cannot
                           perform MA special styles while stunned).
                           Greatly reduces chance for successful spell-casting.
          -Knocked out     You cannot perform any action while knocked out,
                           it leaves your character completely helpless.
                           Beware!

                           High AC helps to avoid melee-based stuns (see (6.4))
                           while stun from sound attacks can only be prevented
                           by having sound resistance.

                           Most infamous monster is probably "The Stormbringer",
                           which can k.o. you in the blink of an eye. But also the
                           rather weak Bloodletters of Khorne can apply very nasty
                           stun effects quickly and it's vital to avoid getting
                           surrounded by them. Always fight them one by one.
                           Fortunately their specialty is that they cannot get
                           summoned or spawn live as a group, only one by one.

                           Melee-based stun can be caused by monsters critically
                           hitting you, also see (*) below.

          Most means of Curing, Cure Critical Wounds and Healing will also remove
          any stun. Therefore it is recommended to treat any form of stun
          immediately, before it builds up. In unlucky cases a normal Stun might
          even turn straight into a Knocked out state, so even a light 'Stun'
          should be cured right away.

  Cut                       Cuts will make you lose HP continuously.
  (Graze, Light cut, Bad cut, Nasty cut, Severe cut, Deep gash, Mortal wound)
                           Cuts can be caused by melee based critical monster hits
                           (also see (*) below), or by shard attacks.
                           By transforming into a monster that has NO_CUT flag
                           (mostly undead forms), the player becomes immune to
                           cut effects.
                           Cuts from shards can be avoided with shard resistance.
                           Cure Light/Serious Wounds potions can heal cuts a bit,
```

while Cure Critical Wounds and Healing work much better
and any means of 'Curing' will completely heal cuts.
While cut, HP regeneration is inhibited except
for half-trolls, trolls and hydras which can continue
regenerating HP even while cut - except if the cut was
applied before shapeshifting into one of these forms.

Poison   -Poisoned   The player will continuously lose Hit Points.
                         Resisting poison will prevent the player from getting
                         poisoned (compare (5.6)).
                         Slow Poison (potions) will reduce the speed at which
                         poison ticks and drains your HP. Best is of course to
                         have means of Cure/Neutralize Poison, 'Curing', or
                         some Lembas, which will all completely cure poison.
                         While poison is slowed, the poison indicator will be
                         displayed in yellow colour instead of orange.
                         While poisoned, HP regeneration is inhibited.

Disease   -Diseased   Very similar to poison, but poison resistance does not
                         help against this. Can be cured by eating some Lembas,
                         a sprig of Athelas, Holiness staves, *Healing* (or
                         potions of Life) or any curing magic.
                         While diseased, HP regeneration is inhibited.

Hallucination   These are random wrong visual, like wrong symbols and
                         colours for monster and other players.
                         "You can't believe what you are seeing!"
                         This effect is pretty annoying as you cannot clearly
                         see what kind of monsters you are up against, making
                         a fight potentially risky, and you cannot even target
                         monsters (using auto-targetting macro etc).
                         You will also get wrong kill messages when you slay
                         monsters while hallucinating.
                         There are several ways to cure hallucinations, such as
                         mushrooms of Cure Paranoia, Lembas, 'Curing' magic and
                         any insanity-curing potions.
                         Hallucinations can be induced as a one-time effect for
                         example by eating a mushroom of hallucination, but also
                         as a recurring flashback when your Sanity is reduced.

Sunburn   This affects vampires that are exposed to sunlight
                         without any means protection such as resistance or
                         shade. Sunburn has no text indicator but your character
                         symbol's colour will flicker fierly.
                         While burning, HP regeneration is inhibited.

And lastly, not an actual status effects, but...
Switch places   Monsters that have MOVE_BODY flag may switch place with
                         the player. This can be very dangerous if it happens in
                         a situation where the player is standing on a staircase
                         on purpose to retreat quickly if the situation gets out
                         of hands and the player is also within a no-teleport
                         area.
                         The higher the player's level and the greater his body
                         weight is, the less likely he is going to get switched.

(*) Details about melee-induced cuts and stuns:
 For a monster attack to cause cuts or stun it must deal at least 95% of its
 potential damage maximum (rounded down). This is also called a 'critical hit'
 of a monster (has nothing to do with the critical-hit mechanics for player
 attacks). See 'Critical hits by monsters' in (6.4) for more information.

An attack type ('HIT') that can do both, cut and stun, will randomly do either
one, but never both at once. The 95% damage criterium is measured for the final
damage ie after the damage-reduction of AC has been applied. This is why
high armour class helps *alot* to prevent any type of cut or stun effect that
comes from critical hits by monsters, no matter how high the actual potential
damage of that attack might be.
However, unlike the most common damage types (like 'HURT') certain damage types
cannot be mitigated by AC and hence their cut/stun potential is always to be
reckoned with (see damage types in the second table in (6.5), which say so if
they can be mitigated by AC.)

Example:
A Star-Spawn of Cthulhu hits you with its 2d33 CRUSH attack. The attack could
deal 2..66 damage. This means its potential maximum damage is 66 (if both dice
rolls turn out a 33 each). 95% of 66 is 62 (rounded down from 62.7), so if that
hit deals a final damage of 62 or higher, you will get stunned. Note that this
attack of the Star-Spawn doesn't have a HURT effect but instead an UN_BONUS
effect. UN_BONUS attacks do not get their damage reduced by AC, so a Star-Spawn
always has a chance to stun you, even if your AC is very high.

(4.11a) Black Breath

Black Breath is a deadly spiritual malady, making your character flicker dark
(which is visible to other players and yourself) with the following effects:

- It will randomly drain your stats in slow but steady intervals persistently,
  requiring you to use some means of restoration (such as potions from the
  alchemist town shop).

- It will permanently drain your experience in slow but steady intervals,
  so it cannot be restored (eg via 'Restore Life Levels' or equivalent means).

  You can lose levels this way and if you drop below zero XP you will die.

  The amount of XP lost is independant of your race/class experience factors
  so high-penalty characters (eg Maia race) suffer the most as they have a
  harder time (re)gaining experience.

  Taking such an xp hit will break rogue's 'cloaking'.

- In fixed intervals you will see a message:
    "The Black Breath saps your soul!"
  which disturbs any resting you might be doing.
  At the same time players nearby you will see the warning message:
    "A dark aura seems to surround <your name>!"

Undead characters and hobbits, that includes mimicked monster forms, have less
chance of getting infected and will less frequently suffer from the infection.

Training 'Holy Curing' to 50.000 will further reduce the frequency of suffering
from Black Breath infection (also stacks with the hobbit/undead advantage).

Black Breath can be inflicted on the player in four ways:

- coming in contact with a Nazgul (high chance to get infected, very high even
  for martial arts users as they tend to come into contact more directly with
  hands, feet and limbs).

- coming in contact with a high level undead monster (very low chance to get

infected. Also, the halloween event monster 'The Great Pumpkin' will never
inflict Black Breath despite being a level 127 undead monster in theory.)

- another player bumping into you, switching places with you or pushing past
  you (or trying to).
  However, there are exceptions when players cannot infect other players:
  - if they are in Bree or in the 'Training Tower' dungeon or in Valinor.
  - if the target character is in a town in 'afk' state (eg via the /afk slash
    command or auto_afk setting kicking in).
  - if the target character level is lower than 25.

- equipping an item that inflicts black breath.
  Currently only weapons of Morgul do this.
  Note that the black breath cannot be cured until you unequip the item.

Some characters are even completely immune to Black Breath:

- Vampires (player race, not mimicked) are immune to Black Breath.
- Players under the effect of 'Martyr' prayer are immune to new infections
  (casting Martyr won't heal an existing infection though).

There are several possibilities to cure Black Breath:

- Eating a Sprig of Athelas.
- 'Soul Curing' prayer, ask a friendly priest to cast it on you.
- 'Herbal Tea' druid spell, ask a friendly druid to cast it on you.
- Visiting the Earth-Dome in Gondolin which offers 'Herbal Healing'
  for a (somewhat steep) price (also see (4.5a about special town shops)).
- Quaffing a potion of Life.

(However, note that you cannot cure black breath for as long as you have an
item equipped that inflicts it, ie a weapon of Morgul. Take it off first,
then cure it.)

(4.11b) Drain effects

Apart from the effects listed above which are indicated in the status bar at
the bottom of the main window, there are three 'drain' effects that can be
caused by items and three other 'drain' effects that can be caused by monsters,
traps or elemental attacks you suffer (possibly from terrain too).

Drain effects caused by items:

Experience drain ('Drains your life force')
    Having 'Hold Life' does not protect against this.
    Having 'Keep Life' (only obtainable from either having both Necromancy
    and Unlife maxed out at 50.000, or from attaining character level 99)
    completely prevents any XP drain, always, including drain from items.

    If you equip multiple items that drain experience, the total drain will
    diminish with each further item though instead of adding up, so for example
    using two rings of power will be less severe than than one might expect.
    If experience drain hits the threshold for your current character level, it
    will not drain any further, so you cannot lose a level from it. Beware
    however, that you are not hit by another life draining effect that lowers
    your experience further below the level threshold, or the experience drain
    will kick in again.
    While the player is on the world surface, the effect is lessened compared

```
         to being inside a dungeon/tower.
         Experience drain is on hold while you are in town areas, this includes
         dungeon towns.
         Having an anti-magic field will further reduce the frequency of draining
         by half of the anti-magic field strength (75% / 2 = 37.5% slower drain).
         All the rings of power that are dropped by Nazgul drain experience (and
         turn you invisible). Note that having multiple items that drain experience
         will not result in a linear increase of the drained amount. Instead, each
         further draining item will drain less, making it more feasible for exampe
         to equip two rings of power.
         The higher the experience gain ratio of a character is (depending on its
         race/class combination) the worse it will be hit by experience drain from
         items, with Maiar being the class that has the most trouble compensating.
         Vampire race characters suffer half as much from exp drain as anyone else.

    Mana drain ('Drains your magic')
         Drains your mana pool over time while you have this item equipped.
         Can be countered if your MP regeneration happens to be faster than the
         drain. Multiple items draining mana will stack linearly.
         Warriors and archers are not affected as they don't have any MP.

    Hit point drain ('Drains your hit points')
         Drains your hit points down to zero, then stops. This means that this
         effect won't kill you, but can make it extremely risky to go AFK in an
         unsafe place, as any further damage you suffer from whatever reason would
         finish you off. Well, going AFK in an unsafe place can kill you anyway.

         HP drain stacks linearly and is given by:
          -Items that just drain your HP
          -Items that have strong good powers and you use them as a Vampire
          -The sun, when it's day and you're a Vampire and out in the open without
           a protective wrapping, such as a Mummy Wrapping, or something granting
           resistance to light.
          -Monster forms that provide wall-passing (wraith form)

         HP drain can be countered by HP regeneration, which can be gained from:
          -'Regeneration' ability (which is a flag, ie one source providing it is
           enough and having more than one regen source won't increase the effect),
           gained from items or as racial/form bonus
          -Health skill
          -Holy Curing school bonus
          -Nature school spell
          -Biofeedback from fire stones
         which all stack too.

         Note that vampire race characters are immune to specifically the DRAIN_HP
         effect on 'Spectral' ego weapons.

    Also see (5.15) for how these drain effects stack or may be cancelled out.


    Drain effects caused by monsters, traps or elemental attacks including terrain:
    --------------------------------------------------------------------------------
    Experience drain from monster attacks, traps or elemental damage you suffer
         For elements, it's caused by unresisted Chaos or Nether or by Time.
         For melee attacks, it's caused by EXP_xx effect attacks.
         Drinking potions of lose memories can also drain your experience.

         'You feel your life draining away!' - the normal message.
         'You feel your life slipping away!' - you suffer less drain, happens if you
                                               acquired the 'Hold life' power, which
                                               is the specific resistance meant to
```

counter experience drain.

'You keep hold of your life force!' – you suffer no drain! Happens if you have 'Hold life' and get lucky.

'You are unaffected!' – you are completely unaffected by experience drain ('Keep life').
To acquire this ability you need to be either level 99 or have Necromancy and Unlife skill both maxed out at 50.000.

Some of your experience points will be drained. If this happens a lot, you might even lose one or more character levels! (You retain all your skill points though.)

When your experience is drained this way, it will be displayed in yellow colour instead of light green on your character sheet (SHIFT+C) and in your 'XP' bar on the main screen.

The game remembers your original amount of experience though and you can restore it by purchasing a potion of 'Restore Life Levels' from the temple in town or by corresponding restoration magic of various sorts.

It is recommended to restore your experience ASAP because any further gain of experience points while in drained state will only count towards your original maximum by 10% of its real value, resulting in large amounts of XP being wasted. (Example: Your XP gets drained from 2000 to 1500, you kill a monster that gives 100 XP, now you have 1600 of 2010 XP.)

Experience drain from Black Breath

This is especially nasty as being infected with Black Breath will drain experience permanently instead of temporarily.

Stat drain

This type of drain will lower your attributes, which can be:
STR (strength), INT (intelligence), WIS (wisdom), DEX (dexterity),
CON (constitution) and CHR (charisma).

While drained, these will be displayed in yellow colour instead of light green on your character sheet (SHIFT+C) and in your 'XP' bar on the main screen.

The game remembers your original stats though and you can restore any stat by purchasing a potion of 'Restore <stat name>' from the alchemy shop in town or by corresponding restoration magic of various sorts.

Note however that there are three tiers of stat drain:

I: Temporary drain. Low-level traps will often do this.
     Suffering from anoxia while in aquatic form can temporarily drain your dexterity. Coming out of an adrenaline rush can temporarily drain your constitution.
     You can just sit it out and after some time it will automatically restore itself back to normal (colour changes from yellow to light green again accordingly).

II: Persistent drain. Medium level traps, monster attacks (those with the melee effect LOSE_xxx), Black Breath, equipped items with TY_CURSE and certain elemental damage you suffer without having the according resistance can cause this.
     Getting seduced can also cause constitution or wisdom to get drained.
     Again the drained stat will be displayed in yellow, but unlike tier I drain it will not self-restore. Instead you will need to purchase a potion from the alchemy shop or use other means of restoration magic.
     Unresisted elemental attacks that cause stat drain are:
     – Time attacks can drain all your stats at once if you don't resist.
       Also, against time even sustenance only has a chance to help instead of preventing stat drain 100% of the time.
     – Acid: Charisma.
     – Electricity: Dexterity.

– Heat: Strength.
– Cold: Strength.
– Mind blast/brain smash attacks can drain your INT and WIS.
Note that Plasma damage, as it consists of both fire and lightning,
may drain both your strength and dexterity.
These elements not only count for spells but also for melee attacks
with elemental effects (RBE_xxx) eg red worm mass that will attack
with RBE_FIRE could drain your strength if you lack fire resistance.

III: Permanent drain. High level traps are the only way to suffer this.
Your stat will actually not turn yellow, but remain light green and
its reduction cannot be undone by restoration magic!
The only way to counter this is by finding stat potions. These in turn
permanently increase a stat. So high-level characters might want to
always keep some of those potions in reserve even if they already
maxed out a stat.

It is especially nasty when your primary stats are drained. For a melee
fighter these are usually STR and DEX, as these determine your attack speed
aka BpR (blows per round). If you suffer stat drain here and notice that
your BpR just dropped for example from 3 to 2, it means you just lost
33% of your attack power! So you might want to return to town immediately
to restore the affected stats.
For a magic user it might be INT or WIS, depending on the type of magic
they use. If these get drained it will not only reduce their mana pool
(MP) but also increase the fail rates of their spells, so again you might
want to restore your primary stats as soon as possible.
Note that WIS drain can under certain circumstances be especially nasty as
WIS is the stat that mostly determines your sanity pool. So if you are
planning to fight a monster that can drain your sanity, make sure your WIS
stat is fully restored before you engage.

Notes:
– 'Sustenance' powers will help to prevent all three tiers of stat drain!
  (Except for time-based attacks, where sustenance just has a certain
  chance to help but isn't guaranteed to.)
– Drinking a stat potion will automatically restore your stat if it was
  drained, before permanently increasing it. So you don't need to purchase
  an extra restoration potion before drinking a stat potion.
– If you are infected with Black Breath, it can also drain your stats
  randomly (yellow aka tier II kind of drain).
– While items cannot drain stats in general, there is one single exception:
  If an item possesses the 'TY_CURSE', a special, strong curse (see (5.12))
  this curse can cause a tier II drain (aka yellow stat colour).

Sanity drain
The most dangerous drain effect of all.
Some traps can cause this, drinking too much booze might also do its share
but mostly it will be from monster attacks, which can be ranged psychic
attacks as well as certain melee attacks.
If your sanity (see 'SN' indicator in the main window) gets drained too far
you will start hallucinating and if it reaches zero you will turn into an
unthinking vegetable, effectively erasing your character even if it is
'everlasting' mode and without any way of resurrecting!
So never let your character run out of sanity or it will die permanently!

Fortunately there are potions (and certain curing magic) to restore sanity,
albeit they cannot be purchased in normal stores.
See (7.6) for more information about sanity.

(4.11c) Common recurring combat buffs

On the plus side, there are three very common recurring combat buffs that can
be acquired by lots of different sources such as potions, item activations,
spells or techniques, that might warrant some detailed explanation here.

These buffs are temporary and do not stack with the same type of buff even
when acquired from a different source, for example quaffing a potion of berserk
strength and then using the fighting technique 'Berserk' will have no extra
effect over just using one of the two (it will just reset the effect's timer).

Heroism stacks with either, Fury or Berserk Rage, but Berserk Rage will cancel
and override Fury and vice versa: Fury cannot go into effect while Berserk Rage
is already active.

Heroism: Remove and resist fear.
                Initially heals you for 10 HP.
                Increases hit points (CHP and MHP) by 10.
                Increases to-hit (melee and ranged) by 12.

Fury: Remove and resist fear.
                Increases Speed by 5.
                Increases to-damage (melee only) by 10.
                Reduces to-hit (melee and ranged) by 10.
                Reduces AC by 20.
                Slightly reduces your resistance to Psionic effects.

Berserk Rage: Remove and resist fear.
                Initially heals you for 30 HP.
                Increases hit points (CHP and MHP) by 20.
                Increases Strength by 10.
                Reduces AC by 10.
                Slightly increases your resistance to Psionic effects.
                Increases your throwing distance (but doesn't increase caps).

(4.12) Malicious effects (status effects) monsters can suffer
----
Monsters can be affected by similar effects as players.
Those are:

Fear, blindness, confusion, sleep, slowing, and stun.

Note (except for 'stun' effect):
      There are basic spells or magic devices that don't do anything except
      trying to cause one of these effects directly, for example a 'wand of
      slow monsters' or the spell 'scare'.
      It is important to know that unique monsters are always unaffected by
      these basic spells. Other monsters have a chance to resist, depending on
      their level vs the power (level) of the spell.

Effect details:

Fear is a temporary effect, causing the monster to flee. Many monsters turn
        afraid if their hit points drop very low. Wears off after a while.
        Monsters that have NO_FEAR flag cannot be scared.
Blindness and confusion are currently the same thing, resulting in erratic
        movements and being unable to cast spells or attack. Usually only
        low level monsters are prone to these.
        They are temporary effects that wear off after a while.
        Monsters that have NO_CONF flag cannot be confused.

Undead, demon, dragons, nonliving monsters and monsters of level 45 or
higher cannot be blinded.
Sleep is especially nice if it's cast as an area effect. Gets you out of
trouble, although most higher monsters are immune to it.
Monsters will wake up after a while, depending on your stealth.
Sleep effects are NOT cumulative.
Monsters that have NO_SLEEP flag cannot be slept. Note that they may
still be asleep when you meet them though.
Slowing on monsters is currently a permanent effect. Very effective, although
many higher monsters are immune to it. Monsters may resist sometimes so
you might need to try again.
Stun   (Note that "stunned" and "dazed" are the same thing.)
Stun can be caused by special martial art attacks among other things.
Stunned monsters have a harder time to successfully cast spells or hit
you in melee combat. Also monsters cannot interfere with your actions
while they are stunned. Many monsters are immune to stun, but also
many monsters - even of high level - are not.
Monsters can also be heavily stunned or knocked out, same as players.
Stun is temporary and will wear off, if no new stun effect is applied.
Monsters that have NO_STUN flag cannot be stunned.

Monsters have a saving throw, and unique monsters are usually immune to some
of these crowd-control effects.

(4.13) Extermination orders, events and Ironman Challenge

Your character will have opportunities to do certain side events for extra
rewards, such as carrying out so-called extermination orders or participating
in global (as in, open to everyone at the same time) events.
An extermination order can be received by a player on demand and infinitely
often, and only concerns him personally. Events however are automatically
scheduled in regular time intervals, often have strict conditions for what kind
of characters are allowed to participate and allow (or even require) multiple
players to participate simultaneously.

Some events will require you to have zero experience in order to participate.
The maximum experience your character ever accumulated counts for this, so
make sure you don't gain even 1 point of experience before the event starts!
The following actions may reward 1 XP without you noticing:
  -Eating a bad food ration.
  -Picking a lock.
  -Transferring items or money from another player to you.
  -Picking up/earning more than 300 gold pieces (IDDC-exclusive characters are
   unable to pick up any gold at all, and in turn start out with 300 extra).
   Use the /ex command to see how much more gold you may pick up
Killing townspeople in Bree however will not give you any experience.
Stay clean!

Before listing the events, there are the x-orders, which aren't considered
real events but rather personal kill quests that can run concurrently (on
a timer) to anything you are actually doing in the game:

Extermination orders:

These are basically 'kill quests'. You need to venture out and kill a fixed
amount of a certain type of monster.
To receive an order, visit the major in the town hall (one of the '+'
doors in town), or if you are in the IDDC simply type "/xorder" in the chat.
There is a certain time limit which in most cases is easily sufficient,

especially if you have the according ESP ability.
The time limit is actually two 'in-game days', which in real time lasts
somewhat over two hours. (See (4.14) for more information about the
in-game time system.)
The time will continue to run out even while you're not logged on.
If you carry out the extermination order you received, you will be rewarded
with a good or great item or sometimes a stack of consumables, depending on
the difficulty (monster level) and chance.
The item does not depend on your race, class, skills or luck in any way,
it's completely random. It's quality is also on average lower than the items
obtained from winning events (read further below about events).
If you fail to carry out your order in time, the order will be cancelled and
you can just get a new one if you want to. There is no penalty.

On an Ironman server or within the Ironman Deep Dive Challenge dungeon, the
amount of monsters that need to be slain is somewhat lower (especially for low
level orders). Also, in the IDDC and in the Halls of Mandos, the monster level
of the extermination order will depend on the floor level rather than on the
player's level. Inside the IDDC you may only request one order per floor.

Events:
----
use /evinfo and /evsign commands to get information and to sign up)
Note: Item rewards depend on your character, see (9.5) for more information
       about item rewards.

Make sure that you aren't inside a dungeon or on a position on a dungeon floor
or in a certain state regarding your character (eg equipment) that prevents the
use use of Word of Recall!
If that is the case when an event begins that you signed up for, you will fail
to join the event!
Such scenarios are for exaple: Ironman dungeons, forcedown dungeons, no-recall
dungeons, no-teleport vaults, wearing a no-teleport item.
If an event has't started yet you can undo your sign-up again with '/evunsign'.

Here is a list of all available events:

  Highlander Tournament:
    PvP, there can only be one, requires at least 2 participants.
    Can provide sort of the strongest reward items of all events.

    When you see a message, announcing a Highlander Tournament, type "/evinfo"
    in the chat to find out more, and use "/evsign" followed by the event's
    number to sign up for participation.
    It's a deathmatch with 10 minutes of preparation time, and only newly
    created characters with 0 experience may join it.
    If you die in this event, your character will get erased, even if it was
    an everlasting-mode character.

    The winner will receive a deed that can be 'r'ead, and turned in at Bree's
    Mayor Office for either an item or a temporary luck bonus.
    All losers will also receive a contender's deed on the next character they
    log in with which can be turned in for a very small temporary luck bonus.
    See "Reward Deeds" further below for details on reward deeds.

    Detailed course of the event:

    After signing up, players can kill townies for cash and go shopping.
    They must not earn ANY experience though, or they won't be able to
    participate when the event starts.
    If a player collects more than 300 gold, he will gain 1 experience point,

and therefore become uneligible to participate.
Picking up items belonging to other players will also give 1 experience.

When the event starts, all participants are (if word-of-recall is legal at
their current position) teleported into a specific dungeon that is reserved
for Highlander Tournament participants exclusively.
All players receive an Amulet of the Highlands which they should not forget
to wear, because it gives the character considerable power.
They now have 10 minutes to level up in this dungeon.
In this highlander dungeon players are randomly teleported when they take a
staircase, so even if two players take the same staircase they won't end up
next to each other.

After 10 minutes, everyone is teleported out of the dungeon and meets on a
battlefield where they have to kill each other, because it is well known
that THERE CAN ONLY BE ONE!

When a player is slain and drops his items, other players can pick up his
Amulet of the Highlands and 'w'ear it, which will make it fuse with an
already existing Amulet of the Highlands, increasing its power!

When only one player is left, he will be the designated winner, and
teleported back to Bree. He automatically receives a victory deed in his
inventory which he can exchange at the Mayor's office in the town hall.

Highlander Tournament deeds can create somewhat more valuable reward items
than the Dungeon Keeper event.

Arena Monster Challenge:
  No sign-up period, it's immediately active. No losses or gains, no deaths,
  it's just for testing your abilities.

  The wizards of Arena Monster Challenge (tm) have prepared a spectacular
  event on the top floor of Bree's training tower, which will allow any Joe
  and Jane to experience top-notch fights against creatures that usually
  pose lethal threat. In this illusonary arena, players will experience
  a fight that seems absolutely real, but they won't suffer any
  consequences if they lose, ie 'die'. Test your might against any foe you
  always wanted to challenge but never dared in real dungeoneer's life!
  It's also possible to challenge ego monsters (such as veteran archers or
  holy animals). The arena corners are safe zones and allow for spectating.
  Note that you cannot die or suffer various hazardous effects in the arena,
  you won't consume food and monsters cannot summon.
  Tip: If you want to spice a monster up, try the /scream command while
  it's in your line of sight.
  Inventory and equipment cannot be damaged/destroyed or disenchanted in this
  event, and you cannot get disarmed either.
  NOTE: PvP mode characters are exempt from safety and can die for real!

Dungeon Keeper:
  Co-op – everyone can win, requires at least 1 participant.
  (You should enable 'easy_open' option in =9 for this event, which is
  enabled by default, and lets you open doors simply be moving into them.
  Light radius of 2 is recommended, eg provided by a Brass Lantern, which
  you can buy from town store '1', the General Store.)

  Characters who want to participate must not be of higher level than 14.
  A character can participate only once in this event.
  PvP mode characters are not eligible to join.
  If you die in this event, your character will get erased, even if it was
  an everlasting-mode character.
  Running, phasing, teleporting, magic mappping, detection and ESP are

disabled in the event. Also, your speed cannot exceed +0 (Normal), and
the lava that floods the dungeon will deal irresistible damage even if
your character is immune to fire.
No items are required for this event.

All winners will receive a deed that can be 'r'ead, and turned in at Bree's
Mayor Office for either an item or a temporary luck bonus.
All losers will also receive an autograph deed on the next character they
log in with which can be turned in for a very small temporary luck bonus.
See "Reward Deeds" further below for details on reward deeds.

Detailed course of the event:

When the event starts, all participants are (if word-of-recall is legal
at their current position) transported into a labyrinth of rooms made of
impenetrable walls but connected by doors or even void jump gates.
The goal is to find one of four escape beacons, which are light green '>'.
The beacons are self-illuminated and in the center of their room, so you
will always be able to easily spot them.
Everyone who steps on an escape beacon and presses the '>' key will be
teleported to Bree and has thereby successfully escaped the maze and
receive a winner's deed they can turn in at the mayor's office in Bree.

After about 5 minutes, the dungeon floor however will crackle, and be
flooded more and more with lava. Time is running out. Now the players who
haven't escaped yet should hurry, before the maze is completely submerged
in lava. Doors, void gates and the exit beacons will stay clear until the
very final push of lava occurs which then completely submerges everything.
However, it seems the former keeper of this abandoned maze left behind a
horrible guardian, the Horned Reaper. It can sense your presence and if it
manages to catch you, there is no hope of survival.

It does not matter who the first or last is to find the exit, everyone who
manages to get out, wins. You could even form a party if compatible.

Tips:
-The Horned Reaper in this maze bashes doors instead of opening them.
 The noise will help you to roughly locate him if he is close enough.
-If you stand still for a turn, you can 'run' over one adjacent floor grid
 as quickly as you can double-tap a movement key (maybe create a macro).
-Players usually do not start next to rooms that have escape beacons.
-Don't OCD this dungeon. Your goal is to pass through as many rooms as
 possible, not to cover areas "cleanly".
-It is known that in a world of squares, moving diagonally has a certain
 advantage.
-A brass lantern is not required but can make things easier sometimes.
-Form a party if possible.
 If you are waiting for team mates at an exit beacon, stay on the beacon
 to avoid suddenly drowning in lava (until the very last lava push which
 will kill everyone no matter where you stand).

Reward deeds:

    Some events hand out deeds to winners (sometimes dubbed victory deeds) and
    maybe also to losers (sometimes dubbed contender deeds).
    If it was an event that erases losers, the contender deed is usually
    received on the next character you log on with.
    These deeds can be 'r'ead and turned in at the mayor's office in Bree, the
    biggest building in town, north-east area of the town center.

  Winner deeds:

Winner deeds can be turned in for an item tailored to the character!
The game checks some details like which skills you have trained and also
your character sheet and equipment to some degree, to determine the item,
so make sure you are prepared before turning it in!
For details on how to optimise this, see (9.5) Reward item creation.
Alternatively the deed can be turned in for a temporary luck bonus that
lasts about 60 min (90 on Ironman server). Usually the item is preferable
over the buff.

However, you can also trade the winner deed to another character, who can
then go and redeem it for luck (not for an item), although the luck bonus
that character gets will be smaller than what the owner would have gotten:
Just as high as a contender deed's bonus.
The buff duration of a traded deed will still be the same as it would have
been for the owner though.

Loser deeds:
Players who didn't win will also (depending on the event) receive a deed
on the next character they log in with, which can be turned in for a very
small temporary luck bonus that lasts about 30 minutes (45 on the Ironman
server); multiple deed buffs do stack in duration up to ˜ 1 hour, provided
it's the same buff power (ie same tier of deed). Contender deeds are not
tradable so they can only be redeemed by the character that received them.

Further information:
The luck buffs are on hold while on the world surface, so you won't lose
buff time from running around in the town area or travelling to dungeons.
This also means that the buffs are not applied while on the world surface.
For details about luck, see LUCK flag in (5.8).

Highlander Tournament rewards can theoretically end up with a higher item
value in gold than rewards from other events. A crown of telepathy for
example is not obtainable from Dungeon Keeper, but can be obtained here.
Reward items cannot be sold to stores though.

Asides from extermination orders and events, there is another, permanently
available challenge that waits for you to tackle it:

Adventure modules:

These are highly challenging events on hand-crafted dungeon maps, specifically
themed environments, and may have hidden bonus treasure and encounters.
Created by Kurzel, these events are usually permanently recruiting in the list
of global events (use '/evinfo' chat command to check, '/evsign' to sign up).

Once a player signs up, there is a short time window of a few minutes during
which additional players can sign up, before the event begins.
Then, nobody else may join until all players participating are dead or escaped.
Event duration is limited. If a player is still there when the time runs out
he will usually just get teleported back to Bree.
In general, fruit bats, PvP characters and ghosts cannot participate.

Under Elmoth:
Create a new character and challenge the forbidding dark-elven halls
under sunken Nan Elmoth. Once a place of beauty, now its cavernous
chambers contain only dread! Triumph over the corruption if you can!

-- Restrictions: Zero experience required. 1-6 players. 30 minutes.

-- Prohibitions: No Mapping, Detection, ESP.
-- Prohibitions: No Summoning, Genocide, Earthquake, *Destruction*.

Seasonal events:

At certain times of the year, some seasonal events will occur for a couple of
days each. The exact time of the day when they start or end can vary depending
on your time zone, even a date difference of +/-1 day is possible for that
reason. The ending date means that somewhen after the beginning of that day,
the event will end.

These events do not use sign-up and aren't listed in the global events list
either, they are just active 'in the background' in the game world, modifying
certain aspects of it:

  Halloween:
    Running from 26th October till 2nd November.
    If seasons run at 2x speed, then also from 26th April till 2nd May.

    The server will recall all players (20 minutes ahead warning will be
    displayed) and restart. After that, Halloween is live and costumes can be
    found and stored costumes can be worn again.
    Townspeople will actually give experience (!) but also have a fear-causing
    'touch' attack. They can't really harm you, though.

    Randomly, the Great Pumpkin will appear on dungeon levels, its hit points
    varying from 1/3 to full strength depending on the dungeon level.
    If you cannot beat it on deeper floors you could try leaving the floor to
    reset it, wait a bit, and then move to a shallower floor and hope to see
    the Pumpkin respawn there with less HP.
    The pumpkin will despawn on its own if it doesn't get defeated before one
    hour has passed after it appeared. It will quickly respawn on another
    dungeon level in that case. About 5 minutes before it fades away, nearby
    players will get a warning message, saying that the Great Pumpkin
    "wails and seems to fade".

    The Pumpkin is aiming at intermediate-level characters. It can spawn on any
    dungeon floor from level 1 to 35 (or 40 on Ironman server),
    except it won't show up on the first 9 floors in the Ironman Deep Dive
    Challenge. It can spawn in both ways, initial level generation and live.
    The pumpkin will not spawn for 6 hours for the last two players who killed
    it, so ideally you are a party of at least 3 and keep creating the next
    dungeon level with the person who did not one of the last two kills, ie
    have that player be the first one to enter a new dungeon level.

    It will usually be quite tough and might require teamwork to beat.
    Players who are too high level (above 30 on main, above 35 on Ironman*)
    will not be able to hunt him, they will see a message:
     "A ghostly force drives you out of this dungeon!"
    The IDDC is the only exception: Players of any level may enter a floor that
    already has the Great Pumpkin on it, without getting teleported away.

    The Great Pumpkin does not cause any damage but still has a few annoying
    spells at its disposal. It is level 127 and therefore can drop quite high-
    level items and usually drops very good stuff. Please share fairly. ;)
    When a player defeats the Great Pumpkin, everyone will get a message about
    it. The Great Pumpkin will randomly respawn again some time later.

    During Halloween, it will stay deep night on the world's surface and magic
    that lights up the world surface won't work.

  Christmas:
    Running from 23rd December to 26th December.

If seasons run at 2x speed, then also from 23rd June till 26th June.

The server will recall all players (20 minutes ahead warning will be
displayed) and restart, after which the event is live.
During christmas, costumes can be worn again and you might even find Santa
Claus costumes. Also, Santa Claus will spawn in Bree and drop great stuff
when you uh.. kill him. :)

New year's eve:
  Running from 31st December to 1st January.
  If seasons run at 2x speed, then also from 30st June till 1st July.

  Fireworks will be launched into the sky of the town of Bree.
  While it's night and fireworks are being launched, magic that lights up the
  world surface will not work.

Ironman Deep Dive Challenge (IDDC):

This is a permanent, special, gigantic ironman dungeon (or tower) that you may
attempt to conquer by reaching the final floor or killing Morgoth and then
recalling out. It allows traversing only in one direction and if you die you
die permanently even if you are everlasting!
Originally there was a specific "RPG Server" I created as a stand-alone server
for a few years, which was then abolished and inspired this single dungeon
instead. For those who wish to play more 'ironish' even outside of the IDDC,
there are character modes available such as no-ghost or soloist.
The IDDC accommodates different dungeon themes, suggested and implemented by
Kurzel, and dungeon towns, I implemented based on Kurzel's suggestions, and it
comes with a specific ruleset, to which IDDC goers contributed such as the IDDC
top dog Pondos and many others.

  Structure, getting out:
    The IDDC dungeon consists of 127 floors (-50 ft till -6350 ft, or positive
    if it happens to be a tower) and does not allow recalling in between,
    except for in the two 'dungeon towns' which will be generated at dungeon
    level 40 (Menegroth) and 80 (Nargothrond).
    There are two additional dungeon towns at level 20 and 60 but these won't
    allow recalling.
    If you recall from a town it counts as withdrawing from the challenge and
    you won't make it on the leaderboard that can be viewed at the
    mayor's office in Bree.
    (Note that 'IDDC-exclusive' characters can NOT recall out at static towns.
    If they try, they are just 'killed by indetermination' and erased.)

    Starting after 4.9.0c, the IDDC will also spawn refuge areas - depending
    on the server settings (you can check by pressing ~ i) either at 500 ft,
    or at 350 and 700 ft, within every 1000 ft interval in the IDDC - which
    offers a possibility to sell loot albeit at not so great prices, and also
    allow for basic shopping for spells and supplies.
    If a player logs out within this refuge, next time he logs back in he will
    spawn inside the refuge again, no matter its location on the dungeon floor.
    While standing inside the refuge area a character will not consume food (ie
    same as in towns, so you can take your time shopping).

    Monsters cannot spawn in the wilderness sector of the dungeon entrance, so
    you can just stay AFK at the entrance safely, waiting for team mates.
    Monsters cannot spawn in any dungeon town either.

    The towns, as well as any other IDDC floors, remain static for (only)
    5 minutes after dying, giving other players a chance to loot items and
    money. An exception are floors 50ft..350ft which only stay static for

2 minutes, still giving you a chance to reconnect if you get disconnected
without the floor turning 'stale' (see much further below).

Since you cannot recall out except from the two towns Menegroth and
Nargothrond, except if you reach the 127th floor (the final floor) of the
dungeon, it is extremely likely that you will die before making it through
all those floors. So this dungeon serves as a challenge of how far you can
make it before death!
The level reached will be recorded in the mayor's office in Bree ('n' key
inside the office, to view the records).

For servers running 'strict_etiquette', meaning that a player will lose all
true artifacts after winning (the official server does NOT run use this):
If Morgoth is defeated, players on his floor will be allowed
to use Word of Recall to leave the dungeon if they wish!

Requirements to enter, exclusive mode:
  The Deep Dive dungeon requires your character to have zero experience
  points in order to be eligible to enter.
  To fulfil that requirement you may not collect more than 300 Au (gold
  pieces) or pick up any items or money of other players. Also, if you eat a
  ration of food and you are unlucky enough that it's gone bad you will get
  1 xp for that.
  Note that you are allowed to pick up items on the world surface (those that
  are dropped by townies in Bree for example). If you sell these items to
  shops, the money you get will be subtracted from the remaining amount of
  gold your character was allowed to pick up (check with /ex command).
  Use the /ex command to see how much more gold you may pick up.
  When you haven't collected 300 Au yet and step on a money pile that would
  exceed 300 Au, your character will only collect as much gold from it to
  exactly hit 300 and leave the rest on the floor. From now on you must not
  step on any other money pile (including this remaining one) or you will
  gain 1 xp and thereby disqualify for IDDC. Note that unlike for items, it
  is allowed to collect gold in a dungeon or tower too.

  If you make a 'slot-exclusive' IDDC character, it will start out with 300
  extra gold, get at least a 50% discount in all shops in Bree, and in turn
  will automatically be unable to pick up any more gold or items of other
  players outside of the IDDC, and it won't get experience from eating bad
  food either. (It cannot buy houses either, which are useless for IDDC.)
  Note that the /convertexclusive command works on the Ironman server too,
  to convert your character to a dedicated (slot-exclusive) IDDC character.

  As IDDC-exclusive character you will get no experience when you kill a
  monsters outside of the IDDC. As a little extra bonus, slot-exclusive IDDC
  characters will also randomly gain knowledge of some item flavours on
  entering the IDDC dungeon. (Flavoured items are: potions, scrolls, rings,
  amulets, magic devices, mushrooms.)
  All characters that enter the IDDC will also get 20 scrolls of identify
  for free, which will automatically be placed into their inventory.

  Exclusive-mode characters cannot recall out of the IDDC at towns.
  They also will automatically be no-ghost mode and will receive an extra
  +25% score bonus (stacking with the no-ghost score bonus and a potential
  hard-mode bonus should the player choose hard-mode aka 'hellish').

  An IDDC-slot-exclusive character that makes it out of the dungeon will be
  restricted to the world surface. If it attempts to enter any dungeon or
  tower it will automatically retire instantly. Note that it cannot buy any
  houses, but it won't need those anyway.

  You can use the command '/convertexclusive' to convert one of your

characters into a dedicated IDDC character, moving it to a specific
IDDC-only-character slot and freeing up the generic character slot again.
This of course only works if you still have a free IDDC-exclusive character
slot available.

Usually (depending on the server, but it's the default setting), IDDC-
exclusive characters may alternatively enter the Halls of Mandos instead!

Experience, items, shops:
Players in the IDDC receive a 20% experience gain bonus in addition to the
usual 15% experience bonus all ironman dungeons provide, so overall you
gain +35% more experience in IDDC than in a normal, generic dungeon.
You could decide to 'abuse' IDDC to level up your character, and then leave
the dungeon when you reach -2000 ft. This might be especially interesting
for mimicry users (see further below).
The IDDC does not enforce a minimum depth in regards to player level in
order to gain optimal experience.
On average the experience gained in IDDC is high enough, that even a
character of a highly penalized race/class combination can still obtain at
least level 46 before he reaches Nargothrond at -4000 ft, even if he skips
all floors that give a "terrifying" feeling - if he clears out all other
floors completely. This number is an average and may therefore vary.

To further bring your character up to snuff on deeper levels, when you hit
-3000 ft you will have a very high chance to find one very useful ring of
speed. This high chance will stay in effect until you actually find it.
This does not have to happen on -3000 ft, it can be on deeper levels too.
As soon as you find it, your chance to find further rings of speed will
revert back to normal.

Shops in the IDDC offer especially powerful items, and there are additional
special shops that are not found elsehwere.

Starting at dungeon level 8 (aka -400ft), a hidden library may appear
randomly (that's a bookstore with a red '9' as an entrance), allowing you
to purchase magic spells you might be missing. It also offers a special
service to identify all items you are carrying.
The chance to find at least one library on your way down is around 1/2
up to dungeon level 10, 2/3 up to 13, 3/4 up to 15, and 4/5 up to 17.
The Herbalist can also spawn in the IDDC (on lower/mid level floors).
On very deep floors (ie after Nargothrond), a seasoned alchemist store may
appear, allowing you to resupply, at a 20% generation chance on each floor.

Rogues should be aware that it's not possible to steal from general store,
weaponsmith, armoury, temple, magic shop, black market and the special
potion store in the dungeon towns.
This leaves only the hidden Library, herbalist, alchemy shop and the
library to steal from.

If you use stolen enchant scrolls on an item while you are in a town,
then the item will get a 100% off discount. If you want to use stolen
scrolls to enchant your items and keep the items sellable, then you have
to take the staircase to leave the town, and read the scrolls in an actual
dungeon level instead.

Recharging wands and staves in the IDDC has a considerably lower chance for
them to break (aka disappear in a bright flash of light) than usual.

Layout, dungeon types and bosses:
The IDDC is randomly using themes of all the other dungeons, the selection
is randomly rerolled every 24 hours. The final floor of each theme might
spawn the according dungeon boss if you are lucky. The chance for a boss to

spawn is even somewhat higher than in normal dungeons.
Further, you will receive an feeling "You feel a commanding presence.."
that indicates a dungeon boss spawn. Like yellow feeling messages, this too
requires you to have stayed on the previous floor for about 2 minutes
(until your depth indicator gets a light blue star attached).

Although Sauron is the final guardian of Mount Doom, he may spawn in any
theme in the IDDC, provided the floor depth is at least level 99.
As in any other dungeon, Morgoth will only spawn if all players on a floor
have already defeated Sauron. He may spawn in any theme, on floor depths of
level 100 or deeper.

Usually unique monsters may not spawn in two or more places in the game
world at once, but the IDDC is actually an exception. In here, a unique
monster is allowed to spawn (once) on a floor even though another instance
of it already exists right now elsewhere in the world.
This means that you don't have to worry which uniques other players are
currently fighting - they can still spawn for you just fine.

If you make it through the IDDC, the title of "Iron Champion" will be
bestowed on you. If you even manage to defeat Morgoth you will instead
acquire the title of "Iron Emperor" or "Iron Empress" respectively.
You are allowed to re-enter the IDDC (and depending on server version) and
also the Halls of Mandos after you made it through.
However, if you are on a dedicated-IDDC character, you will automatically
force-retire (aka suicide) if you enter any other dungeon.

Specialties:
  Mimicry users gain +9 extra kill credit on each kill, effectively
  learning forms TEN TIMES as fast. (However, if that character decides to
  withdraw from the challenge at a static town, it loses 2/3 of those extra
  kill credits again, still not a bad deal.)

  Darklings and Candlebearers for Maiar spawn slightly earlier, from dungeon
  level 10 to 20 in the IDDC, instead of from 12 to 20 anywhere else in the
  world.

  Unmakers cannot spawn in the IDDC at all (same as for Halls of Mandos).

  After the first fixed town at -2000 ft, Menegroth, all further floors you
  enter will give you a progressively increasing (with floor depth) luck
  bonus, making it more and more likely to obtain better items.

  Monsters cannot spawn 'live' in the IDDC, but only at the time of creation
  of each dungeon floor. Summon staves cannot be recharged in the IDDC and
  polymorphing magic does not work.
  Since for this reason it is important to get the most XP out of every floor
  the server may run an experimental feature: A staircase will look white
  instead of dark grey to indicate that someone else is currently on that
  next floor. So you might decide to wait until he left in order for the
  floor to reset and thereby get monster spawn again before you enter it.

  Inside the challenge dungeon you can acquire an extermination order via
  /xorder command at level 1 already, instead of the usual minimum level 5.
  On average, extermination orders in here require less monsters to be slain.
  Also, the monster level of the order will depend on the floor level instead
  of the player's level.
  You cannot take up another extermination order if you haven't taken at
  least three staircases since acquiring the previous one.

Partying and trading:
  IDDC allows partying and trading between everlasting and non-everlasting

characters. To form a party, everyone must be inside the IDDC dungeon and
the person to be added must be on at least the same depth as the currently
deepest party member, or deeper.
You cannot have more than one character in the same IDDC-Party at a time.

However, gold cannot be traded, and items can only be traded if both
players are in the same party and the item was found when the finder was
already in the party and after the player who wants to receive it joined
the party, otherwise you will get the message
  "You cannot take items from outsiders."
(same message as for iron team trading restrictions actually).
Items purchased from shops cannot be traded at all in the IDDC, only found
items can be traded. Items cannot be traded on stale floors.
Level requirements on items are not in effect while inside the ironman deep
dive challenge either, so item levels are meaningless.
However, when a character picks up an unowned pile of money from the floor,
it will be evenly split between all party members on the same floor.

Party bonus experience is higher than outside of IDDC. This means that the
experience you get per killed monster is much closer to the experience you
would get for playing solo, making partying more attractive since you do
not need to worry about 'loss' of experience compared to going solo.

If the party leader dies inside the IDDC, the party isn't disbanded but
ownership of the party is transferred to another party member. (Same as on
Ironman server.)

 Stale floors:
  In case you need to go offline you'll just have to log out inside the
  dungeon. Keep in mind that your character will stay in the game for about
  30 more seconds during which it could be killed if in an unsafe place.
  Dungeon towns in general however are free of any monster spawns, so they
  are safe.

  If you log out in the IDDC and log back on before the level has changed,
  you can continue business as usual. However, if you log off and wait until
  the level has reset, then the level will be "stale" for you, the next time
  you log on, which will prevent you from getting any experience, items or
  gold until you move on by taking a staircase to the next floor.
  You cannot trade with other players on stale floors either.
  Therefore, if you need to log out and stop playing, you should first clear
  as many monsters as you can on your current floor before logging out. That
  way you won't "waste" any experience points.
  Dungeon towns never turn stale.

(4.14) Time systems, speed

Three time systems are relevant for the players' game experience:

-real time (you can check the server's time with /stime command by the way, and
 your local time with /ctime aka client time.)

-in-game day time (check in-game time with /time command)
 When NPCs inform you about anything time related, they will do so in in-game
 time, effectively speaking to your character, not to you as a player.
 In-game time passes 20x as fast as real-time (see below for more info).
 This time also controls day/night changes, where the sun rises at 5am and
 night falls at 9pm.
 Note that the four seaons however (and seasonal events with them) do not
 pass that quickly but just at 2x real-time speed (or maybe even exactly at

real-time speed, depending on server settings).

-in-game 'turns' (the /ex command tells you how fast you can move, ie how much
                  you can move each turn)
 (Not to be confused with server-frame turns, which usually pass at 60 Hz.)
 Turns are small chunks of time during which players and monsters can make a
 move (or several moves if their speed is greater than the basic value of +0
 or less moves if they are especially slow).
 The special thing about turns is that they pass slower for deeper dungeon
 floors, meaning that the speed of all actions is slowed down for both players
 and monsters alike. This is done because both players and monsters will
 usually have gained more speed at higher levels and combat would become too
 fast to react properly.
 You can measure the passing of turns simply by looking at your lamp fuel for
 example, as it is measured in turns (of light) too, passing at 1 energy/turn
 (unless you have fuel-prolonging powers, ie Temporal magic school training).
 So to the player turns would pass at the speed of approximately 0.52s at depth
 zero (0 ft, aka Bree town) and slow down on deeper floors to up to 1.92s per
 turn at dungeon level 196 (-1550 ft, Nether Realm bottom).

Real time:

Special events for example are usually measured in real-time, ie /evinfo
command will return information that mentions minutes and seconds. This is,
because event information is 'out-of-game' information that is supposed to
inform the player, not the character played.

Scheduling of seasonal events or of event scheduling in general (the frequency
at which events are invoked) are also handled by calculating real time.
The four seasons (and seasonal events) will pass at 2x real time though (or
exactly real time, depending on server settings).

Basically all other things in-game are measured by the passing of 'game turns'
and in in-game time, ie the time of the day as seen by your character, not by
you as a player behind it.

The in-game day time can be checked with /time or with /ex chat commands
and runs at about 20x speed of real time and also features day/night change:

Usually a whole day (day + night, ie full 24h in-game time cycle) will last for
slightly more than one hour real time.
The sun will usually rise at around 5am, while night falls at around 9pm, so
the in-game night lasts for slightly less than half an hour real time.
An in-game hour lasts for about 160 seconds in real-time.
Extermination orders (see (4.13)) usually have a time limit of two full in-game
days, so you will have about 2.5 h to carry them out.

Wanderers in the wilderness in turn would rather prefer day light in order to
locate the entrance to that dungeon they are looking for.
Vampires burn if they move around in day light without either a protective
wrapping such as a Mummy Wrapping that protects them or an item that provides
resistance to light.
Even store orders and the Merchants Guild mail system work in in-game time and
tell your character how long their deliveries will take, not you as the player,
so when they speak of "hours" or "days", fear not, it'll be much faster in
real time.

The four seasons however are inconsistent with the day/night speed:

A full cycle lasts for half a real-time year, or (depending on server settings)
even a whole real-time year.

More technical stuff about 'game turns' and how time for your character's
actions passes, and actually passes more slowly on deeper dungeon levels:

Before explaining more about them, I'd like to interject that there is a second
meaning to the term 'turns' in the game, which is used to describe frames of
the game engine, usually running at 60 fps internally. Instead of just calling
those internal processing steps 'frames' as would be precise, unfortunately
they are also called 'turns'. But those 'frame-turns' aren't what we'll be
talking about here, since they don't matter to the players at all.
The only place players will ever come in contact with frame-turns unfortunately
is the high score board, which should probably really be changed to either
'in-game' turns or just to real days/hours/minutes, which make more sense.

So, how do game turns work?
They measure the time experienced by characters and monsters.

For example if you are poisoned then you will see your hit points ticking down.
This is done once each turn, so it will allow you to observe how long a turn
actually lasts in real time.
Same for lamp fuel: It runs out by 1 point of energy each turn.

The speed of characters and monsters also depends on game turns:
A creature (including players) moving at +0 speed can move once per game turn,
while creatures at higher speed may move several times per game turn, and of
lower speed only once in several game turns, depending on the exact speed.

Note that +SPEED is actually not linear in absolute time! To find out how often
your character can really move per game turn, use the /ex command. You will
find that increasing your speed more and more will yield somewhat diminishing
returns on the amount of actions your character can actually perform per turn.

So how long is one game turn actually?

The simplest way to notice is creating a new character and walking around Bree
(not run, but walk), as it will be able to move exactly one grid per turn it
gets. So you'd observe that a turn takes a bit longer than 1/2 and a bit less
than 2/3 seconds, roughly - that is, on the world surface at least! Read on..

An special thing about game turns is that their passing depends on the dungeon
level your character is on!
You can for example observe the passing of turns if you watch your light source
losing fuel and hit CTRL+R to refresh the display and thereby take measure
points.
In the dungeon however, the time will pass slower. The deeper you are, the
slower game turns will pass in real-time. For example if you enter Mordor, you
might feel as if your character only moves at half his usual speed. This is
because each in-game turn is slowed down quite much on dungeon level 34, which
corresponds to the floor at Mordor -50 ft.
The reason for this is that higher level monsters usually move faster than
lower level monsters. This would make the game more and more dangerous to play,
since your reaction times would need to be *very* short. Actually much shorter
than is feasible.
To counter that, the whole time itself is just slowed down on deeper levels, to
allow you to react more easily.

If you enter the town Khazad-dum, you can observe how things would look without
these slow-down mechanics: The town is actually considered level 80 (so

basically as dangerous as a dungeon floor of depth -4000, even though hardly
any high level monsters can spawn there, apart from a few higher level human
type monsters). However, the town is also on the world surface, which means
turn-time is not slowed down there. Now see if you can spot a pack of orcs or
novice warriors that got spawned in Khazad-dum: You'll see that they move at
very high speed! That is because monsters on dungeon levels that are much
deeper than their native level get boosted stats, including their speed.
In the dungeon on -4000 ft you would hardly notice that their speed was raised
because the slower passing of turns counters the visual effect. In Khazad-dum
however you'll see how astonishing fast they suddenly move. You wouldn't want
to have to handle this time speed in the actual dungeon where you encounter
the really bad guys..

For limitations of speed vs real-time regarding server frame rate, see (9.7)
which has information about the game engine limits.

(4.14a) In-game metrics

The lore is, that a grid in the game has a size of 10x10 ft, aka 3x3 metres.
Hence when a character has 40 ft infra-vision he will be able to spot monsters
detectable by infra-vision no further than 4 grids away from him.

However, since the game uses square grids instead of for example hexagonal
grids, this has some implications for moving:
Diagonal movement is more efficient than moving just horizontally and just
vertically when your target location is not exactly horizontally or vertically
away from you. Simply because by moving 1 grid diagonally you are twice as fast
as if you had moved to the same grid by first moving 1 grid vertically and then
1 grid horizontally.

While this seems sort of obvious, it is easy to miss that for example in the
'Dungeon Keeper' event whenever you enter another room, the next doors closest
to you are actually diagonal of you! So now it might become clear how to do
that event in the most effective way..

Note that the map coordinates you see when pressing SHIFT+L (CTRL+W with rogue
like key set) can differ depending on if you have 'big_map' setting enabled or
not via = b .

(4.15) Swimming

Some very light characters can swim without losing hit points occasionally
('drowning). The weight limit includes equipment, backpack and the character's
weight itself. For example an elf has no problems swimming through deep water.

The heavier a character gets, the more often he will get a 'tick' of drowning
inflicted on him, reducing his hit points. This is a continuous process that
scales from 'no damage at all' at very low total weight to serious drowning for
really heavily packed characters.
Undead characters take only half as much drowning damage.

During swimming, you might get other negative side effects:
- Inventory or equipment might take some water damage. Having a tarpaulin
  equipped will help your inventory, being immune to water prevents all damage.
  (Acquiring levitation is the simplest way of avoiding this, as you won't
  touch the water at all that way.)
- You might get exerted and sometimes get a point of stamina depleted,
  depending on how well you can swim vs how heavy you and your
  backpack are.

As a side note, even if your character has no special powers and is bad at swimming, drowning and exertion can still both be avoided if you happen to carry a massive piece of wood in your inventory.
In this case you will be able to just cling to it with minimal effort.
Carrying such a big wood block around with you is usually not a feasible way to go on dungeoneering though....

Most races are too heavy to be able to swim perfectly out of the box, and even low-weight races will run into trouble when they store things in their backpack or wear a couple of items.
However, this is often not a big problem because even though a character may not be able to swim perfectly, it'll still be sufficient to cross large rivers without taking much of a dip in hit points, if he isn't carrying or wearing a load of heavy items.

If you're really too heavy and want to operate in watery surroundings though?
Here are ways to improve your swimming capabilities:

Constitution or being undead (includes mimicked monster forms) will reduce the hit point damage, but not the drowning tick frequency.
Strength and dexterity will randomly reduce the tick frequency but are still no guarantee for perfect swimming.

The 'Swimming' skill is the easiest choice to reduce tick frequency, and it does so to zero ie perfect swimming, when maxed. at 0.700 you will become able to swim very fast, which can be compared to 'running' through the water in terms of speed. However, this costs precious skill points, so it's not a very popular way of getting good at crossing water.

Mimics and especially druids can use an aquatic form or a form that can swim easily, and they will be able to cross water in the same way, without ever drowning. Another way is to use a form that grants wraithform or simply a form that grants levitation, which is a rather common ability.
Rangers learn how to swim at great skill at level 25, Martial Arts users will be able to swim easily at a Martial Arts skill of 30.000.
Ents never drown since they're made of wood, while Draconians will actually gain intrinsic levitation at level 30.
Characters training the magic 'Water' or 'Nature' school will acquire water-passing at 40.000, while 'Air' school grants levitation at 50.000.
Other characters can rely on items that grant levitation, swimming (rare), or wraithform (by spell or item) to become able to cross water easily. Levitation is definitely the most popular choice, since you can 'fly' over water quickly.
Wraithform is as good as levitation, but hard to acquire.

In short: Obtaining levitation is probably the most popular way for crossing larger areas of water.

(4.16) Teleportation

Teleportation is the magical, instantaneous relocation of a player or monster.

There are five main types of teleportation:
-Phase door/Blink
  It follows the same rules as 'teleport self', it's just named differently to indicate that it is limited to a rather short range (usually less than 20 grids away).
  The spell available to players are usually called 'Phase Door' while the

spell used by monsters is usually called 'blink', but again that's just a
matter of naming.
Note that monsters cannot blink out of vaults.
-Teleport self
  The normal 'teleportation' as provided by scrolls, staves or used by monsters
  which has a very long range and also tries to keep a certain minimum range to
  make sure you actually get away from trouble.
  Note that monsters cannot teleport out of vaults.
-Teleport other
  It's basically the same as normal teleportation, except it does teleport a
  targetted player/monster instead of the invoking player/monster himself.
  If you get teleported by someone you cannot see, instead of his name you will
  see this message: "Someone teleports you away!"
  Note that monsters cannot teleport you away if you're within a no-teleport
  area (no-tele vault).
-Teleport-to
  Thes spell tries to move the targetted player or monster onto a grid next to
  the caster. This can be nasty when monsters with dangerous melee attacks cast
  teleport-to on a player who tried to keep his distance.
  Note that teleport-to has no effect if the source grid or the destination
  grid are in a no-teleport area (no-tele vault).
-Word of recall
  The only non-instantaneous teleportation spell and the one with the longest
  range. After a certain 'charge' phase has elapsed it will teleport the player
  over the world map or into or out of a dungeon.

Further rules that determine the target location:
-Neither monsters nor players can teleport into vaults or houses or into shops.
-Monsters cannot land on grids that have a glyph or rune on it, or on
 'protected' grids (the inns and the arena event corners).
-Players cannot land on grids that are inside monster nests/pits, including the
 outer corridor around them (pits/nests are rectangular rooms surrounded by a
 one-space-wide outer passage, that are filled to the brim with monsters).
 Note: Earthquakes or *destruction* magic will cancel the special protected
 state of pit/nest grids, so they become valid teleportation destinations
 again.

However, under certain conditions, teleportation spells may still fail!
In general for all teleportation attempts, these are:

-Teleport spells cast onto others (teleport other, teleport-to) may get
 resisted by the target depending on its saving throw, level or status.
-Trying to teleport while engaged in pvp with a pvp-character. There will be
 a cooldown of maybe half a minute after a PvP mode fight till you can use
 teleportation again. If you try to flee by teleportation, you will receive a
 yellow message: "There's no easy way out of this fight!" >:)
-Certain special floors ('Dungeon Keeper' event or an experimental no-teleport
 dungeon).
-Trying to teleport in a local no-teleport area.
 When you enter such an area (no-tele vaults) you will see a message in dark
 grey, saying "The air in here feels very still". Music will change too in most
 cases (Morgoth's music will not change), and your speed and worldmap indicator
 will change colour to grey, to catch your attention.
 When you try to teleport you will get a message in bright red, saying:
 "This location suppresses teleportation!"
-Trying to teleport while having equipped an amulet of anti-teleportation or
 activated a space-time-anchor effect. You will get an orange message, saying:
 "You are surrounded by an anti-teleportation field!"
-Trying to teleport on a floor that has no or only few free floor grids.
 Teleportation magic tries hard to find a free destination grid, but if it is
 unlucky due to a low number of available grids it might just fail. So it is
 not recommended for example for an istar to cast stone prison all over the

level, filling it mostly up. This puts attempts to successfully teleport on
this level at hazard.
'Free' floor grid means a floor grid that doesn't have a monster or item on
it and is classified as 'floor' (water and lava count as floor too).
If a teleportation spell fails because it didn't find a free destination grid
you will see an orange message "The teleportation spell strangely fizzles!".

(5) Item and flag details, elements
===================================

(5.1) Melee weapons, brands

One of TomeNET's features is the "auto-retaliator". This means, if an enemy
enters a field that is adjacent to you, you will automatically attack the foe
with your equipped melee weapon. This is helpful against lags as well as for
preventing RSI ;) - for details about auto-retaliation please see (4.1a).

Melee weapons have at least three stats, it's 'damage dice', 'to-hit' and
'to-damage'. 'To-hit' helps you actually not miss an enemy, 'to-dam' increases
the damage. The 'damage dice' shows how many dice are added to calculate the
random damage you inflict on an enemy as you hit!

Example: Broad Sword (2d5) (+3,+4)
This means, your chance to hit is a bit increased (+3) and you will inflict
a damage of: 2 dice with 5 sides each, to the result +4 is added.
So the damage you inflict will randomly vary from 6 (1+1+4) up to 14 (5+5+4)
meaning that you do an average damage of 10 per hit with that weapon
([6+14]/2 = 10).

A very important thing about melee weapons is that, depending on your strength
and dexterity as well as the weight of your melee weapon, you might be able to
deliver more than just one blow per round with it!
For example a warrior might be able to swing his "Broad Sword (2d5) (+0,+0)"
one time per round, delivering 2*(1..5) damage. The 'd' means dice, so it's
like throwing 2 dice with 5 sides each and adding their values to estimate the
damage you inflicted on the victim. Now if that warrior equips a light whip
which weighs only 3 pounds (the broad sword weighs 15 pounds) he might get 2
or even 3 swings per round! Since a whip does 1d6 damage, he would deal
(assumed he got 2 hits) 2* 1*(1..6) damage, which in total is more damage per
round than he would deliver using the broad sword! Let's compare what happens
if the warrior magically enchants the damage of both weapons, using "Scrolls
of Enchant Weapon To-Dam" (these scrolls can be bought in shop '5').
One of these scrolls can enchant a weapon so one extra point is added to the
damage dice after they have been added. If we manage to enchant the damage of
the broad sword 9 times, the weapon will look like this:
"Broad Sword (2d5) (+0,+9)"
That means after 2 dice with 5 sides each have been added up, there will be
further 9 points of damage added to the result!

Broad Sword 2d5 (+0,+9) 1 blow per round --> 1* [2*(1..5) + 9] damage
  --> 2*((1+5)/2) + 9 average damage which is 15 per round.

Whip 1d6 (+0,+9) 2 blows per round --> 2* [1*(1..6) + 9] damage
  --> 2* [1*(3,5) +9] --> 2*12,5 = 25 damage per round!
       Far more than with the broad sword.

As you can see, the additional damage caused by enchantment will
be added to the dice result.

If you manage to get your hands on an item that imbues your melee weapon with

an elemental brand (like a Ring Of Ice for example), the dice of your weapon
will be multiplied by 2 if the target doesn't resist that brand.
See (5.3) to get an easy overview.

Characters using weapons have a limited number of melee attacks per round,
depending on the character class. A table showing the blows/round limits
is at section (7.5).

There are four different classes of melee weapons,
swords/daggers, blunt weapons, axes, polearms. (Also see (5.1a) below!)
You may inspect a weapon by pressing 'I' to see its base class.
For items listed in a store, the command is 'x' to examine it.
Those again are divided into four sub-classes each:
Single-handed, forced two-handed, should-be-wielded-two-handed,
may-be-wielded-two-handed. If you inspect a weapon, it will tell you if
it belongs to one of the latter three sub-classes:
"It must be wielded two-handed" (MUST2H)
"It should be wielded two-handed" (SHOULD2H)
"It may be wielded two-handed" (COULD2H)

While smaller melee weapons require only 1 hand to use them, some larger
weapons need 2 hands. Using a shield together with those is not possible.
Some larger weapons that should be used two-handed can also be used
single-handed, but you will receive penalties to to-hit and to-dam bonus if
you use it that way. Look at your character screen ('C') to compare the
to-hit/to-dam boni and see if it's worth it. You'll see a warning message
"Using this large weapon together with a shield makes fighting harder."

Medium weapons which 'may' be used two-handed won't give malus if used
single-handed, but you might get more blows per round if you wield them with
both hands! Again check your character screen ('C') to spot any difference.
You'll see "Without shield, your weapon feels especially easy to swing.".
Depending on weapon weight, your strength and your dexterity, sometimes you
get more blows/round from it, sometimes you don't.

If you try to wield a weapon that is too heavy for your character, meaning
your 'STRength' stat isn't high enough yet, you'll get a warning message:
"You have trouble wielding such a heavy weapon".
This means
- you won't get any benefits from your 'Weaponmastery' skill.
- nor any extra blows per round at all, you'll be stuck with 1 blow/round.
- your hit chance will be lowered depending on the 'overweight' amount.
- your parry chance cut to 1/3
- digging effectiveness (if you use the weapon for digging) will be low
- you cannot use it as effective throwing weapon.
- you'll be more prone to disarming attacks.
(For mage staves overweight has no negative effects beyond these listed above.)

Similar is possible for shields. If you try to use a shield which is too heavy
for you, you'll get another warning message:
"You have trouble wielding such a heavy shield".
That means
- chance to block attacks will be cut down to 1/3.
- you won't get get any 'reflection' ability (REFLECT flag) from it, if it
  provides this. (All other abilities you gain from it are not affected though
  (eg resistances or stat boni), you will benefit from these just fine.)
- you will not be able to bash anything with it.

Your character might have a chance to parry attacks with his weapon and block
attacks with his shield, provided he uses one.
For more details about class-specific ability to utilize weapons and
shields for parrying and blocking, see (7.5), for more details about parrying

and blocking in general see (7.11).
In general, the bigger a weapon the more you may parry, while the bigger a
shield the more you will block!
Last but not least, training "Weaponmastery" skill will also increase your
parry chance a good deal.

(5.1a) Melee weapon types

As mentioned previously, there are four weapon classes:
Swords, axes, blunt weapons (whips, hammers, morning stars etc.), polearms.

You may wonder which one to choose and why. In general, if your character is
especially skilled at one of the four masteries you might want to pick that one
to save skill points (for example Half-Trolls get a bonus on Blunt-mastery).

Also, priests cannot use edged weapons that aren't 'blessed' (the 'BLESSED'
item flag, which at the time of writing appears in the 'Blessed', 'of Aman' and
'of Life' ego powers and also on some true artifacts and some random artifacts)
so if you want to create a melee-oriented priest, you will usually pick blunt
weapons (or 'Martial Arts' instead, for weaponless combat, making more for a
monk-style character).
However, priests can use all 'blessed' weapons as if they were blunt-type! That
means their blunt-mastery skill will apply to them, even if they are swords,
axes or polearms.

However, aside from just skill point calculations there are some advantages and
drawbacks to each weapon class, so you may want to consider the following table
to help you make a decision:

Type	1h/1.5+2h abundance	2h top damage/weight	Base item level 1+1.5h/2h
Swords**	very high / medium	medium / medium	low / mid
Axes*	medium / medium	high / heavy	low / high
Blunt	medium / high	high / very heavy	low / mid
Polearms*	low / high	high / medium	low / mid

 * Note that these weapon types can (partially) obtain VORPAL mod from 'Sharp'
 or 'Spinning' ego power (see (5.8)):

 ** For randarts, only swords can spawn the VORPAL (see (5.8)) mod:
 Damage-wise 2h-swords with VORPAL flag can make up somewhat for the damage gap
 towards the top tier weapons of the other weapon classes.
 VORPAL mod makes an especially big difference in scenarios that are low on
 critical hits (ie no CRIT item flag or Critical-strike skill being applied).

For example if you stick with dual-wielding two weapons, you might want to go
with swords and definitely not with polearms, since there are a lot of 1h
swords, and very few 1h polearms.

The base item level determines at which depth you will start finding that item.
Also, normal town stores usually only sell low level weapons and armour while
black markets tend to prefer mid (normal black market) or high (special black
markets) level items.

In-game you can press 'I' (or 'x' if inside a store) to inspect an item.
Even if you haven't *identified* it, it will still tell you the weapon class
the item belongs to, if it is a weapon.

(Weapons can be damaged when your character gets hit by an elemental attack or
if you stick them into elementally imbued monsters. Sword type weapons are only
affected by acid, while all other types are affected by both fire and acid.)

(5.2) Ranged Weapons, brands

Ranged weapons are not to be underestimated, they can be very powerful.
Especially characters with low Hit Points will love them since approaching
hordes can be killed at a distance or at least driven back, so they won't come
close and hit the player with devastating blows. It is recommended that you
equip a ranged weapon as soon as possible, and enchant its 'to-damage' to at
least +7 !

The maximum range a projectile can travel is 18 (while the maximum distance
your character can see is 20, be it with normal eye sight or infra-vision).
However, you might not reach this far with any ranged weapon:
- Throwing:
  The item's weight caps downwards at 1.0 lb. The heavier it gets after that,
  the more strength you will need to throw it far. Some item types inherently
  fly farther than others.
  The maximum distance is 15 for throwing weapons and 10 for all other items.
- Firing:
  - Boomerangs count as 'firing' although they are obviously thrown:
    Their range is always 15.
  - Launcher weapons (slings, bows, crossbows):
    The range is at least 9 and increased by +3 times the shooter's multiplier,
    to which 'extra might' is added.
    Total range caps at 18.
    Examples:
    A Sling (x2) shoots as far as 9 + 3*2 = 15 grids.
    A Long Bow of Extra Might (x4) shoots as far as 9 + 3*4 = 21, but since the
    absolute maximum range for ranged attacks is always 18 its range is 18.

Ranged weapons have to-hit and to-dam like melee weapons, but instead of
dice they have a 'multiplier'.

Example: Ranged weapon is: Long Bow (x3) (+0,+5)
          Ammunition is: 65 Arrows (1d4) (+0,+2)
If you shoot an arrow, it will inflict
(1d4 +2 +5) * 3 damage on the victim. The dice of the arrow varies from 1
up to 4, so we can do a damage of 24 up to 33, so the average damage is 28,5.
We can see here that ranged weapons can do a lot of damage :)

Ranged weapons will be placed in equipment slot 'c)'. After you equipped one,
you need to also equip ammunition that will be used. For example if you use a
long bow, you need to fill your quiver with some arrows. (w)ield the arrows,
and they will be placed into equipment slot 'm)', the ammo slot.
A macro that shoots at the target closest to you, looks like this: *tf-
Explanation in case you really want to know: * means entering targetting mode
and choosing nearest target, t means exiting target mode and remember currently
selected target, f means fire, - means to aim at previously acquired target if
it's valid and otherwise to cancel the action.
To automatically pick up your arrows simply inscribe them: !=
To inscribe an item press '{' key, to remove an inscription press '}'.
Ranged weapons can also auto-retaliate, that means you will fire automatically
at targets on sight. See (4.1a) for details about auto-retaliation.
However, auto-retaliating with a ranged weapon works only if the enemy stands
on an adjacent field, so use 'fire-till-kill' mode in general!

The dice of ammunition are also effected by brands and slays same as normal

weapons but the additional damage is reduced to 2/5.
Example: Ring of Acid will usually add 1x your melee base damage (weapon dice).
For ranged weapons it will add 1*2/5x of your base damage (arrow dice), so
multiply the average arrow dice result by 1.4 instead of by 2 to get your total
damage output. See (5.3) to get an easy overview.

If you try to wield a ranged weapon that is too heavy for your character,
meaning your 'STRength' stat isn't high enough yet, you'll get a warning
message:
"You have trouble wielding such a heavy bow".
That means
- you'll get neither any benefits from your 'Archery' skill or from any
  specific ranged mastery skill at all! That means you will not receive from
  these skills: Extra shots, extra might, hit chance bonus, damage bonus.
- your to-hit chance will be reduced depending on the 'overweight' amount.

Note: +damage bonus from other items besides the ranged weapon itself or the
ammunition it uses will not be added to ranged attacks, while +hit bonus will.
This means for example that 'a Ring of Slaying (+10,+12)' will add +10 to both
your melee hit chance and your ranged hit chance, but the +12 damage will only
be added to your melee damage, not your ranged.

Also see 'Armour weight (concerning ranged weapons)' further below in (5.5)
for details about how wearing armour affects your ranged weapon accuracy.

(5.2a) Fire-till-kill mode

Your character will fire till kill, ie keep using your current (if eligible)
ranged attacks until the target dies or is no longer targettable.

This auto-attacking, like auto-retaliation, is affected by 'instant_retaliator'
in "Gameplay Options 1" in the options menu. Please see (4.1a) for details.

Accessible via 'm' key, you can switch 'fire-till-kill' mode on or off.
While enabled, your character will keep firing a ranged weapon (ie a weapon in
your 'shooter' equipment slot) or spell (see below) once you initiated the
first shot until the target either dies or direct firing at it becomes
impossible/obstructed for any reason.
The main use besides making ranged weapon usage more relaxed is that you are
able to single out enemies you want to kill of big monster packs such as
escorts.

Fire-till-kill mode also works with spells and runes, same as with ranged
weapons, except it may stop under additional conditions such as having no more
mana or other effects that render you 100% unable to cast spells.
While it will also stop if your spell requires a clear line of sight and would
(while travelling to the target) hit other monsters on the way, some spells
which don't travel to their destination but arrive instantly (most notably ball
spells and mindcrafter spells) will not be affected by monsters crossing your
line of sight.

To manually stop fire-till-kill without moving or performing any other action,
just press the SPACE key. Note that SPACE also stops all other kinds of
repeatable actions such as searching or tunnelling.

Fire-till-kill does not work with any other type of attacks besides those
mentioned above.

(5.2b) Throwing items

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Slings, bows, crossbows and even boomerangs are placed in the "ranged weapon" equipment slot 'c)'and are then 'fired', even though in the case of Boomerangs of course the correct term would be 'thrown'.
However, in TomeNET, throwing is already reserved for the action of throwing an item from your inventory – and while throwing plays no big role for high level characters it can make a difference in the early game!

Throwing can be used to get rid of that pesky fruit bat, floating eye, or to inflict not just damage but status effects too on a monster or even a group of monsters.

To throw an item, you'd press 'v'. While you can throw any item to inflict some damage, usually the more damage the bigger the item is, there are a couple of things to know about throwing:

- Potions thrown at a something will shatter, often releasing an area effect.
  If you have potions in your inventory that are pseudo-identified as 'bad'
   just throw them at a monster or a pack of them.
  For example a potion of salt water can temporarily blind monsters, while a
  potion of weakness can reduce their melee damage.
  Potions of slowness and potions of sleep are very effective too.
- Some weapon types are especially effective at dealing damage when thrown,
  much more so than other random items. These throwing weapons are:
  - Daggers (main gauche counts as such as well),
  - Axes
  - Spears and tridents.
- Flasks of oil can also be thrown for an extra fire damage effect.

Damage of thrown items depends on their damage dice, to-damage enchantment and the thrower's strength. Throwing distance depends on item weight and strength. Effective throwing weapons can be thrown especially far and unlike for other items or weapons their weight will additionally increase the damage dealt. While under the effect of Berserk, the range is further increased. Note that the max range is always capped, however, and this cap cannot be extended by berserk effects either. Throwing weapons can be thrown up to 15 grids far and other items up to 10 grids.

The effect a shattered potion applies is in general the same that a fumes trap loaded with that potion would cause, just that the fumes from the trap are usually more potent.

Tip: To easily throw all 'bad' potions in your inventory create a throwing macro in the macro wizard ('%' and then 'z') and when asked for the item name or inscription, just type 'bad', as that will automatically select a potion that has been automatically inscribed 'bad' by the pseudo-identification system of the game.

However, another use for bad potions could be to use the '/empty' command on them to obtain empty bottles, and fill those at fountains.

(5.3) Slaying vs brands

If you use a weapon that slays trolls, that means its dice will be doubled if you hit a troll ('T'). If you have an item that gives fire brand, the dice would also be doubled by the brand. Slaying and brands are not cumulative. That means you will get a total dice multiplier of 2 here.
Brands don't stack. The best one is taken. So if you wear a ring of fire and your weapon does acid damage the dice will be multiplied by 2 if the target doesn't resist both heat and acid. If the target is susceptible to one of those the dice are multiplied by 4. Same goes for SLAY flags.

```
Contradictory brands (fire-based vs cold-based):
------------------------------------------------
If your hits are branded by both, fire and cold, it will be a coin flip on each
hit which of the two brands gets applied and which gets discarded.
However, if you have hellfire and cold brand, the hellfire brand will override
the cold brand, so your hits will all be hellfire branded and never deal any
cold damage.
If you have fire+hellfire+plasma brands and just either cold or ice brand, the
cold/ice brand will be suppressed completely. If you have both, cold and ice,
then it's a coin toss with 75% chance for the combined fire brands vs 25% for
the cold or ice brand.
If you have two of the fire brands and both cold and ice brand, it's a 50%-50%
coin toss on each hit which brands (fiery vs frosty) are applied.
```

Combat Type	Dice multiplier for brands (fire/cold/acid/lightning/poison) Monster..			
	..is immune	..resists	..doesn't resist	..is susceptible
Melee Weapon	1	1.5	2	4
Ranged Weap.	1	1.2	1.4	2.2
Martial Arts	1	1.25	1.5	2.5

Slaying	Dice multiplier	Description
Slay Animal	1.5	It is esp. deadly against natural creatures.
Slay Giant	2	It is especially deadly against giants.
Slay Undead	2	It strikes at undead with holy wrath.
Slay Troll	2	It is especially deadly against trolls.
Slay Orc	2	It is especially deadly against orcs.
Slay Dragon	2	It is especially deadly against dragons.
Slay Demon	2	It strikes at undead with holy wrath.
Slay Evil	1.5	It fights against evil with holy fury.
Kill Undead	3	It is a great bane of undead.
Kill Dragon	3	It is a great bane of dragons.
Kill Demon	3	It is a great bane of demons.

```
Same as in the 'brands' table, x1.5 will become x1.2 for ranged weapons and
x1.17 for Martial Arts, x2 becomes x1.4 and x1.33 and x3 will become x1.8
and x1.67 respectively.
(Note: The term 'holy fury' is just a fluffy description for the multiplier
and has nothing to do with the 'fury' buff that also exists in the game.)

Giants, Undead, Trolls, Orcs, Dragons, Demons are all 'Evil'.

Dragonriders count as dragons too, so slay/kill mods will work on them.

If several multipliers match the highest one will be used.

For ranged weapons, the damage calculated from brands/slays applied to ammo
dice will further be multiplied by the bow's multiplier (x2..x5, depending on
the type of sling, bow or crossbow).
```

(5.3a) Martial Arts, brands

```
The "auto-retaliator" (see (4.1a)) also works if you fight bare-handed.

Training Martial Arts will give you (see (7.2) for details on these)...
-a bonus to-hit and to-dam.
-special combat moves which your character will use automatically.
 These moves do a lot of extra damage and often additionally stun or slow
```

your opponent.
-special abilities and resistances (like Free Action, see (7.2) for details).
-extra speed and stealth bonus.
-extra AC bonus for each part of armour that is NOT worn.
  Increasing your Martial Arts skill lets you wear light and even medium armour
  and still benefit from its AC.
-a chance to grab your enemies to prevent them from casting or teleporting.
  (This chance adds to your interception skill.)
-extra attacks.

However, to use the full potential of martial arts you will need to take care
of several points..
-a very light backpack will give martial artists a small additional speed and
  stealth bonus. (No warning message here.)
-a very heavy backpack will nullify the abilities and resistances,
  as well as the speed and stealth bonus! You will see a red warning message,
  telling you about weight encumberment:
  "You can't move freely due to your backpack weight."
-using too heavy armour will cut your number of blows per round to half, and
  nullify your to-hit, to-dam, speed and stealth bonus from MA.
-using a melee or ranged weapon (except for boomerangs), or carrying a very
  heavy backpack will nullify the AC bonus from Martial Arts, and greatly
  reduce your number of blows per round.
-using a melee or ranged weapon (except for boomerangs) or a shield will
  nullify the special combat styles, reducing your damage.
-using a melee or ranged weapon (except for boomerangs) or a shield or wearing
  too heavy armour will reduce additional interception bonus gained from Martial
  Arts skill to zero.
-using a heavy shield, melee or ranged weapon will nullify your speed and
  stealth bonus.

The backpack weight limit includes the weight of your equipment and is
depending on your strength and Martial Arts skill. It is
10.0 lb + (str_wgt * 2.0 lb) + ((str_wgt + 5) * rounddown(skill * 0.1 lb)).

Here's a table to tell you the values for str_wgt:
(Warning message is: "You can't move freely due to your backpack weight.")

str_wgt	STRength of the character	str_wgt	STRength of the character
5	3	16	14
6	4	17	15
7	5	18	16
8	6	19	17
9	7	20	18/00-18/09
10	8	22	18/10-18/19
11	9	24	18/20-18/29
12	10	26	18/30-18/39
13	11	28	18/40-18/49
14	12	30	18/50-18/220+
15	13		

The armour weight limit is 5.0 lb + Martial Arts skill level * 0.44 lb.
So for MA 50 it is 5.0 + 22.0 = 27.0 lb.
If your armour becomes too heavy, you will see this warning message:
"The weight of your armour strains your martial arts performance."

Here's a table, for those who prefer this view:

Equipment/inventory | +hit/dam abilities styles spd/stl +AC grab blows

```
--------------------------------------------------------------------------------
Light backpack       |                                    +
Heavy backpack       |           0                 0      0            0
Heavy armour         |     0                       0            0      50%
Any melee weapon     |                 0                 0      0      0
Any ranged weapon    |                 0                 0      0      0
Any shield           |                 0                        0
Heavy shield/weapons |                       0
```

Martial Arts special combat moves have certain dice, similar to normal
weapons. These dice are also effected by brands and slays same as normal
weapons but the additional damage is reduced to 1/3.
Example: Ring of Acid will usually add 1x your base damage.
For MA it will add 1/3 of your base damage, so multiply your base damage
by 1.33 instead of by 2 to get your total damage output.
See (5.3) to get an easy overview.

You cannot use special moves while stunned or confused.

Here is a list of Martial Arts special moves:
A move is picked randomly, then kept in mind if random(1..MA_Skill)>chance.
There are MA_Skill / 7 such tries to find moves, for each attack you perform.
The highest level move of those passing this random check will then be used.
If no eligible move was found in all tries, you will just hit without using a
special move. There is always at least 1 try to pick a move.

Move	Min.level	Chance	Damage dice	Effects
Punch	1	0	1d4	–
Kick	2	0	1d6	–
Strike	3	0	1d7	–
Knee	5	5	2d3	Stunning & increase chance to stun again
Elbow	7	5	1d8	–
Butt	9	10	2d5	–
Kick	11	10	2d5	Slowing (PvM)
Uppercut	13	12	4d3	Stunning
Double-kick	16	15	4d4	–
Cat's Claw	20	20	6d3	–
Jump Kick	25	25	3d9	Stunning
Eagle's Claw	29	25	7d4	–
Circle Kick	33	30	4d9	–
Iron Fist	37	35	6d6	Stunning
Flying Kick	41	35	5d8	–
Dragon Fist	45	35	6d8	Stunning
Crushing Blow	48	35	8d7	Stunning
For winners, ie kings/queens only:				
Titan's Fist	48	45	8d5	Stunning
Phoenix Claw	48	45	5d9	Slowing (PvM)

Depending on your MA skill, you have a fixed number of barehanded attacks
per round, independent of your character class, your strength or your
dexterity (unlike characters that use weapons):
(The attack number can be increased further by items like rings of extra
attacks or by magical influence like priest prayer 'Zeal'.)
Note that EA effects (like EA ring or Zeal prayer) won't work on characters
who fight barehanded without having Martial Arts skill at 1.000 or higher!

Martial Arts skill level   Attacks per round

```
--------------------------------------------------
          2                          2
         10                          3
         20                          4
         30                          5
         40                          6
         45                          7
         50                          8
```

Martial Arts users have a higher risk of being infected with Black Breath
from high undead monsters than weapon-users.
Also, they have a high risk of being badly cut if a monster uses a disarming
attack against them.

(5.4) Application of attack-affecting item mods

While item abilities such as resistances or stat boosts are always applied,
magical mods that affect attacks might not be.
Such mods are:

+to-hit, +to-dam, extra attacks, critical hits, vampiric, slays and brands.

These mods on weapons are only applied to attacks done with that particular
weapon.
Except for 'extra attacks', which generally increases your number of attacks
and will not discriminate which weapon will be used for attacking if you are
dual-wielding - both weapons always have a 50% chance each blow.

These mods on other items, like gloves or rings, will affect all weapons,
even ranged ones, and also martial arts!
Exceptions:
 - +to-dam boni will not be applied to ranged weapons, only to melee attacks.
 - Extra attacks are not applied to ranged weapons, only to melee attacks.
 - Vampirism effect will be weaker (compare table at the end of (5.13)).

(5.5) Weight of weapons and armour, weight limits

Weight of items in your inventory or equipment can have great effect on
martial artists. If you use martial arts, also see (5.3a) for more information.

Even if you're not using martial arts, there are certain types of encumberment
which may affect your character:

Weapon weight

If your melee weapon or ranged weapon is too heavy you will hardly be able
to use it, resulting in reduced attack number per round and less damage.
You will get the message "You have trouble wielding such a heavy weapon",
or for ranged weapons "You have trouble wielding such a heavy bow",
and probably your blows (or shots, for ranged weapons) will drop to 1 and
your tohit/todam values get reduced drastically.
A weapon is too heavy for you if its weight is greater than the so-called
str_hold value. Below is a table with the str_hold values, depending on a
character's strength:

         str_hold   STRength of   str_hold   STRength of

	the character		the character
4	3	45	18/40-18/49
5	4	50	18/50-18/59
6	5	55	18/60-18/69
7	6	60	18/70-18/79
8	7	65	18/80-18/89
10	8	70	18/90-18/99
12	9	80	18/100-18/109
14	10	80	18/110-18/119
16	11	80	18/120-18/129
18	12	80	18/130-18/139
20	13	80	18/140-18/149
22	14	90	18/150-18/159
24	15	90	18/160-18/169
26	16	90	18/170-18/179
28	17	90	18/180-18/189
30	18/00-18/09	90	18/190-18/199
30	18/10-18/19	100	18/200-18/209
35	18/20-18/29	100	18/210-18/219
40	18/30-18/39	100	18/220+

Armour weight (concerning magic)

Wearing armour which is too bulky gives you this message:
"The weight of your armour strains your spellcasting."
That means your mana will be (from lightly to severely) reduced from the
bulkiness of your armour. Training your 'Combat' skill can counter this effect.

To cast freely ie to have an unreduced MP pool, you may wear 15.0 to 30.0 lb of
armour (depending on your class and hence the type of magic you utilize) plus
your combat skill * 0.3 lb (per 1.000 skill). Here is a table of the classes:

Adventurer   21.0 lb
Warrior   -
Istar   15.0 lb
Priest   25.0 lb (also Corrupted Priest)
Rogue   20.0 lb
Mimic   28.0 lb
Archer   -
Paladin   30.0 lb (also Death Knight/Hell Knight)
Ranger   22.0 lb
Druid   20.0 lb
Shaman   17.0 lb
Runemaster   23.0 lb
Mindcrafter 26.0 lb (and will get penalty for head gear heavier than 4.0 lb)

So 50 points in 'Combat' would allow a paladin to wear 30.0 + (50 * 0.3) =
45.0 lb of armour parts without receiving mana penalty from being encumbered.
In general, praying is the easiest-to-use form of magic, and weaving spells
the most difficult one regarding encumberment.
Your total armour weight is the sum of the weight of any armour pieces worn
on head (helmet), body, hands, feet, and your cloak. Note that the weight of
a possibly equipped shield does not matter here (experimental).

Armour weight (concerning sneakiness/to-hit boni)

Wearing armour which is too heavy for you will reduce speed bonus from
'Sneakiness' skill and your to-hit boni received from your dexterity and weapon
class' mastery skill (eg Sword-mastery).

You will receieve a warning message, telling you:
"The weight of your armour encumbers your movement."
To move freely, you may wear 10.0 lb of armoury plus a strength-factor plus
0.6 * your combat skill. Strength factor is 0.6 * str_hold (see table above to
find your str_hold). So the top weight limit is

10.0 + 0.6 * 50 (combat) + 0.6 * 100 (str_hold) = 100.0 lb.

(Inspecting an item causing this type of encumberment would display that it
encumbers "your movement" accordingly.)

Armour weight (concerning flexibility boni and abilities)

Some special abilities depend on armour weight (including shield) too.
Those are...
 - any improvements from your 'Stealing' skill to...
    - your chance to steal successfully.
    - reducing someone else's chance to steal from you.
    - someone else not noticing you trying to steal from them.
    - noticing someone else trying to steal from you.
 - dodge chance from 'Dodging' skill.
 - critical hit bonus from 'Critical-strike' skill.
 - stabbing attacks from 'Backstabbing' skill.
 - extra parry bonus from dual-wielding two weapons. (Also see (7.11).)
 - extra blow/round bonus from dual-wielding two weapons.
 - extra +damage bonus from dual-wielding two weapons.
 - area searching for the 'Rogue' class (exclusive ability).
 - cloaking mode for the 'Rogue' class (exclusive ability).

If the armour becomes too heavy to perform those, a message will appear:
"The weight of your armour strains your flexibility and awareness."

This 'rogueish weight limit' (the skills are mostly used by rogues) is:
20.0 + Combat skill * 0.25 lb, ie max 32.5 lb (20.0 + 50 * 0.25).

IMPORTANT: If you get the above flexibility warning message, that means your
           secondary weapon is NOT APPLIED AT ALL!
           So you won't receive any boni/resistances/whatever from it, it's
           basically as if you don't have it equipped at all.

Armour weight (concerning ranged weapons)

If you wear a shield on your arm, no matter its weight and your strength, your
hit chance with shooting weapons will be reduced by this encumberment. You will
get an orange message saying
"You find it hard to aim while carrying your shield."
and a yellow '}' icon will appear in the encumberment bar.
Note that boomerangs are one-handed ranged weapons and not affected by shields.

Also, the greater your total equipped armour weight is, the more your ranged
to-hit bonus is reduced. This is a fluent, continuous process, and therefore
it's not considered an 'encumberment' per se, ie you won't see any icons in
the encumberment bar about this.

Glove encumberment (concerning magic)

Wearing gloves as a sorcerer may reduce your maximum mana points if they are
not magically enchanted, such as:
Providing 'Free Action' / increasing your mana / increasing your dexterity.

You will receive a warning message, saying:
"Your covered hands feel unsuitable for spellcasting."

Also see (3.2) at the end of the chapter, for information about the
'Encumberment status line'.

Very heavy armour and/or heavy items in your inventory may also slow you down
(slightly reduce your moving speed) if your STRength isn't very great.

(5.6) Resistances & caps, immunities, susceptibilities

Resistances & caps

Several monsters or traps can cause elemental attacks on you. These attacks
can deliver very high damage if you do not 'resist' the specific attack type.
Those 'resistances' become very important in deeper dungeons where many
monsters are able to breathe on you with devastating power.

Permanent resistances (for example if you wear a ring and an armor that both
give fire resistance) will not stack. So one item is suffient for each
resistance. There is no difference if it's a helmet or an armour.
However, a temporary resistance (by potion or spell) and a permanent
resistance can stack (NOTE: This only applies to base and poison resistance,
base ones being fire, cold, electricity and acid).
That means if you quaff a 'potion of resist heat' (temporary resistance) and
wear an armour of fire resistance (permanent resistance) fire attacks will do
only 1/3 * 1/3 = 1/9 of the original damage.
This is known as 'double resistance'.
For more information on resistance/ability stacking see (5.15).

For all attacks the following way of how the final damage is calculated
applies:
If a monster breathes, that attack often has a damage potential of 1/3 of
the monster's hit points.
This 'raw' damage will now be capped at a maximum value that varies for the
different types of attacks.
If you 'resist' that attack, the damage will be cut to further 1/3 (this
value varies for the different types of attacks).

Example:
An Ancient Red Dragon breathes fire.
It has 1500 HP. The fire breath would do approx. 500 damage.
The damage cap for fire attacks is 1200. So the value of 500 remains.
Let's assume that your character resists fire. The damage will be cut down
to 1/3 now, leaving 170 damage.
Example 2:
A Great Hell Wyrm :) breathes fire.
It has 5000 HP. The fire breath would do approx. 1700 damage.
Since 1700 is greater than the cap (1200) it becomes 1200.
Let's assume your character resists fire. The damage will be cut down to 1/3,
leaving approx. 400 damage.

Global damage cap

Breath damage is capped, the number is given in the corresponding description
and actual breath damage generally depends on the monster's current hit points.

Bolts and balls depend damage-wise on the level of the casting monster as the formulae show and is not as strictly capped as breath damage.

However, all breaths and magical attacks (such as bolts and ball spells) are subject to a global magical damage cap of 1600. Even though breaths are not strictly magical spells.
Keep in mind that susceptibility may still double that damage though, as it is applied _after_ the global damage cap. So a susceptible target could suffer up to 3200 damage.

There are four so-called 'basic resistances'. These are

Fire/Heat   These attacks can burn items in your inventory.
                       They can also damage your equipment.
                       Without resistance it can reduce your strength.
                       Fire bolts do (level/3)+(9d8) damage.
                       Fire balls do (level*7/2)+10 damage.
                       Fire breaths do HP / 3 damage, capping at 1200.
                       Immunity or double resistance helps protecting items
                       in your inventory from getting harmed (5.10), (5.15).
                       Potions of resist heat are a cheap way to attain
                       double-resistance for a short time in order to pass
                       lava streams without your inventory taking damage.

Frost/Cold   These attacks can shatter potions.
                       Without resistance it can reduce your strength.
                       Frost bolts do (level/3)+(6d8) damage.
                       Cold balls do (level*2)+10 damage.
                       Cold breaths do HP / 3 damage, capping at 1200.
                       Immunity or double resistance helps protecting items
                       in your inventory from getting harmed (5.10), (5.15).

Lightning/Electricity These attacks can destroy rings, damage amulets
                       (reducing their (+X) bonus pval) and discharge magic
                       devices, draining their charges (or energy in case of
                       rods).
                       Without resistance it can reduce your dexterity.
                       Lightning bolts do (level/3)+(4d8) damage.
                       Lightning balls do (level*3/2)+8 damage.
                       Lightning breaths do HP / 3 damage, capping at 1200.
                       Immunity or double resistance helps protecting items
                       in your inventory from getting harmed (5.10), (5.15).

Acid   These attacks can destroy items in your inventory.
                       Equipping a tarpaulin can mitigate this greatly.
                       They can also damage your equipment.
                       Without resistance it can reduce your charisma.
                       Acid bolts do (level/3)+(7d8) damage.
                       Acid balls do (level*3)+15 damage.
                       Acid breaths do HP / 3 damage, capping at 1200.
                       Immunity or double resistance helps protecting items
                       in your inventory from getting harmed (5.10), (5.15).

Note: Equipment is mostly safe, except that some weapons can take damage from coming in contact with fire, acid or water, depending on the item type.
Also, armour can be damaged by fire, acid or water, depending on its material.
Items which ignore an element, resist it, or even provide immunity against it are unaffected by any attack of that type and won't take damage.
Taking damage means that weapons will lose +dam enchantment, and armour will will lose +AC enchantment, so you can repair them again by either using the

armoury's repair service or -in tougher cases- reenchanting them.
If your character resists a specific element, the chance of any equipped item getting damaged by it is reduced. Having double resistance will reduce it even further.
Note that double resistance will completely prevent any inventory damage from the resisted element; this is especially important for characters who carry a lot of potions that they don't want to get destroyed by cold-based attacks.
If your character is immune to an element (see further down), that will completely prevent any sort of damage from that particular element for any item you carry, wield or wear (both inventory and equipment).
All artifacts are completely immune to any elemental damage with the exception of disenchantment effects, which -albeit with a low success chance- may reduce an artifact's enchantments.

Breath damage before capping is monster HP/3. Damage of these attacks is capped at 1200 (always before resistances are applied).
If you resist them, the damage will be cut to 1/3. If you are susceptible to them, like Ents to fire, you will take twice the damage! This also applies for aura attacks like hitting someone who wears a cloak of immolation.
To prevent side-effects of the attacks on your inventory from occurring you will need the according immunity! Resistance is only sufficient to protect your equipment, not your inventory.
While wands and staves can be destroyed by according elemental attacks, rods cannot be destroyed but only discharged (see elemental attack list above).

Semi-high resistances

Poison	Poison resistance doesn't belong to the basic resistances but to the high resistances, yet is also very essential already from the early stages of your character's life on. If you resist poison you will not only take just 1/3 of the poison damage but also be protected from poisoning effects. Breath damage before capping is monster HP/3. Poison breath caps at 800. Stinking clouds, which are small poison balls, inflict 12d2 damage.
Unbreath	A special type of poison, castable by mages. This one will deprive the air of all oxygen, thereby also deal damage to otherwise poison-immune monsters. The only monsters immune to this are those that do not require to breathe, which means undead, greater demons, angels and nonliving constructs.

Make sure that you have the basic resistances as soon as possible, and poison resistance before going into deeper Mordor. Also, get 'Free Action' before going as deep as about -1000 ft or deeper since many monsters can paralyze you.

There are also five minor resistances:

Fear	While you're afraid you won't be able to attack a target in close combat.
Blindness	You cannot read scrolls or books while you're blind. Blindness can be caused directly by a blindness attack or indirectly by light or darkness attacks if you don't resist those. You still can use magic staves, rods or wands and quaff potions. Quaffing a potion of Healing, Curing or Cure Critical Wounds will remove the blindness.

```
Confusion        While confused you cannot move, shoot or fight straight.
                 Further, you're unable to read scrolls or books.
                 However, you still can use staves, wands and rods.
                 Quaffing a potion of Healing, Curing or Cure Serious/Critical
                 Wounds will remove the confusion.
                 Resisting confusion or chaos will lower damage to 5/7..5/12.
                 Breath damage is monster HP/6. Confusion damage caps at 400.
                 Confusion resistance is covered by chaos resistance, so if you
                 already resist chaos then you don't need any more items that
                 give confusion resistance.
                 (Monsters that have the NO_CONF flag will resist somewhat and
                 suffer less damage.)


Free Action, aka...
Paralysis        Paralysis can be caused by bashing doors, lack of food, by
                 traps and by monsters. Against the latter two effects you can
                 become immune by equipping a 'Free Action' item. You should
                 become immune to paralysis before descending below 1000 ft.


Hold Life        This will provide some protection against experience drain:
                 It gives you a chance to resist experience-draining effects
                 (eg from attacks or potions), either resulting in no drain
                 or at least reduced drain if the roll is successful.
                 it won't help against experience drain inflicted by items you
                 equipped though (ie against the DRAIN_EXP item flag).


Note: 'Feather Falling' reduces damage taken from gravity attacks, although it
is technically not a resistance. 'Levitation' includes 'Feather Falling', so if
you have a source granting you levitation then you don't need another one for
feather falling. (Same as chaos resistance also gives confusion resistance.)



Further, there are several high resistances:
-------------------------------------------
(Poison          was described above, at the end of the basic resistances.)


Water            Water resistance is rare (an *ID*ed item will say
                 'it provides resistance to unleashed water').
                 Water attacks can stun and confuse you if you don't resist
                 them and usually do a lot of damage.
                 Resistance will cut damage to 1/3. (For players in aquatic
                 form this gets overridden by its cut down to 1/4 instead.)
                 Resistance, immunity or aquatic form will also reduce or
                 prevent the chance of harm to items in inventory or
                 equipment and completely prevent stun and confusion effects
                 from water-based attacks.
                 Wearing a tarpaulin also protects items in your inventory.
                 Water bolts do (10d10)+level damage.
                 Water balls do 50+(1...[level*5/2]) damage.
                 Note: The confusion effect can be prevented by confusion
                 resistance, and the stun effect by sound resistance.

Sound            Sound attacks do less damage but can stun you or even knock
                 you out so you will die as if you were paralyzed. Free Action
                 won't help you then.
                 Resistance will cut damage to 5/7..5/12.
                 Damage is reduced by further 50% if bio-feedback is active.
                 (Bio-feedback is activated if a Draconian eats a firestone and
                 gets the 'adrenaline' message. See (5.9) for firestone
                 details.)
                 Sound resistance will protect you from stunning effects.
```

Breath damage is monster HP/6. Sound breath caps at 400.
                    (Monsters that have the NO_STUN flag will resist somewhat and
                    suffer less damage.)

Shards   Resistance will cut damage to 6/7..6/12.
                    Damage is reduced by further 50% if bio-feedback is active.
                    (Bio-feedback is activated if a Draconian eats a firestone and
                    gets the 'adrenaline' message. See (5.9) for firestone
                    details.)
                    Shard resistance will protect you from cuts. If you don't have
                    it you might get nasty cuts that make you bleed over time.
                    Breath damage is monster HP/6. Shard breath caps at 400.

Nexus   Nexus attacks can have extremely nasty side-effects if you
                    don't resist them. Those are
                    -Teleport you randomly.
                    -Teleport you towards the monster.
                    -Teleport you a dungeon level higher or lower.
                    -Swap two of your six stats randomly!
                     ("Your body starts to scramble")
                     This change is permanent and there is no remedy against it
                     except for getting hit by more nexus deliberately and hoping
                     for a 'good' scramble result eventually.
                     If you have maximized your stats with stat potions, the stat
                     swapping will not affect you anymore, since it does not swap
                     the race/class boni, but just your base stats. So while very
                     inconvenient at first, in the long run (ie as soon as you
                     maxed all stats to 'bronze' via potions) the scrambling will
                     have no negative effect on your character's stats at all
                     anymore as they internally will all end up at <18/100> (before
                     then being modified by race/class/item boni and mali).
                     If you want to get re-scrambled by another player's nexus
                     attacks instead of a monster, you must not be in a special
                     event location and your character mode must not be 'PvP'.
                     Use a blood bond scroll to become hostile so spells will hit.
                    -Teleports items out of your inventory, to random locations on
                     your current dungeon level / world sector.
                     ("Your backpack starts to scramble")
                    Resistance will cut damage to 6/7..6/12.
                    Breath damage is monster HP/3. Nexus breath caps at 250.
                    If Nexus hits items on the floor, these too will get teleported
                    around randomly.

Chaos   Chaos attacks can also have nasty side-effects if you don't
                    resist. These are:
                    -Confuse you.
                    -Let you hallucinate.
                    -Drain some experience. Resisting 'Nether' will also prevent
                     this. Having 'Hold Life' will also provide some protection
                     against life draining.
                    Resisting chaos will also make you resist confusion attacks.
                    Resisting chaos will prevent hallucination from certain mind
                    blast attacks.
                    Resistance will cut down damage to 6/7..6/12.
                    Breath damage is monster HP/6. Chaos breath caps at 600.
                    Raw chaos invocation (chaos ball) does (level*4)+(10d10) dam.

Light   Light effects can blind you if you don't resist it.
                    Resistance will cut damage to 4/7..4/12.
                    If you are mimicking a monster that is susceptible to light
                    you will suffer double damage from attacks.
                    Breath damage is monster HP/6. Light breath caps at 400.

('Starlight' is no different from light, just often stronger.)

Darkness   Darkness effects can blind you if you don't resist it.
                 Resistance will cut damage to 4/7..4/12.
                 Breath damage is monster HP/6. Darkness breath caps at 400.
                 Darkness Storms (balls) do (level*5)+(10d10) damage.

Nether   Nether is kind of 'the element of undead' – most higher level
                 undead creatures will have a nether attack of some sort.
                 Resistance will cut damage to 6/7..6/12 and prevent all life
                 draining (experience loss) from nether attacks.
                 Breath damage is monster HP/6. Nether breath caps at 550.
                 Nether bolts do 30+(5d5)+(level*3/2) damage.
                 Nether balls do 50+(level*4)+(10d10) damage.
                 If you lack nether resistance, having 'Hold Life' ability can
                 at least offers some protection from experience loss.

Disenchantment   This attack does massive damage and can also disenchant your
                 equipped items, lowering their to-hit/to-dam/to-ac bonus!
                 It can also destroy ethereal ammunition.
                 Resistance will cut damage to 6/7..6/12 and prevent
                 disenchantment of your equipment.
                 Breath damage is monster HP/6, it caps at 500.
                 Disenchantment bolts do 25+(4d5)+(level*3/2) damage.
                 Disenchantment balls do 40+(level*4)+(6d10) damage.
                 If disenchantment hits items on the floor, it can even reduce
                 their magical (+X) pval bonus.
                 Artifacts have a chance to resist disenchantment.

Psi   Psionic damage is intrusion via mindcraft that deals damage to
                 your hit points AND a fraction of that amount also to your
                 sanity and can cause confusion as side effect if player has no
                 confusion resistance and no psi resistance.
                 Resistance to psi effects will also reduce psi damage received
                 to 4/5...4/9 per psi resistance factor.
                 The mindcrafter class gets all psi damage it receives halved
                 (stacking with the damage reduction from psi resistance).
                 If you run out of sanity, your character dies PERMANENTLY even
                 if of 'everlasting' mode! It's erased same as no-ghost mode.
                 Also see (7.6) for more details on insanity in general.

                 There are no items that grant psi resistance. The only way to
                 gain it is being lucky on saving throw roll (provided your mind
                 is NOT opened (via 'p' key)) or a "willpower" (Mindcraft spell)
                 roll or being under the effect of Berserk which always instills
                 iron determination.
                 These 3 psi-resisting factors stack and will all help to reduce
                 the damage both on the mind (sanity) and body (hit points).
                 However, the resistances can also get reduced/canceled out if
                 the player currently suffers status effects, such as confusion,
                 being stunned, hallucinations or fear, while fear will only
                 reduce your psi resists if you fail an additional saving throw.
                 The other status effects are guaranteed resist-counters.

                 If you do have psi resists, having telepathy (full ESP) will
                 further reduce damage to 4/9...9/9, while if you do NOT have
                 psi resist factors (or if they got canceled out by bad status
                 effects) having telepathy will actually INCREASE damage you
                 take to 7/6...12/6 (so it could double the damage if unlucky)!

                 The resulting sanity damage will finally be reduced if the
                 player has insanity-reducing powers, see (7.6) for a list.

```
            If the psi attack came from another player, it will only affect
            your hit points but not your sanity.


    Irresistible/extremely powerful damage types:
    ---------------------------------------------
    Force          Pure force impact (BR_WALL). Raw damage is monster HP/6.
                   Force impact (breath only) is capped at 200 and irresistible.
                   If you lack sound resistance you will get stunned.

    Inertia        Inertia attacks will slow you down a lot. There is no 'Inertia
                   resistance' but 'Free Action' will slightly reduce the
                   slowdown duration.
                   Damage (breath only) is monster HP/6 and caps at 200.

    Gravity        These attacks have very annoying side-effects:
                   -Teleport you randomly.
                   -Slow you down.
                   -Stun you if you don't resist sound.
                   It's impossible to resist gravitation. However, having
                   'Feather Falling' will reduce the damage your body takes from
                   being thrown around by the shockwave and hence cut the damage
                   to 6/7..6/12.
                   Damage (breath only) is monster HP/3 and caps at 150.

    Holy Orb       This purely holy effect will deal double damage if you are
                   'evil' and half damage if you are 'good'.
                   If you are a (non-corrupt) priest you will take no damage.

    Holy Fire      Same as Holy Orb above, except that:
                   If you are immune to fire the damage will also be cut to half,
                   and if you are not immune then having fire resistance will cut
                   damage to 3/4 (once for permanent and once for temporary
                   resistance, stacking to 9/16).
                   Instead being susceptible to fire will increase damage to 4/3.

    Hellfire       This evil element will deal double damage if you are 'good' and
                   reduce damage to 3/4 if you are 'evil'.
                   If you are immune to fire the damage will also be cut to half,
                   and if you are not immune then having fire resistance will cut
                   damage to 3/4 (once for permanent and once for temporary
                   resistance, stacking to 9/16).
                   Instead being susceptible to fire will increase damage to 5/3.

    Mana           Mana is pure magical energy. There are only rumours
                   about items that provide resistance against it.
                   Resisting it will cut damage to 6/7..6/12.
                   Breath damage is monster HP/3, breath caps at 350. Only very
                   few monsters (mostly uniques) can breathe mana.
                   Mana bolts do 50+(1...[level*7/2]) damage.
                   Mana storms (balls) do (level*5)+(10d10) damage. Beware!

    Time           Time is pure temporary distortion. There are only rumours
                   about items that provide resistance against it.
                   Time attacks can have very nasty side effects:
                   -Drain experience (Hold Life won't help).
                   -One of your stats can be lowered (resistance will reduce the
                    amount; for runespell backlash damage in particular resistance
                    will even prevent all drain effects completely).
                   -Drain all your stats (resistance will prevent this).
                   Resistance will cut damage to 6/7..6/12.
```

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                    Breath damage is monster HP/3. Time breath caps at 150.

Meteor              This is an irresistible attack of pure impact.
                    Sound resistance will prevent stun effect.

Disintegration      This is an irresistible attack of raw destruction.
                    Damage (breath only) is monster HP/3, capping at 300.

Annihilation        Deals a percentage of your current hit points as damage points,
                    caping at 400 damage, but after applying the cap is always
                    randomly reduced further down to 6/7...6/12.


Combined damage types:
----------------------
Ice                 Ice attacks combine shard and cold damage.
                    Ice damage (bolt only) is (6d6)+monsterlevel.
                    Ice damage consists of 60% cold damage and 40% shards damage.

Plasma              Plasma attacks combine electricity (25%), sound (25%), and most
                    of all immense heat (50%).
                    The usual resistances, susceptibilities or immunities for fire,
                    electricity and sound apply as usual if you have them.
                    Plasma also has a strong stun effect if sound resistance is
                    missing, making for example plasma hounds highly dangerous.
                    Breath damage is monster HP/6. Plasma breath caps at 150.
                    Plasma bolts do 10+level+(8d7) damage.

Thunder             This is a lightning strike and deals:
                    1/3 electricity damage, 1/3 sound damage, 1/3 light damage.
                    The electricity damage is reduced by resistances or immunity
                    as usual, see 'Electricity' further above.
                    Having sound resistance cuts the sound damage to 5/7...5/12.
                    Having light resistance cuts the light damage to 4/7...4/12,
                    while light susceptibility doubles the light damage.
                    If you don't resist sound you will get stunned,
                    if you don't resist light or blindness you will get blinded.

Radiation
Nuke
Toxic Waste         This is a poisonous attack (player suffers pure poison damage)3
 ('Nuke')           that may have acidic effect on your inventory (inventory may
                    get destroyed as if you were hit by acidic attacks).
                    If you resist poison
                    - you will just take 2/5 of the damage
                    - you will be protected from being poisoned
                    - your equipment will be safe from acidic damage.
                    Breath damage is monster HP/3 and caps at 800.
                    Nuke balls (radiation balls) do (level*3)+(10d6) damage.

Rocket              Rockets combine fire, shard & sound effects and can also damage
                    your inventory. Rockets do insane damage if unresisted:
                    Rocket damage is monster MaxHP/4, it caps at 800.
                    Shard and sound resistance will lower damage by 1/6 each,
                    fire resistance will lower damage by 1/5, fire immunity by
                    1/4 (overriding fire resistance). These reductions stack (as in
                    they are consecutively applied to the damage).
                    Shard resistance will prevent cuts, sound resistance will
                    prevent getting stunned.
                    (Technically, rockets are similar to breath attacks.)

Detonation          Same as rocket, usually caused by potions of detonations.
```

```
Inferno          Same as rocket/detonation, except it does not destroy walls,
                 usually comes as 'cloud' type effect, aka lasting for a while.


Havoc            A terrible mixture of wrecking inferno, blasts of uncontrolled
                 mana and waves of raw chaos.
                 It usually consists of two phases, an initial blast of high
                 damage and a lingering cloud effect of lesser damage.
```

There is also a special 'Teleportation Resistance', giving the self-knowledge
line: "You resist incoming teleportation effects.".
Having this will give the character a good chance to not be affected by most
teleportation effects from traps or monsters (teleport-away and teleport-to).
Nexus-related teleportation is also affected by this, gravity however is not.

Immunities

Players can become immune to the basic elements, water and poison by wearing
items (for example dragon scale mails of the corresponding colour) or by
transforming into a monster shape that carries the according immunities
(see (7.7) about mimicry details).
If a player is immune to an element, (s)he won't take any damage from those
attacks nor be affected by any side-effects and all items in the player's
inventory and also all equipped items are completely protected from damage
from that element.
Example: Wearing the unique cape 'Ocean Soul' which as a special feature
provides water immunity makes the player take 0 damage from a water bolt attack
and also protect him from the stun+confuse effect of water bolts.
(It won't protect him from the stun/confuse effect of other types of attacks
though, for example a sound or confusion breath.)

Susceptibilities

Some monsters and players are susceptible against certain elements. For example
fire hounds are susceptible against cold attacks and Ents are susceptible
against fire attacks.

Some susceptibilities can only be acquired by mimicking a monster that has
those. Here is a table of all susceptibilities players can get affected by:
```
 -Fire          Ents
 -Cold          By mimicry only
 -Acid          By mimicry only
 -Electricity   By mimicry only
 -Light         Dark-elves, Vampires
 -Evil          Enlightened trait of Maiar
                (Currently only one damage type exists that deals extra damage
                 to good-susceptible characters: Hellfire)
 -Good          Vampires, Corrupted trait of Maiar
 -Life          Vampires
```

Most of these are self-explaining, but some seem obscure, here is what you get
hurt from when susceptible to one of the three obscure ones:

```
 Evil:  -Double damage from holy based attacks (holy orb, holy fire)

 Good:  -Double damage from hellfire attacks;
        -eating Lembas;
        -reading blessing or PfE scroll;
```

```
        -using dispel evil staff;
        -hostile dispel evil effects;
        -activating true artifacts Ingwe, Carlammas, Fundin Bluecloak, Himring


 Life:  -Eating Lembas or sprigs of Athelas; quaffing potion of life;
        -reading blessing or PfE scroll;
        -using holiness staff;
        -cleansing cloud spell, soul curing spell;
        -hostile dispel undead effects;
        -activating the true art Soul Grip;
        -equipping non-cursed items with strong anti-undead powers will apply a
         mana point drain effect if it's head gear or gloves, otherwise a it
         will apply a hit point drain effect.


Lastly there is an implicit anti-demonic susceptibility (similar to the anti-
unded life-susceptibility described above) of demonic forms (mimicry) and
the class 'Hell Knight' which counts as demonic:
        -Equipping non-cursed items with strong anti-demon powers will apply a
         mana point drain effect if it's head gear or gloves, otherwise a it
         will apply a hit point drain effect.


Branded physical attacks vs monsters:
Susceptibility of a monster will result in a doubled multiplier for
branded attacks. Example: If the player hits a Cold Hound with a
fiery broad sword (2d6) the Cold Hound will receive 2d6 * 4 damage
instead of 2d6 * 2 (usual brand multiplier for melee weapons).
Also see (5.3) for a table of brand multipliers.


Magical attacks vs monsters:
Susceptibility of a monster will result in double damage for the
according elemental attacks (ie cold ball vs fire hounds).


Magical attacks vs players:
If a susceptible player without resistance or immunity is hit by the according
elemental damage type, the damage will be doubled! The susceptibility is
applied after the global magical damage cap of 1600, so the player could in
theory take up to 3200 damage.


Branded melee attacks vs players:
Some monsters attack with elemental-branded melee attacks. These are treated
depending on the attack method, see (6.5): The attack method will determine
how much of the damage is treated as elemental part and how much is physical
part. The elemental part will accordingly be doubled if the player is
susceptible to it.


Having both resistance and susceptibility to an element:
Resistance or immunity will not just cancel out the according susceptibility
but actually undo it. That means you will not take more damage on a character
that has both, susceptibility and resistance to an element than on a character
that has just the resistance but is not actually susceptible.


So one of the first things to do as an Ent is to visit the magic shop and buy
a ring of fire resistance, or any druid ego monster or later on arch-vile will
give you a hard time.


(Branded physical attacks in pvp are not influenced by susceptibilities.
Also see (6.4) for details about melee attacks and melee damage caps.)



(5.7) Qualitative classification, identifying & selling items
-------------------------------------------------------------
```

Items are classified by
-a basic item type
-a simple magical enchantment (to hit-chance, to damage, to armour class)
-an ego power (some items even have two ego powers at once),
 (some examples: resistances on armours, elemental brands on weapons,
 enhanced brightness on light sources. The item carries the names of its
 ego powers. For example an 'Acidic Long Sword of Gondolin' has been
 blessed with two ego powers: 'Acidic' and 'Gondolin'. For more information
 about ego powers see (8.4) Spoiler Files).
 In general, an item may have up to two ego powers: A prefix and a suffix.
 In the above example, "Acidic" is the prefix ego power and "of Gondolin" is
 the suffix ego power. Items with two ego powers are dubbed "double-egos".
-sometimes you may find an artifact which can have quite a bunch of
 different powers combined! Artifacts can be recognized by them carrying
 a name. Example: The War Maul 'Turmil' or The Whip of Gothmog.
 There are two types of artifact, true (also called "static") artifacts which
 are unique-existant and time out after a while, and random artifacts which do
 not have such limitations. All true artifacts are predefined and listed in ~6.
 (See (5.9b) for more information about artifacts.)

If you find an item, it's 'unidentified'. That means you see only the
basic item type.
Example:
A Whip {+,?} (1d6)
The ? indicates that you don't know yet which level is required to wield
this item. You have to identify the item to find out more about it.
(The (1d6) means that this weapon has one 6-sided die rolled to determine
its damage afflicted to your target.)

Assuming you identify it you could get one of the results below:

Example 1:
A Whip {+,1} (1d6) (+0,+3)
This is a magical whip. Magical, because its damage is enchanted to +3.
It doesn't possess any further special abilities.

Example 2:
A Fiery Whip of Gondolin {+,24} (1d6) (+8,+13) (+3)
This is an ego-weapon ('of Gondolin') with a fire brand ('Fiery'). The
base weapon type is a whip which makes it belong to the blunt weapons.
Its to-hit and to-damage are magically enchanted to +8 and +13.
Gondolin weapons increase strength and constitution (here +3).

Ego-items or excellent magical items often have varying abilities.
For example a Gondolin-weapon _can_ have HOLD_LIFE, a high resistance,
or increase your dex. It doesn't _have to_, however. Some Gondolin-Weapons
have different abilities than others. To find out the complete powers of an
item it can be neccessary to *identify* it.
Identify (same as *Perception*) reveals the complete ability list.
You can check the complete list of any item listed in a store by pressing 'x'
to 'Examine an item'. For items in your inventory or equipment it is the 'I'
key instead. To get a full list of an items magical abilities outside of stores
requires that you already *identified* the item or bought it from a shop.
Items that are bought from a shop are always automatically *identified*.
Some shops offer an *identify* service (see (4.5a)), for a fee, of course.

Ego items (sometimes) and random artifacts (always) have powers that you cannot
be certain about unless you *identify* the item.
If you inspect (shift+i) the item when it might still have unknown powers, you
will get a message at the bottom of the inspection screen, telling you so:
"It may have hidden powers."
In this case you should always go and *identify* it, not just to find out

whether or not it turns out to indeed have further powers, but also because its
selling value will also increase greatly in case it does!

If you want to look up what certain special items can/cannot do, see the
spoiler files section (8.4) or further explanations in (5.8) and (5.9).

If you sell an item to a shop the offer you will receive depends on
the following:

Item is not identified at all -> the offered cash will equal the value of the
                                 basic item type, eg 300 Au for a long sword
                                 or 20 Au for an unknown potion.

Item has been pseudo-identified -> shops won't buy items that have a bad
                                   pseudo-identification. 'average' items will
                                   sell for the value of the basic item type.
                                   good/excellent/special items will sell for
                                   their basic value too so you better
                                   identify them to get more money for them!

Item has been identified -> the shop will pay you fully for all those boni
                            that are either very obvious (like +STRength or
                            Extra Attacks or Life/Mana) or which are always
                            granted to this kind of ego item (for example
                            'weapons of *Slay Evil*' always give 'ESP evil').

                            However, the shop won't offer money for 'hidden'
                            abilities like resistances or ESP which aren't
                            obvious and which are randomly bestowed upon
                            this type of ego item. (Most ego items have
                            one or more random powers!)
                            To make the shop pay for these unknown powers
                            too you'll need to fully identify the item,
                            this is called *identifying* (note the asterisks).
                            To do this, there are scrolls of *Identify*,
                            staves of *Perception* as well as the spell
                            'Greater Identify'.
                            If your item turns out to lack any hidden powers
                            you wasted the *Identify* scroll, but that's not
                            a big deal.

Item has been identified and is a true artifact -> the shop will pay a fixed
                                                   price which is predefined
                                                   for each true artifact.
                                                   You don't need to *ID* it.
                                                   Note that you can actually
                                                   look up all true artifacts
                                                   by pressing: ~ 6

Item has been identified and is a randart -> Shops will usually offer between
                                             10,000 and 15,000 Au for unknown
                                             randarts, but never more than the
                                             item is really worth. You should
                                             always *identify* your randarts
                                             to discover all their hidden
                                             abilities, so shopkeepers will
                                             pay a lot more.

Item has been identified and is cursed -> the shops never buy cursed items.
                                          That might change if you uncurse
                                          it and if the item hasn't only bad
                                          (negative) boni on it.

Shop prices in general may slightly vary depending on the shop owner's race
and your character's race.

Sometimes an item turns out to be an artifact!
See (5.9b) for more information about artifacts.

Pseudo-ID:

If a player holds an unidentified item long enough in either inventory or
equipment, he/she might get a 'feeling' about it, telling about its quality.
This process is called 'pseudo-ID', short for 'pseudo-identification'.
If a player pseudo-IDs an item, the 'feeling' will be appended in { }
brackets to the item name.

The feeling does not necessarily mean that the item is "good for the player's
character" but simply refers to the value of the item ie when it's sold to
shops or bought from them. So some 'good' items might even have undesired
effects on the character.

Example: A typical feeling is 'good'. Let's assume you are wielding an
unidenified whip and suddenly pseudo-id kicks in randomly. The whip is actually
enchanted, meaning it has some kind of positive +hit,+dam bonus, which makes
it 'good'. You will then receive this message:

"The Whip {+,?} you are attacking enemies with is good.".

And the item in question will be auto-inscribed accordingly, provided it was
not already inscribed, in which case it will not gain a pseudo-id inscription:

A Whip {+,?} (1d6) {good}

Since actively handling an item will make it more likely for you to discover
its qualities, equipped items actually have a much higher chance to get pseudo-
identified than items in your inventory.

In general, training any of these four skills will make pseudo-id in that
particular field happen faster ie more frequently, and at certain skill levels
also make the results more distinguished so you receive additional, more
fine-grained feelings:

- Training 'Combat' will improve pseudo-id of weapons, armour, boomerangs,
  digging tools. It also has a (much smaller) chance of pseudo-id'ing
  ranged weapons and ammunition.
  Training it to at least 10 will result in more detailed pseudo-ID'ing,
  which distinguishes between 'good', 'excellent' and 'special', and also
  between 'cursed' and 'terrible'. Also you can pseudo-id unenchanted items
  as just 'average' now.
  When trained to 30 you will also be able to pseudo-id ranged weapons and
  ammunition as frequently as weapons and armour.
  When trained to 40 you can pseudo-id curses on any items.

  Combat skill is the most powerful skill regarding pseudo-identification, as
  it encompasses the widest range of items affected.

- Training 'Archery' will improve pseudo-id of ranged weapons and ammunition.
  Training it to level 10 will allow the same distinguishment as for 'Combat':
  Instead of just 'good', ranged weapons and ammunition are now perceived as
  'excellent', 'special', 'cursed' or 'terrible'.

- Training 'Magic' improves pseudo-id of magic devices (wands, staves, rods),

rings, amulets, mage staves, potions and scrolls:
At level 10 you get more detailed feelings such as 'excellent' instead
of just 'good', and sometimes 'average' or for items with negative effects
outright 'bad'.

- 'Trapping' improves pseudo-id of trap kits and ammunition.
  Training it to level 10 will allow the same distinguishment as for 'Combat':
  Instead of just 'good', ranged weapons and ammunition are now perceived as
  'excellent', 'special', 'cursed' or 'terrible'.

- 'Health' training will improve pseudo-id of food (mostly mushrooms).
  Training it to at least 10 will result in more detailed pseudo-ID'ing,
  which distinguishes between 'good', 'excellent' and 'special'.

Items may display the following pseudo-ID tags:

-Basic items, non-magical: {average}
-Valuable / enchanted items   {good}
-Very valuable items (often ego) {excellent}
-Artifacts (random & static)   {special}
-Cursed artifacts / Stormbringer {terrible}
-Cursed items   {cursed}
-Harmful items (but not cursed)   {bad}
-Useless or very cheap items   {worthless}

'Terrible' doesn't need to mean useless. Some cursed artifacts can be very
powerful, rings of power dropped by Nazgul especially. Also, heavily cursed
items, including artifacts (and excluding weapons of nothingness) will flip
their negative values into positive ones when equipped by a true vampire (ie
excluding mimicked ones) or hell knight (again excluding mimicry forms), or
by a corrupted priest who has Blood Sacrifice active.
Note that this flipping can sometimes fail for random artifacts though!

Again - if you want to look up what certain special items can/cannot do, see
the spoiler files section (8.4) or further explanations in (5.8) and (5.9).

(5.7a) Types of identification

There are different stages and types of identification:
a) pseudo-indentification.
   This gives you one of the basic feelings like {good}, described above.
b) identification via ID (eg by scroll, staff or shop service (see (4.5a)) -
   or from trying to use the item, if your character is able to observe any
   result, in which case it might yield some experience even):
   This actually does two types of identification!
   1) It identifies the magical properties of an item, such as
      +hit, +damage, +ac, names of ego powers or artifact power.
      These values are then seen by any player who looks at the item after
      it has been identified.
   2) It identifies the flavour of an item (if it is a flavoured item) for
      the particular player who identifies it.
      Flavours are prefices in the base item name, in particular:
      -potion colours
      -scroll titles
      -ring/amulet materials
      -magic device materials
      So if you identify a 'clear potion' you will get to know that it's a
      'clear potion of water'. However, this flavour is now only know to you.
      Other characters who have not yet identified a clear potion on their own
      will still not know that it's a 'clear potion of water'.
c) identification via *ID* (eg by scroll, staff or shop service (see (4.5a))):

This is the same as ID but additionally reveals all details of all ego- or
artifact powers the item has.
This can lead to an increase in price if some of those powers were not
considered obvious, in which case stores wouldn't pay for them when you sell
the item. Non-obvious powers are those that are randomly occurring (those
don't exist on true artifacts).

Note: There are certain effects that can make your character lose his knowledge
      of items, which corresponds to 'unindentification' of types a) and b)1)
      and also loses the additional knowledge gained from c) in the list above.
      The flavour knowledge as described in b)2) is always preserved though.

(5.7b) The EASY_KNOW flag

Items that do not have any random mods, enchantments or abilities on their base
version possess the EASY_KNOW flag.
This flag means that the item will not need to be identified if it doesn't have
any special powers (ego powers/artifact). Example:

Most items don't have EASY_KNOW flag and look like this when you find them:
Dagger {+,?}   <- the question mark, hiding its level requirements, indicates
                   that you don't know if it's got special powers or not,
                   until you identify it.

Light sources are among those items that have EASY_KNOW flag and when you find
one it will look like either one of these:
Brass Lantern {+,3}   <- you know right away that this lantern has NO special
                         powers, because it shows the level requirements.
Brass Lantern {+,?}   <- you know right away that this one MUST have special
                         powers, because it masks the level requirements.

So whenever you find a light source with '?' for level requirements, make sure
to pick it up and identify it, it will have special powers!

More examples:
-Rings of Resist Fire have EASY_KNOW flag, because they cannot have any random
 properties.
-Rings of Protection do not have EASY_KNOW, because they come with a random +AC
 enchantment, so you need to identify it to find out.
-Why do Amulets of Anti-Teleportation come with '?' for level requirements,
 even though they do not have any enchantments or special powers? Because they
 have one: They can actually be cursed sometimes, this counts as random special
 power too!
-Note that shields have EASY_KNOW flag too, so make sure to pick up any shield
 that shows a '?' for level requirements, it might turn out very valuable.

(5.8) Special abilities of items

FEATHER ('It makes you fall down gently like a feather.')
        Feather Falling...
        Prevents you from slipping on icy floor.
        Lets you float down gently if you accidentally stumble into trap doors,
        pits or chasms, preventing any fall damage, including inventory damage.
        Enables you to cross 'dark pits' terrain type (see (4.4)) which is a
        very common feature in the dungeon 'Paths of the Dead'.
        Lets you resist gravitation damage somewhat.

LEVITATE
        ('It allows you to levitate.')
        Levitation implicitly grants Feather Falling too, so you get all of

the boni listed above for FEATHER, and additionally...
Allows you to cross over water areas very swiftly and without drowning
or your inventory or equipment taking damage.
Lets you cross over rubble.
Enables you to hover high enough to pass trees and bushes easily.

XTRA_SHOTS
('It fires missiles excessively fast.')
This ranged weapon can fire an extra shot per round, see your number of
shots per round go up in 'C' character overview screen.

For trap kits, the number of shots they fire can actually increase by
more than one, depending on their pval (the number in parentheses, for
example '(+2)' would fire 2 extra shots).

XTRA_MIGHT
('It fires missiles with extra might.')
This ranged weapon fires more damaging shots: Its damage multiplier is
increased by 1 above the usual multiplier for this weapon type.

For example a Long Bow of Extra might would show a (x4) multiplier,
although Long Bows usually have a (x3) multiplier.
Note that the multiplier may also affect the maximum shooting range.

MANA ('It affects your mana capacity.')
For istari and runemasters, this Will increase your total mana points
by +x0%. Example: Gloves of the magi (+3) increase your mana by 30%.
For other classes, the increase will be a bit smaller.

MANA items _add_ to each other, they aren't multiplied.
MANA affects your complete mana pool, including the additional MP
(mana points) a character gained from 'Magic' skill, except for the
mana added by training the Mimicry skill above 35.

LIFE ('It affects your hit points.')
Will increase your total hit points by +x0%. Example:
Sword of life (+2) increases your HP by 20%.

LIFE items _add_ to each other, they aren't multiplied; so for
example two weapons that grant +1 LIFE each will result in a total
of +2 LIFE aka +20% HP.
The maximum total +LIFE bonus a character can achieve is +3 (cap)
ie a +30% HP bonus.

For mimicry users, the +LIFE effect might be less since their HP in
player form or monster form might be low. The +LIFE isn't applied
to mimics' final HP but the lower base HP and this gain can be
further reduced somewhat if the monster form has significantly more
HP than the base player form.

LIFE affects almost your complete hit point pool, including the
additional HP a character gained from 'Health' skill.
It does not affect temporary HP boosts from Heroism or Berserk,
and it also does not affect the HP boni gained as Corrupted Maia
or from training the 'Nature' school.

+LIFE on randarts will (depending on server options, see ~i in-game)
usually only affect player characters who are royalty ie winners who
have beaten Morgoth and hence have a violet coloured name in chat.

AGGRAVATE ('It aggravates nearby creatures.')
Wakes up all monsters in whose radius of awareness you are, but at

least all monsters in radius 50. It also increases any monster's radius
                of awareness to 50 if it was actually smaller than that.
                (Does not haste them unlike scrolls, shriek ability, traps or /scream
                command do, compare (5.9)).

    REGEN   ('It speeds your hit point regeneration.')
                Your base HP regeneration speed will double.

    REGEN_MANA ('It speeds your mana recharging.')
                Your base MP regeneration speed will double.

    DRAIN_MANA ('It drains your magic')
                Slowly drains your MP over time down to zero.
                Warriors and archers are not affected as they don't have any MP.

    DRAIN_HP ('It drains your health')
                Slowly drains your HP over time down to zero, but you cannot actually
                die from this as it will stop at zero, and a character is still alive
                at that point, as death occurs when your HP drop _below_ zero.
                For more information see (4.11b).

    DRAIN_EXP ('It drains your life force')
                Your experience points are drained in random intervals. This effect
                actually drains your maximum XP too, so it cannot be restored!
                It will however stop at the level threshold, so it will not delevel
                you. BUt if your XP happen to fall below the threshold (ie from some
                other attack/effect you suffer) the DRAIN_EXP effect will kick in again
                and further drain your exp down to the next level threshold.

                This effect stacks with diminishing returns, so eg wearing two items
                that drain exp will drain less than twice the amount one item drains.
                While in town areas (that means dungeon towns, normal towns and the
                surrounding housing area) the drain effect will be on hold!
                For more information see (4.11b).

    HOLD_LIFE ('It provides resistance to life draining attacks.')
                Hold Life gives you a chance to resist the experience-draining effects
                from attacks or potions, either resulting in no drain or at least
                reduced drain if the roll is successful.
                Does not help against DRAIN_EXP item flag.

    LUCK ('It affects your luck.')
                If you are lucky, your chance to find better items increases.
                Luck caps at 40 (and -10 downwards), having higher bonus won't help any
                more. The higher your luck is, the more diminishing is the effect of
                increasing it even more.

                Find 'better items' means that you have a higher chance to get good or
                great items instead of normal (ie unenchanted) items when killing
                monsters or find an item from digging.
                'Good' means that an item has enchantments to hit-chance, damage or
                armour class, ie (+to-hit, +to-dam) and [+to-ac]. How much exactly it
                has isn't affected by luck (well, it is by your personal ooc luck in
                real-life I guess :-p).
                'Great' means that an item has ego powers or is an artifact. Luck does
                not affect how great its ego powers or artifact abilities are though.
                Luck has NO effect on 'acquirement', 'artifact creation' or on items
                you obtain from chests.

                Also luck does NOT affect which base item type drops, ie whether it is
                a dragon scale mail or a cloth hat.

NO_MAGIC ('Anti-magic shell')
> Raises your saving throw to 95%, making you nearly immune to malicious
> magical status effects that depend on your character doing a saving
> throw check to resist, see 'Saving Throw' under (7.3) for a list.
>
> The anti-magic shell will not prevent monsters from casting spells or
> reduce or negate any damage taken from most magic spells though –
> exceptions being monster curses ("points at you and curses/screaming
> the word DIE!"), dispelling attacks and psi-based attacks, because all
> of these are indeed affected by your saving throw.
>
> It also prevents you from using any magic device or casting spells.
> You can still use scrolls and potions though. For more information
> about Saving Throw see (7.3).

ANTIMAGIC ('Anti-magic field')
> Prevents you from using any magic device or casting spells, also
> prevents nearby monsters and other players from casting spells (but
> not from using magic devices). You can still use scrolls and potions
> as usual, but their effect duration might get reduced.
>
> The radius is approximately the field power / 9, and is cumulative
> to the 'Anti-magic' skill. The field power is the chance of
> suppressing a spell. It caps at 75% and is cumulative to the
> 'Anti-magic' skill. Make sure to read up on anti-magic skill at (7.2).
> The anti-magic field's radius caps at range 9.
>
> Your party members are not affected by your anti-magic field.
> Also see "Dark Sword" details in (5.9).

BLESSED ('It has been blessed by the gods')
> These weapons resist cursing. Priests can use blessed melee weapons
> without penalties, even if they are not blunt. They will get their
> 'Blunt-mastery' skill applied to any blessed weapon, even if it isn't
> actually blunt-type but a sword, axe or polearm instead. This specialty
> about weapon skill only affects priests.
>
> The 'BLESSED' flag at the time of writing appears in the 'Blessed', the
> 'of Aman' and the 'of Life' weapon ego powers, and some true artifacts
> and some random artifacts may also have the BLESSED flag.
>
> Blessed weapons will have adverse effects on corrupted (the Maia trait)
> characters and on characters of vampire race or hell knight class. If
> they are melee weapons they will increase spell casting failure chance.
>
> Everyone else can use blessed weapons just the same way as any other
> weapons.

VAMPIRIC ('It drains life from your foes')
> Drains life from your victim, which heals you slightly.
> For details see '(5.13) Vampirism'.

VORPAL ('Sharp' weapons, 'It is very sharp and can cut your foes.')
> Has a chance that the weapon damage dice result is multiplied on
> hitting, you'll see 'Your weapon cuts deep into your enemy'.
> Brand/slay effects will further increase the damage, if applicable.
> Has no effect on targets that cannot be cut (NO_CUT).
>
> VORPAL requires an edged weapon, so swords, axes and several polearms
> can obtain 'VORPAL' mod via "Sharp" or "Spinning" ego power.
> Regarding randarts, only sword-type weapons and razor boomerangs are
> eligible for obtaining the VORPAL mod from randart ability creation.

Note that Scythes of Slicing always come with VORPAL mod, be it as base
item, ego item or even as randart.

SLAY_WEAP (No message, can spawn other mods/increase dice randomly.)
        A special mod for "Weapons of Slaying", see further down in (5.9).

CRIT   ('It affects your ability to score critical hits.')
        This item adds to your chance to score critical hits.
        If the item is a weapon then it will only affect hits done with this
        weapon in particular, so for example a boomerang that provides +CRIT
        bonus will not affect your melee attacks.
        If the item is not a weapon (eg a piece of armour or a ring) then it
        will affect all of your physical attacks, including throwing items.

        For more information about critical strikes and attacks, see the
        description of the "Critical-strike" skill in (7.2).
        The CRIT flag spawns on light (up to 100 lbs) swords or polearms via
        the "Perfection" ego power, but can also spawn on random artifact
        gloves and all types of random artifact weapons -including boomerangs-
        regardless of their weight.

CHAOTIC ('It produces chaotic effects.')
        On hitting, you have a 50% chance to do one of the following:
        a) drain life (VAMPIRIC, see (5.13)) (very likely).
        b) earthquake (see (5.11) for details).
           (If enabled in the server settings, it can be suppressed with
           the !Q inscription. See (0.3) for !Q settings or press ~i in game.
           Usually, !Q only works on the artifact "Grond".)
        c) confuse target (very likely).
        d) teleport target away.
        e) polymorph target.
        f) clone target aka duplicate the monster it hits. Note that the clone
           does not give experience, drop items, or give form credit for
           mimicry users.

        Note that most of these have an *extremely* low chance to occur.
        Most of the time the vampirism or confusion effect is chosen.
        'Chaotic' effects can only happen on melee attacks.

CLONE ('It can clone monsters.')
        Has a 1 in 1000 chance to clone the monster it hits.

IMPACT ('It can cause earthquakes.')
        Causes earthquakes randomly, the higher the damage dealt the higher the
        chance. See (5.11) for details about earthquakes.
        (If enabled in the server settings, it can be suppressed with
        the !Q inscription. See (0.3) for !Q settings or press ~i in game.
        Usually, !Q _only_ works on the Mighty Hammer 'Grond'.)

FUEL_LITE ('It provides light when fueled.')
        A light source that needs to be fueled, otherwise it runs out.
        WARNING:
        If this item provides other abilities besides emitting light, be aware
        that you need to keep it fueled for it to do so! If it runs out of fuel
        your character will lose all abilities it provided until you refuel it.

CURSED, HEAVY_CURSE, PERMA_CURSE, AUTO_CURSE,
CURSE_NO_DROP, TY_CURSE, DG_CURSE
        See (5.12) Curses.

INVIS   ('It makes you invisible.')
        Turns you invisible. Items 'of invisibility' often have a +mod,

which gives you additional stealth. Note that this +mod does not
qualify or affect your y in any way, but is purely for an
extra stealth bonus. See '(5.14) Invisibility' for details.

BLOWS   ('It affects your attack speed.')
         This item adds EA (extra attacks) to your number of blows per round.

SH_ELEC ('It produces an electric aura.')
         Surrounds you with a lightning aura, damaging monsters each time they
         hit you in close combat.

SH_COLD ('It produces an icy aura.')
         Surrounds you with a frost aura, damaging monsters each time they
         hit you in close combat.

SH_FIRE ('It produces a fiery aura.')
         Surrounds you with a fire aura, damaging monsters each time they
         hit you in close combat.

REFLECT ('It reflects bolts and arrows.')
         Gives you a 75% chance to reflect shots, arrows, bolts and missiles
         fired at you, 45% chance to reflect magical bolt-type spells and 60%
         to deflect any physical projectile from traps you triggered.
         Reflected attacks will hit grids closely around their origin, possibly
         damaging/killing the monster who shot at you.

RETURNING ('It returns to you when thrown.')
         Will automatically return to you when you throw it (via 'v') while you
         have it equipped.

Weapons of Spinning
         On activatin spin around, hitting every monster around you in a
         radius of 1, with an extra stun effect.

EASY_USE (of Simplicity, 'It is especially easy to activate.')
         You have a much higher chance of succeeding to use the magic device.
         Also see (7.10) for more information about the 'Magic Device' skill.

CHARGING (of Charging) ('It regenerates its mana faster.')
         This magic device (rod) will take only 1/2 of the usual time to
         fully recharge.

'of the Istari' rods.
         Combination of EASY_USE and CHARGING.

'of Plenty' wands and staves.
         These have more charges than usual, and will also gain more charges
         from recharging than their normal counterparts. (See (5.18) about
         recharging.)

WINNERS_ONLY
         This item can only be equipped by winners (kings/queens/emperors/
         empresses) and fallen winners (those who lost their title because they
         died).
         This item can only be found by certain characters, see server options
         in-game via ~i for details.

NO_SEED
         An ego item that is never created randomly (in terms of abilities
         or power) and that is a lesser type and therefore allowed to stack with
         other similar ego items. These types are currently:
         -Cursed/indestructible rings,

-Fireproof/waterproof scrolls and books,
            -Any type of ammunition.
            Items with other (more powerful) ego powers than these listed above
            will not stack in your inventory even if the items are identical.

    INSTA_ART
            This item always is an artifact; it has no base-class that can spawn
            non-art items. Example: Long Sword base class can spawn regular long
            swords, but also 'Elvagil'. A Phial however will instantly be
            'artified' and turn into Phial of Galadriel or Undeath. There are no
            base-type non-art phials in the game.

    SPECIAL_GENE
            These artifacts are 'special artifacts' that cannot be dropped by
            regular monsters but require a certain key monster to be killed.
            For example the Dragonrider Coat of Mardra can only drop from Mardra
            (there is no guarantee that she will always drop it though).

    (5.9) What does item xxx do exactly?

    Some items might look bad (Mushrooms of Unhealth), but keep in mind that you
    can often throw ('v') these items to damage or impair an enemy.
    For more information about items and especially ego items see (8.4).

    Weapons & Armour

    Dark Sword   Dark Swords have a so-called 'anti-magic field', which
                    prevents the user from using magic devices or casting spells,
                    and also has a chance to interrupt nearby monsters and players
                    who try to cast spells but doesn't affect their magic devices.
                    You can still use scrolls and potions, but their effect
                    duration might get reduced.

                    The chance to interrupt spellcasters is 30% minus 3/5 of the
                    to-hit and to-dam values of the dark sword. Example:
                    A Dark Sword (+3,+7) has 30 - (3+7) * 3/5 = 24% chance of
                    interrupting spellcasters.
                    Dark Swords never give more than 30% AM, even if tohit and
                    todam boni added together result in a negative number.
                    They also never give 'negative anti-magic', 0% AM is the
                    minimum, even if tohit+todam are greater than its AM.
                    AC boni/mali on Dark Swords won't affect the anti-magic field.

                    The radius of the anti-magic field is several fields (chance
                    to interrupt spells, divided by 9), getting smaller if the
                    chance is smaller than 30%.
                    Your party members are not affected by your anti-magic field.

                    The anti-magic chance and field radius of a dark sword stacks
                    with the 'Anti-magic' skill (see (7.2)).

                    Note that if you dual-wield dark swords the stronger AM field
                    will override the weaker one, so they don't stack.
                    Similarly, if there are multiple players around nearby who have
                    anti-magic fields affecting the same monster then only the
                    strongest AM field will work, overriding the weaker ones.

                    Dark swords cannot be enchanted nor disenchanted and do not
                    take damage from water or fire.

```
Shadow Blade     Resists darkness and provides a fixed stealth bonus of +2.
                 Does not get damaged by acid, water or fire.

Bluesteel Blade
                 Especially sharp (see 'VORPAL' under (5.8)).
                 Does not get damaged by water or fire.

Blade of Chaos   Grants chaos resistance and produces chaotic effects on hits,
                 which in most cases means either life drain or confuse target,
                 with other (in turn detrimental to the wielder) effects being
                 very rare, see (5.8) for details on CHAOTIC flag.

                 As a specialty, this weapon will never gain ego powers or
                 artifact powers that harm (aka hit point drain) an undead or
                 demonic wielder.
                 Does not get damaged by fire, acid and water.

Scourge of Repentance
                 Slays undead and demons.
                 Does not get damaged by water, acid, or fire.

Demon Hammer     *Slays* demons. Does not get damaged by water, acid or fire.

Mace of Disruption
                 *Slays* undead. Not damaged by water, acid or fire.

Hunting Spear    Slays animals.

Dragon Lance     *Slays* dragons.
                 Does not get damaged by water, acid, or fire.

Scythe of Slicing
                 Especially sharp (see 'VORPAL' under (5.8)).
                 Does not get damaged by water, acid, or fire.

Slaughter Axe    Slays animals.

Infernal Axe     Fire-branded. As a specialty, this weapon will never gain ego
                 powers or artifact powers that harm (aka hit point drain) an
                 undead or demonic wielder.
                 Does not get damaged by water, acid or fire.

Thunder Axe      Slays giants, is lightning-branded. Is not damaged by fire.
                 Does not get damaged by water, acid or fire.

Weapons of Morgul
                 These are terribly cursed weapons. They are no good in any
                 way and you should just never pick them up, and if you made
                 that mistake, try to get rid of them as soon as you can to free
                 up that inventory slot again - except if you are truly of the
                 undead vampire race or a maiar so corrupted that you became a
                 hell knight! In these cases, as all heavily cursed equipment,
                 these weapons will get their mali reversed into boni when you
                 equip them, working in your favour! That doesn't mean their
                 curse is broken, though..

                 Wielding a weapon of Morgul will allow you to see the invisible
                 but also infect you with Black Breath, drain your experience
                 and aggravate nearby monsters.
                 Note that the black breath cannot be cured as long as you are
                 still wielding the Morgul weapon!
```

Since they have a heavy curse on them, if you want to get rid
of them you will need to either use a scroll of *remove curse*
or use enchant scrolls to break it. For details about the trick
with enchant-scrolls, which are usually much cheaper, see the
paragraph '(5.12) Curses'.
Note that this weapon can auto-recurse itself when you move it
between equipment and inventory, so when you uncursed it drop
it to the ground right away!

If you find a weapon of morgul, inscribe it '!w' to prevent
wielding it accidentally.
Wielded against Nazgul however, Morgul weapons will greatly
resist destruction on touching them, same as artifacts and
the Stormbringer do!

Weapons of Nothingness   (Currently disabled, cannot be found)
Similarly terribly cursed as weapons of Morgul. You are unable
to strike while wielding this weapon. There is noone who can
possibly make use of these, as they simply refuse to work.
Fortunately you can just drop or destroy these weapons via
'd' and 'k' keys just like any other items, just make sure you
never ever accidentally wield one.

See 'Weapons of Morgul' right above on how to break the curse
of this weapon to get rid of it, as these kinds both are
heavily cursed.
Note that this weapon can auto-recurse itself, same as Morgul
weapons, when you move it between equipment and inventory, so
if you ever accidentally wield one and then managed to uncurse
it, do NOT take it off as that will make it recurse itself, but
instead 'd'rop it straight to the ground or simply destroy it
with 'k' right away!

Shattered weapons
Weapons that have the prefix "shattered" deal less damage than
usual, in most cases the +hit and +dam values are in negative
numbers.
However, other than bad damage, the weapon is not cursed or
impared in any way.

Weapons of Slaying
  (SLAY_WEAP)   These weapons can have greatly boosted damage dice and
sometimes poison brand.
If it's a sword, axe or slice-type polearm it could also get a
'vorpal' effect - see 'VORPAL' under (5.8).

Magic ammunition
(Magic Arrows, Magic Bolts, Magic Shots).
Those will return into your quiver magically, so just having
one will already serve, as long as it isn't destroyed by some
elemental attack..
Artifact ammunition of any type auto-returns too, same as magic
ammunition.

Silver ammunition
Slays undead.

Ethereal ammunition
Magically returns after being fired, has a small chance to fade
away instead though. Cannot be enchanted.

```
Blasted armour   Armour that has the prefix "blasted" has much less +AC bonus
                 than usual, in most cases the +AC value is deeply in the
                 negative numbers.
                 However, other than bad +AC the armour is not cursed or impared
                 in any way.

Dragon Scale Mail
Dracolich Bone Armour
                 Legendary piece of armour that often grants some elemental
                 immunity and can be activated for elemental breath.
                 Also has neutral water buoyancy, so it doesn't hamper (nor
                 help) your ability to swim in terms of weight it puts on you.
                 Usually When mentioning DSM, the Dracolich version is included,
                 it also works the same as DSM, so it's just different in name.

Dragonrider Coat
                 Resists heat & cold.

Elven Cloak      Increases your stealth and luck.
                 For details about luck see LUCK flag in (5.8).

Elven Gloves     Regenerate hit points and mana points.

Multi-hued Dragon Scale Mail
                 Gives base + poison resistance ('base' resistance means
                 fire/cold/lightning/acid) and two random immunities out of
                 those five.
                 For example one MHDSM might give fire and cold immunity,
                 while another MHDSM gives poison and lightning immunity.

Royal Armour     Super-heavy armour that can only be worn by (fallen) winners,
                 'winner' meaning queens, kings, empresses and emperors.
                 (These armour pieces usually have a level requirement of 51 or
                 more and can have special boni not found on other armour.)

                 'Royal armour' is not a base item name itself but just
                 describes various types of adamantite and mithril heavy armour
                 or shields that will display
                 "It is to be used by royalties exclusively."
                 in violet colour when inspected/examined.

Serpent Scale Mail
                 Resists acid.

Shadow Cloak     Makes you hard to spot for other players, regarding..
                 a) them seeing you
                 b) them being able to look at your current equipment.
                 Shadow Cloaks work especially well to further disguise yourself
                 while being invisible vs. someone who is able to see invisible
                 creatures/players. See '(5.14) Invisibility'.


Potions
-------
Augmentation     Raises all your stats.

Berserk Strength
                 Temporary effects: Heals you for 30, increases CHP and MHP by
                 20, become fearless, -10 malus to ac and +10 to strength,
                 compare (4.11c). Does not stack with 'Berserk' technique.
                 ("You feel like a killing machine!")
```

```
Blood            Cannot be found or bought, but only gathered from fountains of
                 blood which are found in the Paths of the Dead. These feed true
                 vampires, but they expire after some time.

                 Their expiry process can be delayed by carrying snow in your
                 backpack, obtaining an aura of cold, avoiding an aura of fire,
                 sticking to cold terrain, or being proficient in Water wizardry
                 school (at least 8.000).
                 If the carrier is of white draconian lineage that also helps,
                 while being of red draconian lineage will accelerate going bad.
                 Since vampires don't emanate much body heat, they are also good
                 carriers, provided they are also moving on cold terrain.
                 Not all of these effects actually stack, but carrying more snow
                 is always effective, especially if the ratio of snow to blood
                 potions is higher.

Boldness         Removes fear and keeps your heart boldened for a while.

Chauve-Souris    Turns you into a fruit bat. Quaff another one to be restored
                 to your original form. A wand/rod of polymorph might help too.
                 Make sure you don't resist nexus if someone tries to polymorph
                 you back. Or just use 'Morph Restoration' service.
                 Characters with 'Fruit Bat' body modification are immune.
                 Mimicry users can simply polymorph out to any form they like.

Cure Light Wounds
                 Cures blindness and heals cuts somewhat; heals 3d8 HP.

Cure Serious Wounds
                 Cures blindness, some cuts, confusion; heals 6d8 HP.

Cure Critical Wounds
                 Cures blindness, most cuts, confusion, stun; heals 14d8 HP.

Curing           Heals 9d10 HP, removes blindness/confusion/stun, cures
                 poison/disease/cuts/hallucinations, heals 4d4 insanity,
                 cures being gorged, restores all your stats (except exp).

Detect Invisible
                 Temporarily grants you the ability to see invisible.
                 ("Your eyes feel very sensitive!")
                 (See (5.14) for details about invisibility.)

Detonations / Death
                 Better not drink it (or you deserve it).
                 Also, handle with caution! Make sure those won't shatter in
                 your backpack when you're hit by potion-damaging effects, or
                 you might not see the next sunrise.

                 If thrown (press 'v' to throw an item) these potions show the
                 strongest effect by far of all potions - devastating!
                 Accordingly useful to be used in fumes traps.

                 Death potions can be consumed by undead without taking damage
                 and they will restore experience and 500 MP.

Enlightenment    Illuminates and maps the whole level and reveals all objects.
                 It also identifies all of the user's items.

*Enlightenment*
                 Raises your intelligence and wisdom, detect treasures,
                 objects, secret doors, stairs, traps. Identifies all items.
```

	Tells you about yourself like a potion of Self-Knowledge.
Experience	Gives you additionally half your current experience plus 10, but only up to a maximum of +100,000 points. So you'll get the most out of it if you quaff it when you reached 200,000 exp. (Ok, 199,980 - thanks Sav...) The XP gain from this potion is not affected by the experience gain penalties (exp ratio) of your class or race. Some players prefer to quaff it earlier, when it's especially hard for them to reach the next level for some reason, maybe harder than if they were at 200,000 exp already.
Heroism	Temporary effects: Increases CHP and MHP by 10. Removes fear. +12 bonus to-hit, compare (4.11c). ("You feel like a hero!")
Infra-vision	Temporarily grants you 100..200 ft of infra-vision randomly, ie the ability to see warm-blooded creatures from afar, even in complete darkness or if they are invisible to normal sight. If you already have fixed infra-vision, this potion will add to your fixed infra-vision radius, further increasing it. ("Your eyes begin to tingle!")
Invulnerability	Will turn you partially invulnerable (40% chance to fully deflect any attack, 50% damage reduction if it still hits) and increases armour class by 100 temporarily. ("A powerful iridescent shield forms around your body!")
Learning	Gives you 1..3 (random) additional skill points to spend.
Life	Heals 700 HP, removes blindness/confusion/stun, cures poison/disease/cuts/hallucinations, cures Black Breath, restores all your stats and experience.
Lose Memories	Lose 25% experience (if Hold Life is missing).
Resistance	Gives you temporary resistance against heat, cold, acid, electricity and poison. (Stacks with permanent resistance to lower the damage to 1/9 (1/3 temp * 1/3 perm)).
Speed	Temporary speed increase by +10.
Healing	Cures blindness, most cuts, confusion, stun; heals 300 HP.
Healing	Cures blindness, cuts, confusion, stun, poison, disease and heals 700 HP.
Restore Life Levels	Restores your experience, if it has been drained. You can see that your experience has been drained by it being displayed in yellow colour instead of the usual light green. Note that this potion does not restore experience you lost by dying (there is no way to restore experience loss from death). If you gain experience while your experience is drained, it will go into regaining XP back to your normal value, and only 10% of it will actually be credited to your maximum XP, so it is highly inefficient to kill monsters while your XP is drained as you basically waste 90% of your gains.
Restore Mana	Restores 500 MP. ('You feel your head clearing')

```
*Restore Mana*  Restores 1000 MP. ('You feel your head clearing')

Ruination       Take 10d10 damage. All stats are decreased by 25 (restorable).

Self-Knowledge  Tells you everything about yourself and identifies your items.


Scrolls
-------
Acquirement     Gives you a great item, generated randomly (may sometimes be
                very great and sometimes less great).
                Reading it on deeper dungeon levels produces better results in
                general (although the outcome is still pretty random).

                Note that while some towns also have a high level, reading this
                scroll in town won't guarantee a 'great' item, which will
                be guaranteed if you read it in the dungeon.

                What you usually do: Either try to quickly visit a really deep
                dungeon level just to read the scroll, grab the item and get
                out of there. Or sell it to a town store for good cash.

                Acquirement is not affected by 'luck'.
                Acquirement does have a chance to produce artifacts.

*Acquirement*   Same as Acquirement, but gives you two or three great items.

Aggravate Monsters
                Wakes up all monsters within about twice the maximum sight
                range (a constant defaulting to 20, so aggrav. radius is ~40).

                Unlike static aggravation (from item flag) this hastes all
                monsters in your line of sight (same as SHRIEK ability or traps
                of aggravation or the "/scream" command).
                The haste effect is permanent, but most non-unique monsters can
                be slowed down again by using any slowing magic.

Blessing
Holy Chant
Holy Prayer     Temporarily increases your AC by 8 (blessing), 14 (holy chant)
                or 20 (holy prayer) and also increases your to-hit bonus by
                half that amount ("You feel righteous!").

Blood Bond      Inscribe this @P<playername>, for example @PGandalf, then read
                it to form a blood bond between you and that player. (Only one
                of you has to read a BB scroll, it's working bidirectionally).

                Everyone on the server will receive messages about that blood
                bond been formed: "<player A> blood bonds with <player B>".
                If you don't see this message, you did something wrong. Get
                another scroll and repeat the blood bonding until you see the
                correct confirmation message.

                Your characters will automatically be hostile to each other,
                so you can fight in a friendly duel. This even works in town,
                which otherwise is a safe zone from PvP.
                The loser won't suffer a real death while blood-bonded, but
                just get teleported away. The hostility will automatically be
                cancelled when the blood bond ends or when a player logs out.
                Everyone on the server will be informed about the result:
                "<A> wins the blood bond against <B>".
```

Cancellation   Don't use it! It will heavily disenchant and blast all sorts of
                magic items in your inventory and render them worthless,
                including magic devices.
                Artifacts (and Stormbringer) are unaffected.
                Your equipment is unaffected.

Curse Weapon   Will remove all special powers and enchantments of your primary
                or (in case you don't wield a primary weapon) your secondary
                weapon and turn it into a 'shattered' weapon without any useful
                abilities. Artifacts have a chance to resist the effect.

Curse Armour   Will remove all special powers and enchantments of your body
                armour (if you wear any) and turn it into a 'blasted' armour
                without any useful abilities. Artifacts have a chance to resist
                the effect.

Cheque   These are automatically generated in player stores when someone
                buys an item. They can be 'I'nspected to check their value or
                'r'ead to cash in the money.
                For more information see (4.10a).

Deed   Some of the parchments are deeds, which are used as rewards
                for various purpose, such as events (see (4.13)) and
                pvp fights of PvP mode-characters (see (7.13)).

                Press 'r' to read a deed, which will usually tell you what to
                do with it. In most cases, you have to turn it in at the
                mayor's office in Bree (one of the '+' doors in town).

                Some deeds can be traded to other characters, but usually they
                will get a lesser reward (eg a luck buff instead of an item)
                than the original owner could have gotten. Also, the luck buff
                from a traded master deed won't be as strong as the luck buff
                form your own master deed.

                Luck buffs of lesser deeds (contender) usually last about
                30 minutes each or 45 minutes on the Ironman server, while luck
                buffs of master deeds (winner) usually last about 60 minutes or
                90 on Iornman server (duration is relative to world surface.)

                Note that temporary luck buffs from deeds stack in duration up
                to ~ 1 hour as long as their buff power is the same, and also
                will end prematurely when you log out before the buff ran out.

                The luck buffs are on hold while on the world surface, so you
                won't lose buff time from running around. (Of course this also
                means that the luck effect is not being applied.)

Destruction   Causes a local earthquake, nearly completely wiping the area
                of monsters and objects (see (5.11) about earthquakes).
                Extremely powerful magic which causes a searing blast of light
                and a terrible shockwave that will blind you and knock you and
                everyone else out.
                Use this as a last resort!

                This magic will fail inside vaults and in towns or in the area
                surrounding a town within a radius of 3 worldmap sectors.
                It will also fail on dungeon floors that do not allow
                destruction magic explicitly (orange floor feeling saying
                "The walls here seem very solid.", also see (4.8)).
                Destruction does not yield any kind of credit such as

experience points, loot or monster-form for mimics.
Destruction actually erases objects completely, so potions
caught up in it will not cause any shatter-effects.

Enchant Weapon To-Dam
Enchant Weapon To-Hit
Enchant Armour

Will attempt to enchant a selectable item of appropriate type.
The higher the item is already enchanted the more unlikely it
will succeed another time.
The chance to succeed will also drop if the scroll is used on a
stack of items, instead of a single item, depending on the
stack size. It is easier to enchant a stack of ammunition than
enchanting a same-size stack of regular weapons/armour though.

Enchant Weapon
Enchant Armour

Much more likely to enchant up to +15 than normal 'Enchant'
scroll types, and likely to enchant by several points at once.
The chance to succeed will drop if the scroll is used on a
stack of items, instead of a single item, depending on the
stack size. It is easier to enchant a stack of ammunition than
enchanting a same-size stack of regular weapons/armour though.

Fire
Ice
Chaos

Fires a ball of the according type around you. Make sure you
resist it or you will take damage too.

Genocide   Removes all monsters of a certain kind from the current level.
The race will be determined by the monster which stands
closest to you when firing off the spell.

For each monster you will suffer randomly from just 1 up to
4+(monsterlevel/8) points of damage, which cannot be absorbed
by any magic shield or other protective effect!

Depending on the server configuration, the caster's remaining
hit points are usually halved (as an additional extra penalty)
after the spell finished.

Monsters have a chance to resist genocide, depending on their
level. Monsters inside vaults, Uniques, and monsters that are
immune to teleportation attacks cannot be genocided.

Genocide-type spells do not yield any kind of credit such as
experience points, loot or monster-form for mimics.

Golem Creation Allows you to create a golem which follows you and which you
can control to some extent, see (9.3) for more information.

Life   Resurrects another player's ghost if standing on a directly
adjacent field to you when you read it. Does not work inside
vaults, and only over solid ground.
Also restores your experience points if they were drained.
Since it was often asked: Non-everlasting and everlasting
players can revive each other without problems.

Lottery   This might be your chance today to win the Jackpot!
Just read it, if you win any money, it will appear under/around
your character on the floor. You will always get a message that

tells you if you won or not.

                A common question is if someone ever won the first prize and
                how much it is:
                Yes, several people have won it, although it happens extremely
                rarely. The prize at the time of writing this is about 1.5M Au.

                Note that any discount the ticket item has will be applied to
                the prize money too, so stolen tickets yield no prize as they
                are 100% discounted, like all stolen items.

Obliteration   Removes all monsters that are close to you (radius 20).
                For each monster you will suffer a HP drain between 1 and
                3+(monsterlevel/8) points of damage, which cannot be absorbed
                by any magic shield or other protective effects!

                Depending on the server configuration, the caster's remaining
                hit points might be halved (extra penalty) after the spell
                finished (this penalty is enabled by default).

                Monsters have a chance to resist genocide, depending on their
                level. Monsters inside vaults, Uniques, and monsters that are
                immune to teleportation attacks cannot be genocided.

                Genocide-type spells do not yield any kind of credit such as
                experience points, loot or monster-form for mimics.

Parchments   These contain informations about the game, they won't
                disappear if you read them.

Protection from Evil
                Repels evil creatures that try to attack you in melee.
                See the prayer 'Protection from evil' in (7.8)!
                ("You feel safe from evil!")

Recharging   Recharges a magical device (rod, wand or staff, see (5.18)).
                Can be inscribed "@I<partial item name>" to target a specific
                item.

Remove Curse   Breaks lesser curses on items, allowing you to unwear or
                destroy them. Note that many items can be sold for good cash
                as soon as they are uncursed!
                (Scrolls of remove curse give you the message on reading:
                'You feel as if someone is watching over you.'.)

Remove Curse Breaks heavy curses. Note that curses (including heavy ones)
                on weapons or armours can also be broken by enchanting one of
                their boni some points above +0 manually. (The enchant service
                of shops won't help!)

Rune of Protection
                Creates a rune on the ground that monsters cannot cross nor
                summon on. Monsters have a chance to break it on each turn.
                Weak monsters will rarely succeed while powerful monsters may
                break it quickly. Monsters of level 98+ can instantly break it.

Rumour   Makes a random rumour come to your character's (and everyone
                else's characters') mind. Has no further effect and is not
                necessarily true even.

Wilderness Mapping
                Maps the wilderness area around the worldmap sector you

are currently within. These scrolls also sometimes carry
an inscription telling the location of a hidden dungeon.

If you discover a dungeon's location this way, you must still
go there in person and find the entrance staircase (get it
into unobstructed line-of-sight of your character) for it to
register! Only then it will be officially 'known', to you and
server-wide (in the Mathom-house).

Word of Recall Use it to quickly travel from the town or the wilderness into a
dungeon or tower within your current sector.
It can also be used to travel between towns or on the worldmap
in general. See "(0.3) Important Inscriptions, Word of Recall"
for more info about Word of Recall! ("Word of Recall", "WoR")

Word of Recall scrolls can be exchanged between an everlasting
and a non-everlasting player!

Vermin Control Stops breeders on the whole floor from multiplying. Doesn't
have effect on certain non-natural breeders such as Unmakers.

This scroll affects all currently existing breeders on the
dungeon level, but also all breeders that additionally may get
spawned in the future, so Vermin Control doesn't need to be
used more than once per dungeon floor, ever.

Wands/Rods/Staves

Annihilation   Wand only: Drains 10..20% life from your target.
Unique monsters can resist. The damage drained caps at 1200.

Clone Monster Duplicates a monster. The duplicate, aka 'clone', does not give
experience, drop items, or count as form credit for mimicry
users.

Curing   Cures being gorged, poison, diseases and cuts,
removes blindness/confusion/stun/hallucinations.

Destruction See scroll of *Destruction* further above.

Detection   Detects treasures, objects, traps, secret doors, stairs and
non-invisible creatures.

Dragon's Breath
               These wands fire a ball of dragon odem (more powerful than
normal ball spell wands.) - randomly on each cast one of:
Fire, frost, lightning, acid or poison.

Drain Life   Wand/rod: Drains 10..20% life from your target, giving you 25%
of the drained life force.
Undead and nonliving monsters are unaffected, unique monsters
can resist. The damage drained caps at 900.

Enlightenment Magically maps your surroundings.

Genocide   See 'Scrolls'.

Havoc   Fires a strong initial havoc ball that leaves a lingering
havoc cloud behind, dealing additional damage over time.
Note: Rods of Havoc do not stack! That means each rod you carry
will occupy one inventory slot.

```
Healing         Staves:
                Heals 250 to 400 hit points, depending on magic device skill,
                cures stun and cuts.
                Rods:
                Heals 100 to 400 hit points, depending on magic device skill,
                cures stun and cuts.

Holiness        Dispels nearby undead and demons.
                Also protects you from evil for a while.
                Cures poison/disease/cuts, removes fear/stun, heals somewhat.

Magi            Restores your intelligence and 500 mana points.
                ('You feel your head clearing')

Perception      Identifies a specific item.

*Perception*    *Identifies* a specific item, you guessed it..

Polymorph       Polymorphs your target randomly into another form.
                Doesn't works on players who resist nexus.

Power           Dispels nearby monsters.

Probing         Tells you hit points, melee attacks, speed and armour class of
                monsters in your line of sight.

Restoration     Restores experience points (aka live levels) and drained stats,
                ie STR/INT/WIS/DEX/CON/CHR.

Starlight       Casts 8 beams of light in a star-shaped pattern.

Teleport To     Attempts to teleport your target towards you, placing it on an
                adjacant grid next to you. Some monsters are immune and will
                give an 'unaffected' message, all monsters have a chance to
                resist in which case it'll give you a 'resists' message.

Wonder          Wands of wonder cast random magic spells.


Jewelry
-------
Talisman (Amulet)        Increases your luck, helping you finding better loot.
                         (See LUCK flag in (5.8) for details about luck.)

Amulet of Adornment      They might be looking fancy, but they don't do
                         anything and have no effect on your character.

Amulet of Anti-Magic     See (5.8), 'NO_MAGIC'

Amulet of Anti-Teleportation
                         If worn it will suppress all attemps to teleport, phase
                         or recall the wearer, regardless whether initiated by a
                         monster or by himself. It will also prevent certain
                         effects of unresisted nexus attacks.

Amulet of Brilliance     increase intelligence and wisdom, provide light.

Amulet of the Moon       Gives infra-vision, the power to see invisible, and it
                         can be activated to sleep monsters nearby.
                         It also improves your +hit and +dam boni.
```

```
Amulet of Terken         Gives the power to see invisible, free action, and
                         improves your searching (usually by quite a lot).

Amulet of Sustenance     sustain all six attributes, provide 'Hold Life'
                         resistance to experience-draining attacks,
                         and provide slow digestion.

                         Sustenance of a stat will prevent it from being drained
                         by various sort of attacks, potions, or other effects.
                         For most things it works 100% of the time, but for some
                         effects it just reduces the chance of a decrease to
                         occur.

                         Sustaining STR and DEX for example will ensure that you
                         don't lose attacks/round, so wearing a ring of Sustain
                         Ability can be helpful for melee fighters, especially
                         if they enter an ironman dungeon which they cannot
                         leave early in case they need to restore drained stats.

Ring of Prowess          increase and sustain strength and intelligence.

Ring of Tenacity         increase and sustain strength and wisdom.

Ring of Might            increase and sustain strength and constitution.

Ring of Cunningness      increase and sustain dexterity and intelligence.

Ring of Gallantry        increase and sustain dexterity and wisdom.

Ring of Toughness        increase and sustain dexterity and constitution.

Ring of Preparedness     increase and sustain constitution and intelligence.

Ring of Steadiness       increase and sustain constitution and wisdom.

Ring of Flames
Ring of Ice
Ring of Acid
Ring of Lightning        Provide the according resistance and can be activated
                         for temporary resistance too, thereby temporarily
                         giving you "double resistance" (see (5.15) for
                         details). They also brand your physical attacks with
                         the according element.

Ring of Lordly Protection
                         Resist poison, disenchantment, life drain and give
                         free action (immunity to paralysis).

Amulet of Slow Digestion
Ring of Slow Digestion
                         will slow your food digestion so you have to eat less
                         often. Also prevents instant paralysis if your food
                         state hits red 'Starved' (or red 'Weak' in old game
                         versions up to 4.8.0).

Ring of Polymorphing     Can be used by adept Mimicry-users to tansform
                         themselves. See (7.7a) for details on these rings.


Misc
--
Ale
```

```
Wine              Will satisfy your hunger somewhat, and may have random side
                  effects:
                  Confusion, stun, hallucinations, 1 point of sanity damage,
                  paralysis, fear, blindness (methyl? ew), vomitting if
                  your stomach isn't relatively empty, temporary stat
                  decrease (except for strength), slowness,
                  heroism, berserk, speed (compare (4.11c)).

                  Note that the unique dwarven ale of the Khazad is vastly
                  superiour to normal ale or wine, and will mostly affect the
                  drinker positively, not ever causing negative side effects
                  besides possible confusion.

Chest             Chests may contain treasures or items. Usually, chests
                  you find will have hidden traps on them. So what you do
                  is to hit 's' to search for traps while standing next to
                  the chest, or use any trap detection magic.
                  When you have discovered the trap, hit 'D' to disarm it,
                  or again use any sort of disarming magic.
                  The disarmed chest is finally safe to open with 'o' key.
                  Happy looting.

                  Note that only the chest's level affects what kind of items
                  you may find in it. It does not matter where you actually
                  are when you open it or who opens it. A player's 'Luck'
                  value has no effect on the outcome either.
                  On average, large chests tend to contain items rather than
                  money while small chests mostly contain money.
                  Chests have an increased chance to drop good items, same as
                  monsters that have DROP_GOOD flag.

                  Also see (6.3) for more information.
                  Since client 4.8.0, emptied chests can be used for storing
                  items to extend your inventory slightly, see (3.4).

Climbing Set      Allows you to travel over mountain fields.
                  Info for mimics & co: In order to be able to use it, your
                  appearance form must have arms and fingers. (Equip it!)

Backpack Safety Lock
                  When equipped it has a very high chance to prevent thieves
                  from stealing items from your backpack or money from your
                  purse.
                  Also somewhat protects against traps that cause your items
                  to drop or that somehow try to steal your items (thirst).

Empty Bottle      You can /fill these at fountains to turn them into
                  potions. (See (0.2b) for more details.)

Firestone         These can be eaten by Draconians and players in dragon
                  forms and have various random effects (small firestones
                  just have reduced duration):
                  - If the player isn't a Draconian but he is currently in
                    dragon form he will get some mana refilled.
                    ('You feel your head clearing')
                  - If he is a Draconian, the following effects can apply:
                      - Adrenaline:  Consume way more food.
                                     Get STR/CON/DEX bonus.
                                     Get to-hit/to-dam bonus.
                                     Sometimes get EA.
                                     Get AC malus.
                      - Biofeedback: Consume more food.
```

```
                              Regenerate HP / heal cuts faster.
                              Reduce damage from arrows/missiles,
                              shards, sound and ice shards.
                 - ESP:            You can see telepathically.
                 - Physical Instability:    Probability Travel.
                 - Fury:           speed bonus, to-dam bonus, no fear,
                                   to-hit malus, to-ac malus.
                                   Compare (4.11c).
                 - Speed-up:       Speed bonus.
                 - Heroism:        +10 CHP/MHP, +12 to-hit, resist fear,
                                   compare (4.11c).
                 - Temp res:       Temporary base and poison resistance.
                 If you eat too many of them over a short period of time you
                 might get poisoned by adrenaline overdose, with lethal
                 outcome.

Flint            Prevents your light from going out by automatically
                 refilling it right when it would've reached 0 turns.
                 For this to work you'll need to carry appropriate items in
                 your inventory that will be used up in the process, eg a
                 flask of oil or another lantern for refilling a lantern or
                 another torch for refilling a torch.

                 The flint will fail if you are paralyzed at the time your
                 light goes out.
                 The flint will ignore all inventory items that carry '!F'
                 inscription or are ego- or artifact-class items.


Fortune Cookie   Gives you a line of wisdom.

Guild Key        See (7.9).

Dwarven Lantern  Make you resist fear. Don't need to be fueled.

Feanorian Lamp   Make you resist fear and see the invisible. Don't need to
                 be fueled.

Lembas (elvish waybread)
                   Satisfies your hunger, heals 5d8 hit points, cures poison,
                   disease, confusion and lessens non-lethal cuts.

Shovel
Pick
Mattock          Digging tools, improving your digging capabilities.
                 (+to-hit, +to-dam) on digging tools as well as a high
                 weight help to further increase their effectiveness.
                 Main factor is the (+diggingpower) mod though. (Equip it!)

                 If you lack any of these valuable digging tools, axes and
                 swords can help you hacking down trees or bushes. For
                 hacking away spider webs certain polearms used for slashing
                 (scythes and sickles) may help too, at least as well as
                 swords or axes. (see 'Digging' skill in (7.2) and (5.17)
                 for more information about digging).

                 Starting in 4.8.0 you can press SHIFT+W to wield a digging
                 tool as a weapon. You will still use it for digging too.
                 If you try to dig while having a digging tool equipped in
                 the weapon slot and another one in the tool slot, the
                 better one of the two will be used automatically.


Mushroom of Hallucination
```

Deals some chaos damage to your sanity which will cause
hallucinations. Also restores a little mana.

Mushroom of Paranoia
Causes fear and hallucinations.

Mushroom of Cure Paranoia
Removes fear and hallucinations.

Mushroom of Unmagic
Removes all magical effects from your body if eaten.

Mushroom of Restoring
Restores your stats and your experience if drained.

Mushrooms with bad effects in general are also often poisonous when eaten.
Also, try throwing bad mushrooms at enemies to apply bad status effects.

Mummy Wrapping   Reduces your charisma slightly, and prevents other players
from seeing your equipment except for your melee and/or
ranged weapon. Also makes you look dark, almost like being
infected by Black Breath. (Equip it!)

Vampires start with a mummy wrapping, because it can
protect them from the sunlight. If they are moving on the
world surface (meaning not in a dungeon/tower) while it's
day, the sun will burn them if they don't resist light or
wear a mummy wrapping.
Tip: Polymorphing into a vampire bat may improve hit
point regeneration rate.

Picklock   When equipped, improves your trap-disarming (and therefore
also your lockpicking) ability.

Rubble (':' on the floor)
You can create sling ammo from this. You cannot pick up
rubble, just stand next to it (see (7.12)).

Skeleton
Bone
Skull   You can craft ammunition from these if your Archery skill
is sufficient (see (7.12)).

Snowball   Can be thrown at other people or target dummies.
Can also be used to cool potions of blood.
The more snowballs you carry, the slower they tend to melt.
Moving in cold terrain will preserve the snowballs in your
inventory.
Other than that, basically everything about cooling that is
written further above about potions of blood does also
apply to snowballs.

Spell Scroll   Although called "scrolls" they actually persist and can be
used infinite times. They may however get destroyed by
certain damage effects (most notably fire and acid)
same as regular scrolls. Spell scrolls ignore water damage
though, which can harm regular scrolls.

Spell Crystal   They are like "spell scrolls", except they are used for
mindcrafter spells. A specialty of spell crystals is that
they ignore fire damage (and water damage, same as spell
scrolls), but are susceptible to electricity!

```
Codex
Spellbook
Grimoire              These are magic books that may contain magic spells of any
                      type and school.
                      However, these books start out empty, devoid of any spells
                      and it's up to the player to add spells of his choice to
                      them.
                      To do so, he needs to find or buy spell scrolls in the
                      bookstore (orange '9' in town), then press 'A' to activate
                      the Codex, Spellbook or Grimoire, then choose the spell
                      scroll he wants to transcribe into the book. The scroll
                      will vanish and the spell will be permanently and
                      irreversibly added to the book.

                      Condition for this to work is that the book still has free
                      space left, and that the player has actually learned the
                      spell he wants to transcribe.

                      Codices can carry the least amount of spells (3),
                      spellbooks being intermediate (4), while Grimoires have
                      the most space (5).

                      Tip: You can stack multiple of these books if they have the
                      exact same spells in the exact same sequence in them.
                      (Note that you cannot use these books if your game client
                      version is below 4.4.2!)

Sprig of Athelas     Eat this one to cure Black Breath (see (4.11a) for more
                     information about Black Breath),
                     also heals for 8d8, cures poison, disease, stun, cuts,
                     confusion and hallucinations.

Tarpaulin            When equipped a tarp prevents your inventory from taking
                     water damage and mostly from acid damage, for example when
                     crossing water grids or when you are attacked with water-
                     or acid-based effects.
                     Note that a Tarpaulin doesn't protect your equipment.

Grinding Tool        Used by demolitionists (see "Digging" skill in (7.2)) to
                     grind items containing wood or metal, which they don't have
                     any other use for, to wood chips or reactive metal powder.
```

(5.9a) Activatable items

Many items can be activated (press 'A' to try). These items are generally
called 'Magic Devices'. (Apart from these items, magic devices also include
wands, staves and rods, see (7.10) for more information.)

The chance of successful activation depends on various factors such as the base
item level and your magic device ability. See (7.10) for details.

An activated item will usually have a cooldown (timeout) until it can be
activated again. Items that need to be equipped to be activated usually won't
recover while they aren't equipped.

Many artifacts can be activated, as well as items of certain ego powers. But
there are also some base item types that provide an activation effect.

Base and ego types that can be activated and aren't described elsewhere:

```
Scorching Cloak:              Temporary fire resistance.
Frostwoven Cloak:             Temporary frost resistance.
Sparkling Cloak:              Temporary lightning resistance.
Cloak of Lordly Resistance:   Temporary base+poison resistance.

Cap of the Noldor:            Treasure detection.
Boots of Jumping:             Random short-distance jump like Phase Door spell.
Dragon Scale Mail:            According breath attack.

Weapon of the Thunderlords:   Teleportation.
Weapon of Spinning:           Spin attack:
                              Hits monsters adjacent to you n times in total,
                              adding a stun effect to each blow. 'n' is your
                              number of blows per round (BpR) plus 8.
Weapon of Fury:               Temporary fury, compare (4.11c).
Spectral weapon:              Temporary wraithform (see (5.20)).

Amulet of the Serpents:       Poison breath.
Amulet of the Moon:           Sleep monsters.
Amulet of Rage:               Temporary fury, compare (4.11c).

Ring of Flames:
Ring of Ice:
Ring of Acid:
Ring of Lightning:            Breathe the ring's element and gain temporary
                              resistance to it.
Ring of Teleportation:        Explode and instantly teleport its wearer.
```

(5.9b) Artifacts and artifact resets

(For information about the 'timeout' on true artifacts, see 'Artifact resets'
further below.)

Artifacts of any type cannot be enchanted by any means, nor harmed by elemental
attacks of any type. Also they have a high chance to resist disenchantment
effects. (If the player actually resists disenchantment already then they are
completely safe.)

Artifacts can be destroyed only by very few means:
By a monster that has KILL_ITEM or TAKE_ITEM (and won't drop it again on death)
flag, by Nazgul if it's a weapon, or by reading a scroll of curse armour or
of curse weapon. Artifacts generally have a decent (or in case of Nazgul-touch
even a very high) chance to resist destruction.
Three artifacts are even indestructible: Morgoth's crown, hammer and the ring
of phasing.

Artifact types in general

Some items are 'named', those possess especially great magic powers and are
also called 'Artifacts'.
Different from other items artifacts will pseudo-ID as 'special' (given
sufficient combat/magic/archery skill) or as 'terrible' if they are cursed.

The artifact name can either be given as a real name, for example:
    The Dagger 'Nimthanc'
or it can be in the form of a description like for example:
    The Whip of Gothmog
The 'The' indicates that this item is one of a kind, aka an artifact.

To find out all about the magic powers of an artifact it needs to be

identified, for example by a 'Scroll of *Identify*' or in one of the *ID*
shops that occur in most towns, which will usually cost around 2000..3000 gold.

Some artifacts can be 'A'ctivated for a special effect. This will be shown
in the list of its powers that you get when *identifying* it.

Artifact ammunition never breaks or (in case of boomerangs) falls down to the
floor instead of returning. Artifact weapons are harder to get disarmed.

There are two classes of artifacts, 'true artifacts' (or short 'truearts',
also called 'static artifacts') and 'random artifacts' or short 'randarts':

True artifacts ('Truearts', also called 'static artifacts')

True artifacts, are predefined in the a_info.txt file and will always sell for
their defined value even if they have not been *identified*.
You can search a list of all true artifacts in game, by pressing ˜ 6 .

True Artifacts are unique. If an artifact is owned by a player, noone else can
find it anymore until it's lost (for example if the player dies) or sold to a
shop, or if the player drops it to the floor and leaves it behind.
Depending on a server's configuration artifacts that are sold to shops usually
stay a while in the shop and can be bought by other players before they finally
disappear from the stock.

Usually true artifacts may not be dropped into a house (will just disappear!)
and may not be picked up by winners, ie characters that have beaten Morgoth.
Artifacts in possession by a player when he beats Morgoth and hence acquires a
royal winner title will disappear if he drops them. If he decides to keep them,
they will now time out at twice the normal speed.
There are a few exceptions: True artifacts specifically designed for winners!
These have the WINNERS_ONLY flag and will actually timeout at half the normal
speed at which artifacts time out (for non-winner players). So usually they
should last for 10 weeks instead of the usual 5 weeks of normal true artifacts.
These winner-artifacts can also be handled, dropped and traded between winners
normally without disappearing.

Since static artifacts are predefined and have fixed abilities, their number
therefore is limited and only one of them can exist at a given time in the game
world. Thanks to the existence of random artifacts (see below) this won't be
able to cause any shortage of artifacts that can be found though, as you can
still find infinitely many random artifacts even if all true artifacts are
already in possession of other players.

True artifacts will also be erased if they are left on the ground and the
dungeon level or worldmap sector gets 'unstaticed', that means it gets reset
because no players have been on it for a while (can be instantaneous for world
map sectors or dungeon floors that are left without any players on them, and up
to many hours in case someone ghost-died on a dungeon level, which can render
the dungeon level 'static' for that time to allow others to retrieve the loot).

For that reason, if you want to drop an artifact and pick it up with another
character, make sure you do this in town, not in a wilderness sector!

Note that some cursed true artifacts can be sold to stores after you removed
the curse. Having a curse does not necessarily mean the item's value is zero,
but shops in general will not buy any item that still carries a curse.

Random Artifacts ('Randarts')

Random artifacts are composed randomly and even if they happen to bear the same name might have totally different powers. Randarts need to be *identified* to sell for what they are really worth.
Randarts can be dropped in houses and used by anyone just fine, with the exception that randarts that give a hit point bonus can only be found/created by winners (characters that have beaten Morgoth), and that the hit point bonus will not apply if a non-winner character happens to use them.

As was just mentioned, randarts can actually be created by players, using a 'Scroll of Artifact Creation' which are somewhat often sold in the 'Expensive Black Market' in Minas Anor, but also may very rarely spawn in normal black markets.
The advantage of creating an artifact is that the player can determine the base item type he wants to use. For more information about artifact creation see (9.4).

The abilities a randart gets do not depend on depth, monsters, chests, the player himself or any 'Luck' bonus. Instead, they are always truly random and only depend on the item base type.
(The only exception is the hit point bonus restriction mentioned above.)

The level of the final object (ie the level restriction that determines what minimum level someone else has to be to become the new item owner when trading the item) depends partially on its powers and partially on the depth where it was found, similar to any other type of loot actually.
If the item was manually created (via scroll of artifact creation) then the object level is determined as if the item was found on dungeon level 50.

Note that randarts that don't auto-curse themselves can be sold after you removed the curse (except if the base item type is already worthless).

Artifacts vs Nazgul

Artifacts greatly resist Nazgul, which cause most other weapons to break more or less instantly. So even if an artifact weapon you find seems not very appealing in particular you might want to keep it just for slaying Nazgul.
(See (1.3a) for more information about Nazgul.)

Note: 'The Stormbringer' is not a real artifact but it will show the same resilience as true artifacts and random artifacts vs Nazgul.

Set bonus from wearing similarly named artifacts

If you wear/wield multiple artifacts of similar name, you will receive a luck bonus (see (5.8), 'LUCK', for details about luck). For example if you equip
    The Whip of Gothmog   (which happens to be a true artifact)
and also
    The Hard Leather Armor 'Gothmog'   (which is actually a random artifact)
You'd get a small luck bonus, or 'set bonus'. The more artifacts of similar name you equip the greater the luck bonus will be.

If your client is newer than 4.8.0, it will display the indices of equipment slots providing set luck bonus in colours (see table below). This behaviour can be toggled with the 'equip_set_colour' option in =3 .

The randart rings of power dropped by Nazgul are exempt from this and won't give any kind of bonus nor contribute to one.

The exact luck boni for those 'artifact sets' starting at two items are:

```
Number of artifacts equipped | Luck bonus | Equip slot index colour
-----------------------------+------------+------------------------
              2              |    + 3     |        green
              3              |    + 6     |        light blue
              4              |    +10     |        violet
              5              |    +15     |        red
              6              |    +21     |        orange
              7              |    +28     |        light umber
              8              |    +36     |        light umber
          9 or more          | +40 (cap)  |        light umber
```

..which is actually the sum of all numbers from 1 up to the number of artifacts
you have equipped. Eg 2 artifacts -> 1+2 = 3. 4 artifacts -> 1+2+3+4 = 10.

Multiple equipped sets don't stack, only the biggest set counts!

Artifact resets

The old system of resetting all true artifacts at once every 3 months has been
replaced by a new "fluent" reset system that utilizes 'artifact timeouts' which
are counted down separately for each artifact, starting when it is found:

Artifacts will last for 5 weeks after they have been found (ie dropped by a
monster/chest/just being generated on the dungeon floor, and picked up by a
player), after which they will "time out" and disappear. This timer is specific
for each single true artifact, depending on when it is found (again).

No compensation is given when an artifact times out and disappears, since that
would encourage hoarding, so sell an artifact to a store in time before it
actually vanishes.

To check the timeout of an artifact, inspect it ('I' to inspect).
For your character to 100% "know" if an artifact is a true artifact or not it
needs to *Identify* the item. So this will be required to see the timer on it.

The timer will also continue to run out while the owner/carrier of an artifact
is offline.
Trading artifacts between characters has no effect on the timeout.

Grond and Morgoth's crown do not time out. These are the only artifacts that
can exist multiple times, ie are not unique, so every player can acquire them.

There are a few special artifacts that can only be found by winners (kings/
/queens/emperors/empresses). These have twice the timeout delay (10 weeks).

Level 100 artifacts are also treated specially: They do not get their remaining
timeout halved when their wearer beats Morgoth.

If a character who is carrying true artifacts wins the game, ie beats Morgoth,
all the true artifacts he is already carrying will from now on time out at
double speed - except for artifacts that have a native level of 100, which
currently are only The One Ring and the Power Dragon Scale Mail 'Bladeturner'.

Characters that are inside the Ironman Deep Dive Challenge dungeon will always
have all their true artifacts time out at double speed. (This is not cumulative
with the doubling from 'winner' status mentioned above.)

'Ironman' server: All artifact timeout delays are doubled here (10 weeks for
regular true artifacts, 20 weeks for winners-only true artifacts).

The Ring of Phasing has no timeout (!) but will instead immediately reset when

someone else kills Zu-Aon. Until then its owner can keep it indefinitely.

(5.10) Destruction of items by elemental attacks

Items in your inventory can be destroyed if you are hit by an elemental
attack. Those attacks can even have a very slim chance of damaging an item
that you have equipped (see (5.10a) subsequently)!

For the basic four elements, fire, cold, acid and lightning the damage done to
your inventory or equipment depends somewhat on the amount of damage the attack
does. Very low-damage attacks will even have no chance to pentrate the backpack
hull, so your inventory won't be harmed at all by those.

There are two different cases, inventory items and equipped items:

-Inventory items can get destroyed or in some cases damaged by various
 elemental attacks, or disenchanted (equipment only) or discharged
 (by lightning: Magic devices, amulets, ethereal ammo), depending on the
 item type and element type.
 See (5.10a) below for details on disenchantment and discharge.

 Having resistance will reduce the chance of inventory items getting destroyed
 somewhat. To protect your inventory effectively though you will need to have
 double resistance (*), ie static + temporary resistance. This will protect
 inventory items completely from getting destroyed by that particular element.
 Being immune to an element will also protect all your inventory (and euqipment
 too) from any damage from that element.

-Equipped items can get damaged by certain elemental attacks (armour) or they
 can get damaged when used to attack an elementally affine monster (weapons) or
 when blocking attacks of such a monster (shields).

 Having resistance will reduce the chance of equipment items getting damaged
 somewhat. Having double resistance* will greatly reduce the chance of damage.
 Being immune to an element will also protect all your equipment from any
 damage from that element.

(*) "Double resistance": Static resistance gained from an equipped item or an
 intrinsic character class/race resistance or a resistance acquired by training
 a skill, plus temporary resistance gained from either consumables (usually
 potions) or castable spells or activatable items that grant you temporary
 resistance on activation - also see (5.15).)

Some items have IGNORE_xxx flags which let them ignore certain elements,
completely preventing them from being destroyed or damaged by that element.

Items usually ignore an element if they have the according resistance (usually
due to ego powers), for example a leather shield of resist fire will ignore
fire damage. This is not a given though, so maybe double-check the presence of
the IGNORE_ flag.

All artifacts, random and static ones, cannot be harmed by elemental attacks
of any type.

As a specialty, all items that resist or ignore disenchantment (eg Dark Swords)
can also not be damaged by any elemental attacks!

Here is a table of items and which elements they are susceptible against:
"Impact" happens if you fall into a pit, smashing some potions on hitting the
floor. Items that IGNORE_COLD also resist impact damage.

Usually items that contain wood, leather or stuff are susceptible to fire and
acid, while things that consist only of metal are just susceptible to acid.

	Acid	Elec	Fire	Cold	Impact*	Water	Shards
Arrows	x		x				
Bolts	x		x				
Pebbles							
Shots							
Slings	x		x				
Bows	x		x				
Crossbows	x		x				
Wooden boomerangs	x		x				
Metal boomerangs	x						
Razor boomerangs	x						
Swords	x						
Axes	x		x				
Blunt	x		x				
Polearms	x		x				
Leather caps/Hats	x		x				
Metal caps/Helmets	x						
Crowns	x						
Leather shields	x		x				
Shields	x						
Boots	x		x				
Gloves	x		x				
Cloaks	x		x				
Soft Armour	x		x				
Hard Armour	x						
DSM Armour							

	Acid	Elec	Fire	Cold	Impact	Water	Shards
Scrolls	x		x			x	x
Parchments	x		x				
Potions/Flasks			x	x	x		
Bottles			x		x		
Lamps	x		x				
Wooden chests	x		x				
Metal chests	x						
Skeletons	x		x				
Junk	x						
Rings		x					
Amulets							
Wands		x					
Staves	x		x				
Rods							
Spell Scrolls	x		x			x	
Spell Crystals	x	x					
Beginner Handbooks	x		x				
Handbooks (**)	x		x			x	
Tomes (**)	x		x				
Greater Crystals		x					
Custom Books	x		x				

```
(*) Impact-based attacks (includes force- and sound-based attacks):
 These do not hurt items in your inventory. For example impact hounds breathing
 at you will not destroy any potions in your backpack.
 However, there are some cases where impact-type destruction can happen to your
 inventory items:
 1) Falling through a trap door/chasm without having 'Feather Falling'.
 2) Rocket attacks, if you do not resist both, shards AND sound!
 3) Inferno/detonation damage, if you do not resist both, shards and sound.
    However, inferno and detonation damage cannot be caused by monsters.


(**) Some tomes or spellbooks will resist certain elements, for example a
 Tome of the Eternal Flame cannot be harmed by fire.



(5.10a) Equipment damage from elemental attacks
-----------------------------------------------
Armour can get damaged when an elemental monster attacks you or when you get
hit by elemental magic. Blocking an attack with a shield may damage it in the
same manner. Weapons may take damage if you hit an elemental monster with them.

Armour (and shields in archaic server version) getting damage means a reduction
of their +AC bonus by 1 point each time, while weapons getting damaged means a
reduction of their +damage bonus by 1 point each time.
AC bonus won't drop lower than half the negative amount of the base AC.
Damage bonus won't drop lower than -10.

If the player has resistance to the element, this will cut down the probability
of any equipment damage. Having double resistance (permanent + temporary) will
cut it down even further.
To completely prevent any equipment damage, you need to become immune to the
element, or the equipped item needs to ignore the element. In most cases, items
that grant resistance to an element also ignore it.

The following table lists the elemental damage taken by various item types.
```

	Acid	Fire	Water
Wooden boomerangs	x	x	
Metal boomerangs	x		x
Swords	x		x
Axes	x		x
Blunt		x	
Polearms		x	
Leather caps/Hats	x	x	
Metal caps/Helmets	x		x
Iron crowns	x		x
Crowns			
Leather shields	x	x	
Shields	x		x
Boots	x	x	
Gloves	x	x	
Gauntlets	x		x
Cesti	x	x	x
Cloaks	x	x	
Soft Armour	x	x	
Metal/steel Armour	x		x
Mithril/adamantite			
DSM Armour			

Also, disenchantment can disenchant your equipment if not resisted, lowering
either (+hit, +dam) or [+armour class] boni on your equipped items, down to +0.
Even artifacts are not safe! Only if you have disenchantment resistance or the
item has the IGNORE_DISEN flag (ignore disenchantment) then the item is safe.
Ethereal ammunition is especially susceptible to disenchantment.

Last but not least, electricity damage can also discharge items in your
inventory or even your equipment, if the item doesn't ignore or resist
electricity.
This mainly concerns magic devices, but also amulets!
Ethereal ammunition is also susceptible, similar like to disenchantment.
Items that ignore electricity are safe, and if you have double
electricity resistance (or immunity of course) then all items are safe.

(5.10b) Item damage on the floor

Items lying on the floor can also get damaged by elemental attacks and whatnot.
In general, the same rules as for inventory damage apply here, although the
effects might take a more drastic turn: Items often get destroyed right away
instead of merely damaged.

Disenchantment and discharging (electricity damage) also works on items on the
floor, even more effective than on items in your inventory or equipment.

Also, some higher-tier elements can have drastical destructive effect, wiping
the floor almost clean except for artifacts, because artifacts cannot be
destroyed by any kind of spell damage:
- Raw magical energy (ie mana storm, mana ball, etc.)
  Some items resist or ignore mana, those are safe!
- Meteor impact.
- Annihilation.
- Disintegration.
- Havoc/inferno/detonation/rocket.

Last but not least be informed that Holy Orbs and Holy Fire destroy all cursed
items, except again for artifacts.

(5.11) Earthquakes

Earthquakes will cause ceilings to collapse and the ground to shift and crack,
burying items, players and monsters and inflicting a lot of damage.
All fields in a certain radius around the epicentre have a certain chance to
be filled with rocks, to be cleared from previous obstacles (walls) and turn
into empty floor fields, or to remain untouched and unchanged.

Players don't take damage from their 'own' earthquakes, caused by their
equipment or items (for example weapons of earthquakes or scrolls of
destruction).

If you have equipped an item that has the ego power 'of Earthquakes' (either a
weapon or a digging tool), you can try to cause an earthquake at will by
striking the ground at your feet.
To do this, tunnel into direction '5' aka your own grid you are standing on.
The item with the biggest earthquake chance will automatically be chosen from
your equipped digging tool and your equipped weapons (with the most powerful
one being The Mighty Hammer 'Grond').
When striking the floor, any 'Q' inscription (available on Grond only) on the
item used is ignored as this action is interpreted as a deliberate attempt to

cause an earthquake.

Earthquakes can deal up to 300 damage if you cannot evade the falling rocks
and shifting ground: Depending on the number of unchanged (by the earthquake)
empty fields that are adjacent to your character, there is a chance to 'evade'
and take much less damage or even none at all. Earthquakes can also stun you.

Items will usually be destroyed/lost. Stairs and void jump gates are immune.

Monsters killed by earthquakes do not yield experience, loot or other credit,
same as goes for monsters erased by *destruction* or genocide.

Earthquakes actually erases objects completely, so potions caught up in one
will not cause any shatter-effects.

If there is no safe (ie non-wall) grid next to a player when he gets hit by an
earthquake, he will take a lot of damage. Otherwise the player has a chance to
dodge the quake and take less or even no damage. The dodge chance is affected
by the player's Dodging skill and whether he is Shadow Running.
Damage taken by earthquakes is halved if the player has trained 'Earth' school
to 50.000 or if he is in wraithform, these two stack for 3/4 reduction total.

(5.12) Curses

Several items you find will be {cursed}!
Cursed items usually have bad effects that outweigh or dominate their useful
abilities, and you cannot take them off once you equipped them, as long as
the curse isn't broken. Cursed artifacts and ego items are pseudo-ID'ed as
{terrible}. Shops won't buy cursed items, they might buy the item after the
curse is broken, however.
If you equip an unidentified item and it carries a curse your character will
notice 'Oops, it feels deadly cold!'.

Note: Instead of dropping an item which curse you have successfully broken,
      you may of course also just outright destroy it with 'k' key instead.
      You cannot destroy artifacts though (for example Rings of Power dropped
      by Nazgul).

There are different types of curses:
CURSED   can be broken by a regular 'remove curse'.
                Item cannot be taken off or destroyed (via 'k' key) until the
                curse is broken.
HEAVY_CURSE   requires a strong '*remove curse*' to be broken.
                Item cannot be removed until the curse is broken.
                On weapons, there is a high chance of resisting disarming.
                See the tip regarding the use of enchant scrolls to break a
                heavy curse instead of using a *rc* scroll, written at the
                bottom of this paragraph!
PERMA_CURSE   This curse can never be broken.
                Item can never be taken off or otherwise removed again!
                Mimics polymorphing into a form that cannot wear the specific
                item won't succeed getting rid of it either, instead they will
                still have the item equipped!
                There is absolutely no way to get rid of this item. If you
                find a way then you found a bug =).
CURSE_NO_DROP   these items cannot be dropped from inventory as long as the
                curse isn't broken. CURSE_NO_DROP occurs together with
                CURSED or HEAVY_CURSE.
AUTO_CURSE   occurs together with CURSED or HEAVY_CURSE.
                If the curse is broken, AUTO_CURSE items will automatically

recurse themselves as soon as the item is equipped, taken off,
or picked up. To get rid of an AUTO_CURSEd item that you don't
need anymore (d)rop it to the ground after the curse has been
broken. If you had the item equipped, don't take it off but
(d)rop it to the ground right from your equipment! Otherwise
it will recurse itself.
To drop directly from your equipment, press '/' key at the
"drop what?" prompt, which will switch to equipment (and back
to inventory if pressed again).

TY_CURSE   "It carries an ancient foul curse."
                  Randomly drains stats sometimes, even if the item is uncursed.
                  (TY_CURSE will stay, even if the 'normal' curse is broken!)
                  Lowers the items value by 15000 Au.
                  This curse will be on hold while you're in a town, and will
                  also occur rather rarely while you're on the world surface,
                  ie not within a dungeon or tower.
                  Note that your saving throw has a chance to suppress it.
                  Having 'Holy Support' skill at 40.000 or better will completely
                  negate TY_CURSE effects.

DG_CURSE   "It carries an ancient morgothian curse."
                  Rarely summons a random non-unique monster on you, even if
                  uncursed. The monster will yield no credit, xp or loot.
                  Monster groups (escorts or friends) cannot be summoned by this
                  curse, so it will always just be a single monster.
                  The monster's level is random, but never greater than:
                    (player level + dungeon_level + 1) / 2 + 1.
                  (DG_CURSE will stay, even if the 'normal' curse is broken!)
                  Greatly lowers the items value by 25000 Au.
                  This curse will be on hold while you're in a town area.
                  Note that an anti-magic field has a chance to suppress it.
                  Having 'Holy Support' skill at 40.000 or better will completely
                  negate DG_CURSE effects.

If 'CURSED' or 'HEAVY_CURSE' occurs on an enchantable item such as a weapon or
armour piece, the curses can alternatively be broken by enchanting the item's
stats above +0 manually. (Note: The enchant service of shops CANNOT do this!)
Each enchantment of any of their stats (to-hit, to-dam, to-ac) above +0 has
a certain chance to break the curse. This can often be cheaper than buying a
Remove Curse scroll for HEAVY_CURSE items.
This is an especially commonly used trick for getting rid of Morgul weapons.
Just pick the stat that is already higher. Example:
A Dagger of Morgul (-33,-15) -> You'd enchant its damage to +0 or higher,
since it requires you to buy less scrolls (15+) than going for to-hit (33+).
If the item you want to enchant is among your equipment instead of your
inventory, press '/' key at the "enchant what?" prompt, which will switch to
equipment (and back to inventory if pressed again).

Flipping of heavily cursed items:

Vampires, Hell Knights, and Corrupted Priests while Blood Sacrifice is active
have a special take on heavy curses:

If an item is heavily cursed and it is NOT the "of nothingness" type (weapons)
and also not a Nazgul's ring of power, then if a vampire or Hell Knight (true
one, not mimicked) or a Corrupted Priest in Blood Sacrifice form equips it, its
negative boni will flip to positive numbers.

Also vampires tend to greatly resist certain bad effects that heavily cursed
items may exert, making for example Morgul weapons and some heavily cursed
true artifacts quite useful.
Look up the Vampire race description in (7.4) for more information.

Randarts however will not get 'flipped' but rather rerolled completely! This
follows three rules:
a) the resulting randart won't be cursed,
b) the resulting randart won't drain hitpoints of undead or demon users,
c) the resulting randart keeps all 'good' abilities it might have had.

In very rare cases rerolling the item might fail and it will stay cursed, oops!
This happens if it already had holy flags SLAY_EVIL/SLAY_UNDEAD/SLAY_DEMON or
even KILL_UNDEAD/KILL_DEMON, light radius and WHITE_LIGHT also affect this.
However, if the item has the CHAOTIC flag, all of the 'good' flags mentioned
above will no longer prevent flipping anymore!

Note that the curse on an item must be heavy, not normal, for all of this
bonus-flipping and rerolling to work.

(5.13) Vampirism

Weapons and other items that you can equip may be 'vampiric' (see (5.8)),
meaning that they drain life from your target.
Mimics who use a vampire form and players of 'Vampire' race will also get a
vampiric 'brand' on their melee attacks (see (7.7)).
Vampirism does not work with magic, only with physical attacks.

Vampiric life draining heals you with a part of the damage you afflicted on
your target, almost each hit! The more damage you deal and the more attacks per
round you have, the more life you will leech back. There's a maximum amount of
HP which you can leech per round, which isn't reached until your character
deals quite a lot of damage. In short:
Leeching is based on a fraction of your damage dealt.

Exact formula for melee:
The amount of HP you heal is 1d2 + 2d(damage/16) on each hit, however it caps
at a maximum amount of 50 HP divided by your BpR, per attack (rounding errors
are handled so you don't lose anything if that's not a clean division).
Example: If you have 8 BpR and deal 64 damage each hit and have average dice
rolls in the formula, you'd try to leech 52 HP during that turn, saturating the
cap pretty well.

Exact formula for ranged:
The amount of HP you heal is 1d2 + 2d(damage/16) on each hit, however it caps
at a maximum amount of 10 HP per shot.
Example: If you have deal 128 damage each hit and have average dice rolls in
the formula, you'd try to leech 10 HP during that turn, saturating the
cap exactly.

Vampirism does not work on all types of monsters. From some it is not possible
to drain life force. Those immune to vampirism are:
- undead monsters
- nonliving monsters
- in general, all elementals ('E'), golems ('g') and vortices ('v').
Although demons and angels don't really 'live', vampirism is able to drain
the powers that allow them to exist, and so vampirism works against those too.

The best case is to have vampiric flag on a weapon, that will drain at maximum
efficiency. However, it will only drain if you hit the monster with that
particular weapon.
If you use other vampiric equipment, like gloves, they will be a bit less
efficient than an actual vampiric weapon, meaning that you will leech less
frequently (the amount of leeched life per hit is not penalized though) but in
turn it will work with any weapon you use (ranged too).

For ranged weapons it doesn't matter whether the bow or the ammunition is
vampiric. It won't increase your over all life leeching if both are vampiric
either.

Note that vampirism gained from mimicked forms only works on melee combat.
Vampires (real ones as well as mimicked ones) usually only are half efficient
at vampiric leeching, compared to vampiric weapons, due to half of vampires'
attacks being normal hits and the other half being biting (which does the
actual leeching).

Last but not least some items might be 'Chaotic'. This means there are a few
specific things that can happen on striking an enemy. One of them is vampiric
life drain, which (together with 'confusion') is actually the most common one.
When it procs (which isn't that common) it will have the same effect for that
particular hit as if your weapon was actually vampiric. It does not stack with
Vampirism in any way and also cannot really replace the reliable, continuous
effect of 'real' vampirism (For more details on the CHAOTIC flag, see (5.8).)

In general, vampiric flags don't stack from multiple sources! Just the source
that fits the situation best (usually weapon/ammo) overrides the weaker ones
(usually non-weapons). Here is a table of priority - as was just explained,
only the most powerful source is applied, the rest is ignored:

Vampirism source priority table (from best at the top to worst at the bottom)
The best source overrides all weaker ones, which simply get ignored:

Melee	Ranged
Weapon 100%	Ranged weapon 50%
Vampire bat/mist form 100%	Ammunition 50%
'Chaotic' effect (proc) 100%	
Vampire character race 50% (*)	
Other vampiric forms 50%	
Non-weapons (gloves) 50%/100% (**)	Non-weapons (gloves) 33%
Fruit bat (native only) 50%	
Fruit bat (potion only) 33%	

(Mimicked fruit bats don't get vampirism.)

(*) Training Necromancy and Traumaturgy schools can increase this further,
    see the skills' descriptions for details.

(**) 100% if on gloves and fighting without weapon and shield (Martial Arts),
    50% otherwise.

(5.14) Invisibility

Invisibility on monsters is binary, either they are invisible to a player (if
he doesn't have 'see invisible' ability) or they aren't (if he does have it).
Note that ESP overrides invisibility, so if an invisible monster isn't
empty-minded (or has special ESP-cloaking such as 'telepath' ego monsters) you
can spot it with the matching ESP even if you don't have 'see invisible'
ability. Some type of magic may detect invisible monster too, while some other
creature-detection type of magic actually fails against invisible monsters.
Players who don't have 'see invisible' but have infra-vision (and aren't
blinded) can also see invisible monsters if they aren't cold-blooded.

For players being invisible it depends:
-Invisibility from spells has a certain power shown in the spell's info.
-Invisibility from items uses 4/5 of the player's level for power
  (player level is capped at 50).

-Invisiblity from monster form (mimicry users) is similar to invisibility from
 items, except that its power is the average of monsterlevel/2 and playerlevel,
 with monsterlevel capping at 100 and playerlevel capping at 50.
Invisibility powers from different sources do not stack, the best one overrides
the weaker ones.
Some items that grant invisibility also have +mods on them (for example '+3'),
these don't affect the invisibility itself, but are usually just an extra
+stealth bonus or some completely different kind of bonus that item also
happens to grant (use *Identify* to find out).

The actual effect invisibility has on gameplay will also be affected by player
and monster level, the ability to see invisible, and shadow cloaks, as follows
here:

A player who is invisible is harder to spot for monsters in the way that they
only have a certain chance to see the player on each turn, making them move
erratically instead of directly targeting the player. This also helps against
casters, archers or breathers who won't be able to target you as well (often)
as they usually could. Your invisibility power is continously compared to the
monster's level, causing an internal 'dice roll' that determines whether or not
the monster will see you on each turn.

Being invisible costs your body a lot of effort, resulting in getting hungry
quickly.

Invisibility won't work at all on monsters that are..
        -invisible too.
        -game bosses (Sauron, Morgoth, Zu-Aon).
        -Dragonriders, they have ESP.
        -nonliving monsters with empty mind (not using optical senses).
        -able to see through the rogue-specific 'cloaking' ability, these can
         see through invisibility too (compare (0.2) 'cloaking mode'):
         Eyes, angels, Nazgul, nether guards, and unique monsters which are
         both smart and powerful at once.

All other monsters are randomly affected by the player's invisibility,
meaning that they will only sometimes be able to spot him (they will see the
player kind of 'flickering').
The closer a monster is, the better its chances to spot the player.
Some monsters have better chances to spot the player, depending on
        -distance to the player,
        -level of the player (higher level = harder to spot),
        -monster class (Dragons, demons, undead, animals, never sleeping
                       monsters and smart monsters are better at it;
                       orcs, trolls, stupid monsters are worse),
        -the vision power of the monster,
        -the level of the monster,
        -player carrying a light source (not affected by vampires' "intrinsic
         light"), doubles the chance of spotting him,
        -player wearing an aggravating item, further triples the chance.

Invisibility also affects other players:
If another player is invisible and of higher level than you..
        -you can see him if you can see invisible and he's not wearing a
         shadow cloak;
        -otherwise he'll be completely invisible to you.
If another player is invisible and not of higher level than you..
        -you can see him easily if you can see invisible and he's not wearing
         a shadow cloak;
        -you see him 'flicker' if you lack seeing invisible or if he's wearing
         a shadow cloak (or both). He will fade in and out of your sight.
         If you want to look at his equipment with the ' key, then you'll

need some timing, might take several tries.
Invisibility (on players) overrides ESP. So it does help in a (blood bond)
duel even if the opponent has ESP.

The effect of invisibility is greatly reduced in pvp (you cannot become
completely invisible even if your level is higher than the other player) but
still gives a slight edge.

Cloaking:

The ability to cloak themselves is exclusive to rogues and automatically
acquired at level 15. This will effectively render them invisible, but it is in
fact NOT the "Invisibility" that has been described above.
Cloaking overrides any detection mechanism, a cloaked player can only be seen
by party members, certain special monsters, or while the cloaking is weakened
because the cloaked player performed certain (noisy) actions.
See (0.2) for more information about cloaking.

(5.15) How abilities, resistances and boni stack

(Also see (5.6) for basic information about damaage types and resistances.)

The same resistance from two or more items in your equipment don't add to each
other. For example you only need one item that provides fire resistance. If
you equip two such items you won't get better resistance than with just one
item. You cannot get "double resistance" from two items' static resistances.
This rule applies to all resistances and abilities that don't use a bonus
number to indicate their effectiveness, like faster mana replenishing or hit
point regeneration, telepathic powers, slow digestion, etc.
Intrinsic resistances and abilities gained from your class or race, or those
acquired from training a skill are also static resistances and will not stack
with other static resistances from items.

However, there is a way to further increase your base resistances (fire, cold,
acid, lightning) or poison resistance temporarily:

Use an item or spell that provides some temporary resistance. Static resistance
and temporary resistance actually stack and their effects are multiplied!
For example if you wield a shield of resist fire and you quaff a potion of
resist heat you'll have double fire resistance as long as the potion lasts,
resulting in fire damage being cut down to 1/9 instead of 1/3:
1/3 static res * 1/3 temp res = 1/9 total res.
This is quite close to having fire immunity, as far as single monster fights
are concerned.
Not only potions can boost your resistances temporarily, some items can also
be activated for temporary resistance, for example cloaks of lordly resistance
or elemental protection rings or certain artifacts. And of course there are
some spells that can be cast for temporary resistances.

Note that two temporary resistances to the same element do not stack either,
same as how two static resistances to the same element don't stack.
Only one static and one temporary resistance will stack in total, ever.

Stat increases or ability increases that are not 'flags' (flag means you either
have it or you don't) but that use bonus numbers will add to each other.
For example an orcish shield (+2) that increases your strength by +2 and a
kolla (+1) which also increases your strength (just by +1) will add up and
your character's strength will be increased by +3 in total!
Same goes for IV (Infra-Vision), luck, extra attacks, speed, etc.

There are some abilities which are not flags although they might look like it.
In fact, they add up / stack. Those are:
-Extra shots (concerning ranged weapons)
-Extra might (concerning ranged weapons)
-Drain mana ('Drains your magic'. Note that 'mana regeneration' (also called
 mana-charging) does NOT stack. So it can cancel out the effect of only ONE
 item that drains mana, not of any more). See (4.11b) for more information.
-Drain hit points ('Drains your health'. note that 'regeneration' does NOT
 stack, so it can cancel out the effect of only ONE item that drains hit
 points, not of any more. However, the 'Health' skill is able to further
 increase your regeneration rate). See (4.11b) for more information.
-Drain experience ('Drains your life force'). See (4.11b) for more information.
-Extra light radius

(5.16) Experience-draining items

Some items, such as randart rings of power (dropped by Nazgul) drain your
experience points permanently. Here are some details about that process:
-Experience drain from multiple items stacks, although it doesnt add in a
 linear way. So, wearing two rings of power won't drain twice as fast as one,
 but about 1,5x as fast.
-Experience drain is not temporary, so it cannot be restored by potions of
 restore life levels. To make up for it, you'll have to kill monsters..faster.
-Experience drain won't go further than the experience you need at least to
 maintain your current character level. If you reach that experience border,
 experience drain will stop, even if you still have the items equipped.
 So you will not lose levels from experience drain.
 HOWEVER: If a monster or other effect drains your experience below your
 current level, the experience drain from items will kick in again!
-Experience drain will happen much slower if you're on the world surface,
 ie not inside a dungeon or tower.
-Experience drain will completely hold while you're in a town, so you can just
 take any time you want for shopping or sitting out blacklists, without losing
 any experience at all.

(5.17) Digging

Your chance to successfully tunnel through an obstacle depends on the obstacle
and your 'digging power'.

In general, the digging power depends on your digging tool's (+digging) bonus
and its (+hit,+dam) enchantment and also on its weight (that's why a pick is a
better digging tool than a shovel for example, even if they have the same bonus
enchantments). Digging power further depends on your Digging skill and your STR
(strength).

Each digging attempt of your character has a constant chance to succeed, based
on your digging power vs the material you're trying to tunnel through. If your
digging power is too low, the chance might even be 0% so you would be trying
forever, giving you a message "You cannot seem to make a dent in the ..." and
automatically stopping your digging process, as your character realizes the
futility of the attempt.

Digging tools vs weapons

Digging tools can actually also be wielded as weapons (Shift+W).
Vice versa, an equipped weapon can also serve as digging tool, if it's any axe,

any sword, or from the polearm-class a scythe or sickle.
However, weapons only have 'digging power' against soft targets such as spider
webs and vegetation, ie trees, bushes, ivy.
So even if you lack a digging tool, an equipped sword or axe can substitute
somewhat in these cases. For some weak, unenchanted digging tools, weapons can
even be more effective to use (see table further below)!
When you attempt to tunnel, your character will automtically apply the best
tool you have equipped, choosing from weapons and an actual digging tool.

Causing earthquakes

For digging tools that have the ego-power 'of Earthquakes', you can cause an
earthquake by digging the floor you are standing on, ie direction '5'.
Again, this will also check your weapons, and if you have a weapon equipped
that can also cause earthquakes, the strongest source will automatically be
applied. So if you have The Mighty Hammer 'Grond' equipped and want to cause
an earthquake with it, just tunnel direction '5' and your character will smash
it into the floor where you are standing, most likely causing an earthquake.

If you're not interested in the exact formulas for digging power, skip down
to (5.17b) which has a table with example values for certain scenarios.

(5.17a) Digging - exact calculation

Your digging power is calculated as follows:

For actual digging tools

An equipped item that provides (+X) to digging will add 20*X.
If you have a digging tool equipped, its weight is added (eg 25.0 lb -> +25).
If the digging tool is enchanted to hit or to damage, those values are added.

The power value so far is now multiplied by a value between 1 and 2, depending
on your 'Digging' skill (see (7.2)). If the skill is 0, the multiplier is 1, if
it's 50, the multiplier is 2. Otherwise the value is linearly inbetween.
After that, a bonus is added depending on your strength:
Ranging from +0 at 3 over +10 at 18/10, +50 at 18/110 up to +100 at 18/***.

If you don't have a digging tool equipped, your total digging power is halved.

If your resulting final digging power is zero, then it is set to 1, so you
always have at least a tiny chance of digging through the weaker materials
that have a +0 difficulty (see table below).

For weapons

The calculation is simpler than for diggin tools, as it doesn't take your
digging skill into account.
Swords:
    vs wood: 30 + weight/2 + (tohit+todam)/3
    vs fibre: 60 + weight/4 + (tohit+todam)/2
Axes:
    vs wood: 60 + weight   + (tohit+todam)/2
    vs fibre: 30 + weight/2 + (tohit+todam)/3
Scythes and sickles:
    vs fibre: 60 + weight   + (tohit+todam)/2

'Wood' encompasses trees, dead trees and bushes.
'Fibre' encompasses bushes too, ivy, and actually spider webs.
Against other types of 'terrain', weapons have no digging power at all.

Now a bonus is added to the fibre/wood power, depending on your strength:
Ranging from +0 at 3 over +9 at 18/10, +19 at 18/110 up to +30 at 18/***.
(Internals: For this bonus we actually borrow the 'CON-MHP' bonus category,
which we adjust to our purpose by subtracting 128 and re-adding 5 (net -123),
so it's a different bonus scale than the 'STR-DIG' one used for digging tools.)

Now if the weapon is a 1.5-handed weapon but it's not wielded with both hands
because you also have a shield equipped (aka awkward_wield encumberment) the
resulting fibre/wood digging powers are halved.

Now we continue for both, weapons and real digging tools:

To successfully dig through certain features, your digging power must be
greater than the result of a random number roll "random(0..x-1) + y":

Spider web   100 + 0
Rubble/Ivy   200 + 0
Bush   300 + 0
Dead tree   300 + 0
Tree   400 + 0
Sandwall   300 + 0
Magma intrusion   400 + 10
Quartz vein   800 + 20
Granite wall   1600 + 40
Tunneling any other wall types, such as ice walls, and also unknown secret
doors (as long as they're not embedded in permanent wall types) has the same
difficulty as granite walls.

The +y is a fixed value that gets added to the random roll of (0..x-1), the
sum of this is what you have to overcome with your digging power value.
For example you cannot successfully tunnel through quartz if you don't
have at least 21 digging power, since you have to overcome the +20.

Example: If you have 21 digging power and try to dig into quartz you'll have to
be very lucky and hope for the random(0..799) roll for quartz to actually be a
0 so that the result will be 0+20 which is 20 and therefore smaller than your
digging power of 21. So on each turn of tunnelling your chance to succeed would
be 1 in 800 in that case.

If you try to use a digging tool that is too heavy for you, you will see it in
your encumberment bar and there will be a warning message on equipping it,
 "You have trouble wielding such a heavy tool"
which means your digging power will be cut down to 1/3 when using it to dig.

(5.17b) Digging - common example values

Some example values, assuming 0.000 'Digging' skill
and unenchanted (ie (+0,+0)) digging tools with (+1) to digging:

Without a digging tool..
-You always have a chance to remove rubble and organic material, even without
 a digging tool. Might take quite a while if your strength is low though.
-You cannot tunnel through granite wall without a digging tool if your STRength
 is below 18/180.
-You cannot tunnel through quartz without a digging tool if your STRength is
 below 18/100.
-You cannot tunnel through magma without a digging tool if your STRength is
 below 18/60.

```
With a digging tool..
-You can tunnel through all materials other than granite walls with just a
 basic shovel even if your STRength is only 3.
  (For quartz, you have a 3% chance to succeed at 18/50 STR with the shovel
   and at 18/10 STR with a pick. If you use an enchanted shovel (+9,+9) (+1)
   however, you already have a 3% chance to succeed at only 5 STR.)
-You cannot tunnel through granite with a basic shovel if your STRength is
 below 18/30.
-You cannot tunnel through granite with a basic pick if your STRength is
 below 12.

You can tunnel through all tunneable materials, no matter your strength, with..
-a (+1) shovel that has +hit and +dam enchanted to a total of at least +15.
-a (+1) pick that has +hit and +dam enchanted to a total of at least +6.
-any (+2) digging tool or better (except if it was cursed and therefore has too
 negative (+hit,+dam) enchantments).

For good measure a digging tool vs weapon example:
 You have 5.000 Digging skill and you are trying to fell a tree (it classifies
 as 'wood' target) and you equipped a Shovel (+1) (+0,+0) and are also wielding
 a Broad Axe (2d6) (+0,+6). Your strength is 18/20.
 The axe does provide digging power in this case as the target 'Tree' is in
 either one of 'wood' and 'fibre' categories.

 The shovel's digging power:
    (+1) x 20 + 6.0 lbs weight +0+0 (no hit/dam enchantments) = 26
    Your 5.000 skill is applied: 26 x (1 + (5.000/50.000)) = 26 x 1.1 = 28
    Digging-tool class strength bonus added: 18/30 -> +15 -> 28 + 15 = 43.
    The shovel's final digging power is 43.

 The axe's digging power:
    60 + 15.0 lbs weight + (+0+6)/2 = 60 + 15 + 3 = 78.
    Weapon class strength bonus is added: 18/30 -> +11 -> 78 + 11 = 89.
    The axe's final digging power is 89.

 So since the axe provides a better digging power against the tree, you will
 automatically be using the axe and your digging attempts will apply the axe's
 digging power of 89 instead of the (in this scenario) weaker shovel's digging
 power of 43.


(5.17c) Digging - further information
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For digging through granite wall without having to wait for ages to succeed,
you will definitely want a better digging tool than basic shovels or picks.
For example ones 'of Digging', a magical ego power for digging tools.
Or higher level diggers such as gnomish, orcish or dwarven diggers or mattocks,
which have a higher base digging bonus than just (+1).

Tunnelling into walls that are actually secret doors will be treated as if
you were tunneling into granite wall, but on success you won't "remove" the
door but actually "find" it. You cannot find secret doors in permanent (aka
non-tunneable) walls this way though, such as mountains. Additionally, each
time you try to tunnel the game will roll an additional 'searching' attempt,
so your chance to discover it increases further. Last but not least if the door
is actually trapped and you trigger the trap you will instantly uncover it.

Tunnelling into known doors will just try to open them instead.
If a door is stuck, you will want to 'B'ash it instead of tunnelling, since
you cannot just open stuck doors the normal way.

Tunnelling might reveal special floor features, items or gold (walls that are
```

displayed as a '*' symbol will reveal cash worth of gems or precious metal, but
those walls might not always show it until you use 'Treasure Detection' or
'Treasure Location' magic), see 'Digging' skill in (7.2) for details.
Also see (3.4c) for more information on digging tool mods.

If you haven't got a digging tool equipped, or if it's just a basic shovel (+1)
then wielding a sword or especially an axe can work as pseudo-digger when you
want to hack down organic material such as trees, bushes or spider webs.
Certain polearms that have a slashing effect (scythes and sickles) can help
at least as well as swords or axes against spider webs.
(Dual-wielding does not help, so two weapons can't dig better than just one.
Wielding a 1.5-handed weapon in only 1 hand will decrease your digging chance
though, so take off your shield for best results.)

Last but not least, starting in 4.8.0 you can press SHIFT+W to wield a digging
tool as a weapon. You will still use it for digging too. If you try to dig
while having a digging tool equipped in the weapon slot and another one in the
tool slot, the better one of the two will be used automatically.

(5.18) Recharging

Wands, staves and rods are generally called 'magical devices' in the stricter
sense, this paragraph is about those and those are the only items that can be
manually recharged by the player at will.
There are in the broader sense of the word 'magic device' other items too that
can be activated to unleash a specific kind of magic, such as certain jewelry,
artifacts and special ego-powered items. These cannot be recharged at will
however, the user will just have to wait till they are ready again.

While wands and staves use a charges counter to measure if they are depleted or
not, rods have an internal charge that is completely depleted on using it and
will slowly build up again on its own - depending on the user's magic device
skill the depletion may be less severe, the rod will therefore take less time
to recharge if it had been zapped by a proficient magic device user.

While electricity or disenchantment based attacks may deplete magic devices,
they can usually also be manually recharged when necessary!
So wands and staves will need to be actively recharged by the player when
depleted, while rods (and other, not manually rechargeable items) will
automatically recharge themselves over time, displaying 'charging' label or
just '#' if the item name is very long and there's not enough space.

Recharging can be done via shop service (see (4.5a)), a scroll, another magic
device or a magic spell.
For wands and staves recharging will replenish their charges, while for rods
recharging will reduce their 'charging' delay, aka refill their energy.

When an item is recharged the result depends on the method of recharging and
the item's base type level. For wands and staves it also depends on the current
amount of charges in the device: To minimize the risk of a failure you should
only recharge wands and staves that are already fully depleted ie have zero
charges left.
In general, higher recharge power and lower base item level result in...
 -lower chance for the recharge process to fail,
 -chance for gaining a higher amount of charges replenished.

If the device is successfully recharged and is a device using charges (ie
a wand or a staff) it will become unidentified as you will not know how many
charges it gained. To find out, you have to identify it again.

If unlucky, recharging may result in a failure. Even when recharging at the
highest magic spell level there is still a very slim chance for a failure to
occur.
While a failed recharge may drain rods even further, wands and staves may
either just get their charges depletes or they may even blow up completely,
depending on your (bad) luck. The messages are:
 - "There is a static discharge." - the device survives but is depleted.
 - "There is a bright flash of light." - the device is destroyed.
   (Wands or staves only, rods can only get discharged but not destroyed.)
If the device was destroyed and it was fused with a mage staff, the mage staff
survives and is reverted to its basic state, allowing you to fuse it again with
a new device.

If a wand or staff still has charges when you try to recharge it, the risk of
failure increases for every charge it still has.
So if you want to minimize failure chance, only recharge thosse when they are
already fully depleted.
You can inscribe wands and staves "!D", a quality of life feature which will
automatically deplete the device for you first when you try to recharge it,
so you don't have to activate it manually to get rid of any remaining charges.
The (small) drawback is that you cannot use this inscription if you actually
aim at overcharging a device, ie recharge it further while it is not yet
depleted, to gain even more total amount of charges on it - a very risky
process, obviously.

Means of recharging:
-Scrolls   (60 power)
-Thingol artifact   (80..110 power, depending on magic device skill)
-Shop service   (125 power, see (4.5a))
-Magic spell   (10..140 power)
 (Tier details: Recharge I 10..84, Recharge II 68..104, Recharge III 111..140)

The power determines both, the chance of succeeding in recharging the item and
the degree of recharging done to the item.
Some lesser means of recharging might not be powerful enough to recharge rods,
these require over 60 power, so for example scrolls won't work.

Staves and wands 'of plenty' will receive about twice as many charges from
recharging (with the risk of breaking remaining unchanged) so look out for
those!

If you try to recharge a whole stack of devices in one go, the risk for it to
fail is actually the same as if you recharged just a single item.
You will get the amount of charges replenished to every single magic device in
the stack, at a slight rate of diminishing returns.
In other words: Recharging stacks is okay, it can save you a lot of scrolls of
recharging, just don't go too crazy with the stacks size to keep diminishing
returns low and if it ever fails you might lose a lot of wands/staves at once.

Note that inside the Ironman Deep Dive Challenge (IDDC) it is not possible to
recharge Staves of Summoning or Wands of Polymorph.

Items used to recharge magic devices can be inscribed "@I<partial item name>"
to target a specific item. Also see (0.3) for details about "@I" inscription.

(5.19) Enchanting

Weapons (including ammunition and physical-missile trap kits, meaning Catapult,
Arrow and Bolt trap kits) and armour can be enchanted. There are three types of
enchantments:

- to armour class (in short "to-a" or "to-ac")
- to hit chance (in short "to-h" or "to-hit")
- to damage (in short "to-d" or "to-dam")

Enchanting restrictions:
- Armour can only ever be enchanted to-a, even if it comes with (+hit,+dam)
  mods on it like for example a pair of gauntlets of slaying.
- Weapons can only ever be enchanted to-h and to-d, even if it's a weapon that
  also comes with an armour class mod, eg a quarterstaff or defender weapon.
- Some weapons and armour cannot be enchanted at all:
  - All artifacts.
  - Ego items that have the NO_ENCHANT flag, eg "(*Defender*)" weapons.
  - Normal items that have the NO_ENCHANT flag, which are Dark Swords and all
    three types of "Magic" ammo.

To enchant an item, you can either use scrolls (available at the alchemy shop
or the black market) or enchantment shop services (see (4.5a)).
There are big differences between the effects:
- Shop services always enchant one of your equipped items (which is eligible
  for enchanting) to 5 + (yourlevel / 5), capping at 20. So you reach that
  cap at character level 75 (75/5 + 5 = 20). For ammunition the service caps
  at +15,+15, as ammunition can - in general - never be enchanted higher.
  These services are pretty expensive but can deliver the best result if your
  level is high enough. Their enchantment attempt always has a 100% chance to
  succeed.
- Basic enchanting scrolls:
  - Scroll of Enchant Armour
  - Scroll of Enchant Weapon To-Hit
  - Scroll of Enchant Weapon To-Dam
  These enchant +1 point at a time, but have a chance to fail the higher the
  item is already enchanted. It is hard to get above +10, but the theoretical
  maximum reachable with these is +15.
- High-power enchanting scrolls:
  - Scroll of *Enchant Armour*
  - Scroll of *Enchant Weapon*
  These scrolls will never fail and can reach a maximum of up to +15.
  The weapon-enchanting scroll can enchant either hit or damage, randomly, or
  even both of them.
  If an item enchantment is below 10, then these scrolls can sometimes enchant
  it by multiple points at once.

Details about enchanting via scrolls:
- Items whose enchantment is below 0 will have a 100% enchantment success rate,
  however it might be much cheaper to just use the 'Repair' shop service in
  town, of either the weaponsmith or the armoury.
- If you try to enchant piles of items, the success chance drops to 1/pilesize.
- If you try to enchant ammunition, the success chance increases twentyfold.
- Enchanting an item to at least +0 or better also has a chance to break a
  curse, even a heavy curse (see (5.12) about curses), every time you enchant
  it. If it doesn't break at +0 immediately, just keep enchanting it more.
  This method might be cheaper than buying a scroll of *Remove Curse* in many
  cases. For cursed weapons that have both to-h and to-d enchantments in the
  negative you should therefore pick the (arithmetically) higher value of these
  two to enchant, in order to reach +0 faster and therefore save cash.
  The chance to break the curse is 10% + new enchantment * 10%, so at +0 the
  chance is 10% and at +9 the chance is 10% + 9 x 10% = 100% success.
  Permanent curses can never be broken, obviously.

To-dam enchantments on ranged weapons, ie slings, bows or crossbows, will get
their effect multiplied by the weapon's multiplier (given in parentheses),
making to-dam enchantments especially effective on ranged weapons.
Eg a Long Bow (x3) (+2,+5) will add +15 damage to each shot, resulting as

product from its +5 to-dam enchantment multiplied by its x3 launcher multiplier
for a 5*3 = 15 total damage bonus.

Items that are enchanted will have their item level set to at least the value
of their currently highest enchantment. Eg if you enchant a level 1 dagger
from whatever it was before to now (+3,+11), its level will be set to 11.
(The item level will of course not be adjusted downwards by enchanting.)

(5.20) Wraithform

Wraithform, or "pass wall" form is a character state obtained by spell or item:
-Spectral weapons ('A' to activate one for temporary wraithform).
-Ethereal Dragon Scale Mail (just wear it and you obtain wraithform permanently
 until you take it off again).
-The artifact 'Spectral Shard' ('A' to activate it for temporary wraithform).
-Wraithform spell (Udun school)
-Wraithstep spell (Unlife school)

Items that permanently give you wraithform tell you on inspection:
 "It renders you incorporeal").

There is a confirmation message when using the Wraithform spell:
"You turn into a wraith!"   when you attain wraithform.
"You lose your wraith powers." when your wraithform spell runs out or
                                when your environment hinders your wraithform
                                powers!
The latter happens in those types of vaults that prevent teleportation and can
be very dangerous, as you might find yourself suddenly stuck and unable to
escape quickly, if at all..

Wraithform is very powerful since it allows you to move around the dungeon
without having to follow its room/passages structure, making it easy to pick
encounters or loot items you detected on the ground via detection magic,
and to escape dangerous situations easily (just retreat into walls).

but at the same time wraithform prevents you from attacking anything else in
close combat, except if the target is also able to pass walls (ie possesses
wraithform too, or is actually a ghost or other monster that can pass through
walls).
For this reason it can be dangerous for melee classes to go AFK while in
wraithform, because you will no longer melee-auto-retaliate against most kind
of attackers..

Last but not least, spells cast while in wraithform will only deal half as much
damage as usual, even if the target is in wraithform too.

(6) Monster details
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(6.1) Monsters

All creatures in the game apart from special 'questors' and player characters
are actually "monsters", aka your enemies. Some might exhibit rather neutral
looking movement or no movement at all, some might not even inflict damage,
but none of them is friendly towards you and all of them will in some way or
another make your survival more difficult.

Right after creating a new character you will already encounter "monsters" of

some sort: Townspeople, denoted by the letter 't' and maybe some cats, birds or
fish (if you happen to walk nearby the lake).
Since all creatures are basically hostile, you will auto-attack them when you
move onto an adjacent grid. Killing townies is a good way to make some easy
money. Just beware of mean-looking mercenaries and battle-scarred veterans.

In Bree, the starter town, you might also meet an exception: The 'questor'
standing a bit south of the inn, the 'Town Elder'. He is a purple 't' that
sometimes flashes a bit and is actually not hostile, you can talk to him a bit
by bumping into him.

When you enter the training tower or the dungeon you will soon notice the
variety of monsters, for example you will probably encounter a "floating eye",
denoted by an orange 'e'. These cannot inflict any damage on you but if you get
too close they will gaze at you which will in most cases paralyze you!
If you're unlucky or your Saving Throw stat (Shift+C to check) isn't
particularly great a floating eye might even lock you in paralysis forever,
making you easy prey for any other monster around.

To check monster information you have these ways:
Press ~2 for monsters you have killed or ~3 for a list of 'unique' monsters.
Press ~7 for the 'monster lore' search. It contains all monsters in the game
 execpt for ego-variations (see below).
Press ~1 for spoiler files and there check 'r' and 'E' for base monster races
 and for ego monster types (modifiers that are applied to the base monsters).

There are three types of monsters:
-Basic monsters (over 1100 of those), such as "a Hill Orc" or "a Zog".
-Unique monsters (over 200), such as "Azog, King of the Uruk-Hai".
  You can recognize these by distinctly flickering (like a colour 'spike').
-Ego monsters (over 50). These are not actually monsters but modifications of
  basic monsters, for example:
  The basic monster "Hill Orc" receives the ego-power "Archer", it will become
  "a Hill Orc Archer" and instead of trying to punch you in the face will shoot
  arrows at you.
  Ego monsters can also be recognized by flickering: They receive the ego-power
  colour in addition to their base colour. For above's example that would be
  the green base colour of the hill orc and the orange colour of "Archer"
  ego-power resulting in a green orc that flickers orange.
  If the ego-power colour is actually the same as the basic monster colour the
  resulting ego monster will instead flicker in random colour spikes just like
  unique monsters do.

Some ego monsters can be extremely nasty at low and mid levels. Among the most
feared are probably the (dark-brown) melee-specific egos "Monk", "Warrior" and
"Unbeliever" and the somewhat less bad "Chieftain" and "Possessed" animals as
well as the dark-green "Archpriest" ego which moves fast, has a powerful curse
attack and can summon more monsters.

Monsters have specific loot tables, a base level (r-level, racial level of the
basic monster type in general) and an actual monster level (m-level, the real
level of a monster standing before you, which can be above its basic r-level,
because monsters can appear as levelled-up versions if you encounter them on
much deeper dungeon levels than where they usually start to appear).
See (6.3) for loot tables, see (0.4) for details on m-level and r-level.

Some unique monsters are "dungeon bosses", which means they can only be found
on the final level of a particular dungeon and when you kill them you will
"conquer" that dungeon (press ~8 to check your dungeon info). See (4.5d) for
info about dungeon bosses.

Morgoth, the Lord of Darkness is the game boss. To actually encounter him you

first need to defeat Sauron, the Sorcerer though. See (1.3b) for details.
By defeating Morgoth the player is awarded royal status. There will be two
more dungeons that can only be entered by royalty and offer further, insanely
hard challenges and new unique bosses.

Variant-based monsters

The TomeNET bestiary consists of 4 actual variants plus additions:
- Monsters from original Angband aka "vanilla" monsters. ('BASEANGBAND' flag).
- Monsters from ZAngband variant. ('ZANGBAND' flag.) Tend to be notably nasty.
- Monsters from CthAngband (based on ZAngband) which is set in H.P. Lovecraft's
  Dreamlands and the Cthulhu mythos. ELDRITCH_HORROR monsters are almost all
  from this variant except for a few exceptions which are either related to
  Warhammer or of unknown origin (search the guide for 'eldritch' for related
  information). ('CTHANGBAND' flag.)
- Monsters from PernAngband (which was later renamed to ToME) which is based on
  the Pern novels about Dragonriders by Anne McCaffrey (whose lawyer sent a
  cease and desist order causing the name change and removal of Pern references
  notably except for the still existing "Dragonriders" which is a sufficiently
  generic term to be safe). ('PERNANGBAND' flag.)
- "BlueBand" monsters. This is not a variation but simply refers to monsters
  that I (C. Blue) created and added to the game. ('BLUEBAND' flag.)

In general, BASEANGBAND monsters are probably the easiest monsters of their
respective level, while ZANGBAND and BLUEBAND monsters are probably the hardest
with CTHANGBAND monsters following closely.

However, this isn't true for very-high-level monsters, where all great wyrms,
balrogs, and various top end uniques including the game's boss Morgoth are
actually BASEANGBAND.

Then there also seem to be errors in classification, for example Tik'srvzllat
is currently carrying BASEANGBAND flag but it is definitely a special ToME
addition. These could be corrected in the future, but in the end it doesn't
really matter except maybe a bit for...

Variant rarity -
The default server settings for monster spawns consist of the following table
of probabilities:
- VANILLA_MONSTERS = 100%
- ZANG_MONSTERS = 33%
- CTH_MONSTERS = 33%
- PERN_MONSTERS = 67%
- CBLUE_MONSTERS = 67%

This means that if a monster of the respective flag is generated, it must pass
the percentage roll to actually be generated. So for example monsters from
group ZANGBAND or CTHANGBAND are just 1/3 as common as normal Angband monsters,
while PERNANGBAND or BLUEBAND monsters are 2/3 as common.

This can have a bit of an effect on players looking for certain monsters -
their rarity in the spoiler files (or in ~7) must then further be multiplied by
this variant-rarity %chance to obtain the actual final spawn chance.
Well, or almost final, as some dungeons in turn have rules for spawn rarities
depending on monster classification, for example mostly undead and nonliving
monsters in the Paths of the Dead, etc. - theorycraft is never over!

(6.1a) Normal, boss & unique monsters and how they spawn

Generation-time monster creation:

When a player enters a dungeon (or tower) floor and causes it to be generated, monsters will be spawned on it depending on the floor level (also called 'depth') and the player.

In general, a dungeon floor of level N will randomly get monsters placed on it ranging in r-level from 1 up to N. (Level 0 monsters are for Bree town only.)

This means that if you are looking for say a level 20 monster the highest probability to find it is at a dungeon floor of level 20. You could also go to a floor of level 25 for example, but then the total pool of easily eligible monsters is diluted a bit more from the addition of the level 21-25 monsters.

World map sectors also work this way. Their levels depend on the level of the closest town sector and their distance to that town.

However, 'Out of Depth' spawns are possible: A monster can, albeit rarely, occur on a dungeon floor that is way lower level than the monster. This can be pretty dangerous and will be indicated to the player by a yellow floor feeling, also see (4.8).

Unique monsters (named monsters, eg "Lagduf, the Snaga") may also spawn on the dungeon floor if the player 'generating' it has not yet killed that particular unique monster already.

Dungeon bosses are unique monsters too, but they can only be generated on the final floor of their respective dungeon. They are displayed in yellow colour in the uniques list in the knowledge menu (3˜).

All monsters have their own 'rarity' parameter, which specifies how often a monster spawns. This becomes especially noticable when you are going for a dungeon boss that has a rarity above 'common': It might take several attempts at generating the final dungeon floor until you see him spawn.
The rarity also affects mimics a lot that are going form-hunting, as rare monsters are harder to find and therefore take longer to learn their form.
The rarity is listed in ˜7 and in the r_info spoiler file in ˜1.

Lastly, worldmap terrain and dungeon types (see d_info spoiler file via ˜ld) also determine the type of monster that may spawn, and/or modify the rarity of certain monster classes. For example..
 - the Orc Caves spawn a lot of orcs, much more in relation to other monsters than other dungeons.
 - Ocean on the worldmap spawns aquatic creatures but no land-based critters.
 - The Cloud Planes allow only monsters that at least resist cold and don't allow hounds, undead, demons, jelly, mold or breeders to spawn.

Live-spawn monster creation:

Aside from this monster spawning at level generation time, monsters can also spawn 'live', ie while the player is already on the dungeon level and doing stuff. This can sometimes be dangerous if the player doesn't notice it and the monster is a nasty one.

Restrictions apply to live-spawning though:
 - The game boss, Morgoth, as well as any dungeon bosses cannot live-spawn.
 - There are no live-spawns (except for breeders and summons) in the special dungeon 'Ironman Deep Dive Challenge' (IDDC).
 - Darklings and Candlebearers (for Maiar) cannot live-spawn.
 - Unmakers cannot live-spawn (except for already existing ones multiplying).
 - Live-spawns do not cause or alter a dungeon floor feeling!

– Bloodletters of Khorne will not live-spawn (or get summoned) in groups,
     only one by one. (Because the danger of k.o. is deemed too high.)
   – The event monster 'The Great Pumpkin' cannot live-spawn.
   – Monsters can't act for a random, very short amount of 'wind-up' time
     (between 0 and up to 2/3s real-time on Nether Realm floors).
     This also happens for summons except summons done by a player.
     This makes spawns and monster-summons less deadly.
Also note that at level generation time, monsters cannot spawn on staircases,
but live-spawns can spawn on staircases.

Unique monsters:

Once the player kills a unique (named) monster, he will never generate it again
and the only way to actually meet it again is to have another player, who
hasn't killed it yet, generate a dungeon level and hope for the particular
unique to spawn on it.

However, most unique monsters are eligible for auto-revivification once the
player character obtains the WINNER status, by killing the game boss, Morgoth.
See further below about uniques reviving for winners.

Note that the game boss, Morgoth, cannot be encountered by players who haven't
killed Sauron yet or who currently possess the winner status, ie royal title
and purple name.
Even if you attempt to have someone else generate the dungeon floor and Morgoth
on it, you will be unable to go there and meet him!

The same is true for the seasonal event mob 'The Great Pumpkin', for players
not meeting the required level restrictions. (See 'Seasonal Events' in (4.13)).

There is a special way for everlasting or normal characters who have already
killed Morgoth but then died and thereby lost their royal status, to encounter
Morgoth once more without help from another player, for a chance to regain
their winner status. For details see chapter (4.5a) under 'The Mirror' on how
to change your fate to enable you to 'solo re-king'.

Monsters being summoned:

Monsters (and players) can summon monsters of higher level than themselves.
The summoning levels will be random though and the summoned monsters could also
end up of lower level instead.

The same restrictions as for live-spawns listed above apply to summons as well,
with the exception of summoning in the IDDC, which is allowed.
Especially important, the 'wind-up' time for monsters getting summoned by other
monsters applies, same as for live-spawns (see Live-spawn rules above).

Note that monsters summoning other monsters will cause the summons to give less
and less experience until they are 100% clones that do not yield any XP or loot
anymore. So you can 'farm' summons for a while, but not endlessly.

There are also special types of induced live-spawns that do not get summoned by
the normal summoning mechanics and therefore do not count as 'summons' but are
rather spawned as a result of another monster getting killed.
Two very prominent examples are:
 – Killing a pink horror spawns blue horrors.
 – Killing a warrior of the dawn may spawn more warriors of the dawn.

Dead uniques reviving again for winner characters:

A player that has beaten the game boss, Morgoth, and hasn't died since so he
still carries the royal title and purple name will randomly get dead unique
monsters he killed before revived back to life by the game, so he can kill
them over and over again. Each time he kills them they may randomly revive
again for him at a later time.
If that happens he sees a message "Xyz rises from the dead!" in violet colour.

This check happens once per minute for each eligible (ie winner) player.
The check actually picks a random unique monster that belongs to the pool of
respawn-eligible uniques and then checks if the player already killed it.

If he killed it the game will roll dice against a 'resurrection chance' which
is lower the higher level a monster is, so low-level monsters will resurrect
faster than high-level monsters. If the monster passes the roll it will get
resurrected!
If the monster doesn't pass the roll or if it wasn't actually dead for the
player but currently alive for him then nothing will happen this time.
You can check which uniques you have currently killed or not in the knowledge
menu (~3 key).

This means that the more dead uniques you have the more likely each minute one
of them will revive. On the other hand since one unique is picked randomly each
time independantly of whether it is actually dead or alive to the player, it is
not possible to cause a particular unique to respawn slower or faster (eg by
killing or not killing other uniques). The chance PER UNIQUE will always be the
same over the same amount of time.

This revive-spawning is on hold while the player is in town or in the town area
(the housing zones surrounding each town), so uniques will not respawn until
the player leaves the town area and travels the world map or ventures into a
dungeon/tower.

Some unique monsters are not eligible for revivification, so once the player
kills them he will never generate them again and the only way to actually meet
them again is to have another player, who hasn't killed them yet, generate a
dungeon level and hope for them to spawn on it:
 - The monster level (r-level) must be lower than 98,
   so the game bosses like Sauron and Morgoth also never revive.
 - The Shadow of Dol Guldur never revives (as it is Sauron in disguise!)
 - Nazgul never revive.
 - Dungeon bosses never revive.

(See exceptions for the game boss Morgoth and for the seasonal event
monster 'The Great Pumpkin' explained further above, which cannot be
generated for you by another player if you don't meet the requirements.)

(6.2) Monster flags

Most monster flags you find in the spoiler files (press ~7 in-game or open the
actual file r_info.txt with a text editor or use Mikael's monster search, you
can invoke that one via ~R) are self-explanatory. Here is an explanation of
some flags that are important but might not be obvious:

FORCE_MAXHP   The monster always gets rolled at maximum hit points.
                For example if the monster has 3d6 hit points aka 3 dice with
                6 sides each, it could have anything between 3 and 18 hp.
                But if it has this flag, when you encounter this type of
                monster it will always have 18 hp.
FORCE_DEPTH   You cannot meet this monster out of depth. It will never appear

```
                  on a floor of lesser level that itself.
FORCE_SLEEP       Deprecated, has no actual effect in-game.
                  A note about monster sleep in general: Check monster lore (~7)
                  to see which monsters start out asleep and which are awake.
                  Note that monsters inside a pit (see (4.6)) are never asleep.
OOD_xx            The monster cannot occur more than xx levels out of depth.
                  All unique monsters actually have an intrinsic OOD_20 flag even
                  if it's not shown in the monster lore spoilers.
FRIENDS           This monster comes in a pack. Makes life easier for mimics.
RAND_xxx          This monster has random movement. The xxx number is the chance
                  in percent. Several of these flags will stack.
NO_SLEEP          This does not mean that the monster cannot be asleep when you
                  meet it, but that you cannot use sleep spells (et al) on it.
                  (Compare (4.12).)
NEVER_BLOW        This monster will never attack in melee.
NEVER_ACT         This monster will never move or perform any action at all.
                  So this means it is completely harmless.

NO_TARGET         This monster cannot be targetted with target command.
NO_DEATH          This entity can never die.
NO_AUTORET        You won't use auto-retaliation against this entity.

REFLECTING        The monster can deflect shots, arrows and bolts, physical and
                  magical projectiles, prolonging the fight (flat 50% chance).
                  Boomerangs cannot be deflected. For thrown items it depends on
                  their weight, only very light items can be deflected reasonably
                  well, and already middle-light items become undeflectable,
                  making throwing weapons an alternative (see (5.2b)).
                  Also, the monster will resist any types of light-based attacks
                  greatly, not just attacks in bolt form.
                  Reflected attacks will not hurt you or other players or any
                  other entities/monsters but simply disappear harmlessly.
HURT_LITE         This monster is susceptible to light attacks.
HURT_ROCK         This monster is susceptible to stone-to-mud attacks.

COLD_BLOOD        You cannot spot this monster with infra-vision.
WEIRD_MIND        The monster flickers on ESP.
EMPTY_MIND        The monster does not show up on ESP.

SHAPECHANGER      The monster changes its appearance randomly and quickly.
CHAR_CLEAR        The monster has no visible appearance, not even if you can see
                  invisible.

UNMAGIC           Will cancel all temporary magical effects on the player,
                  except for mimic form (from polymorph ring) and martyr.
HOLD              Paralyzes you from afar.
FORGET            Blanks your mind, makes you forget the dungeon map and details
                  of your items (unidentifies items).
TRAPS             Can place traps around you (from afar).
DISBELIEVE        Monster has an anti-magic field, the strength depending on its
                  level.

                  Like training the 'Anti-magic' skill, having intrinsic anti-
                  magic from the DISBELIEVE flag will also shorten the duration
                  of certain magical temporary buffs and debuffs on your
                  character!
                  To see which those are and to see more information about
                  anti-magic, see 'Anti-magic' skill in (7.2) and 'Dark Sword' in
                  (5.9).

DROP_GOOD         The monster usually drops enchanted items.
DROP_GREAT        The monster usually drops items with ego powers or artifacts.
```

Tip: Usually monsters that have this flag are pretty powerful,
                    but there are actually some low-to-mid-level monsters that have
                    it too, so make sure to kill these when you see them:
                    Smeagol (level 3), Wormtongue (level 9), Robin Hood (level 10),
                    Boldor (level 15), Azog (level 23), It (level 24, but actually
                    impossible to seek out, you'll rather just meet It by chance),
                    Sandworm Queen (level 30), The Wight-King of the Barrow-Downs
                    (level 35). Azog, the Sandworm Queen and the Wight-King are
                    dungeon bosses, so you will only find them on the final floor
                    of their respective dungeon.
                    (For details on monster stats and flags, press ~ 7 in the game
                    to invoke the monster lore browser.)
DROP_60   The monster has a 60%/90% chance to drop something (an item or
 DROP_90   a gold pile).
ONLY_GOLD   The monster drops only gold (and no items) or only items (and
 ONLY_ITEM   no gold).
DROP_CHOSEN   This monster drops additional, very specific loot.
                    See (6.3a) further below, for details.

POWERFUL   Harder to taunt, charm or silence. Cannot be blinded.
                    Doesn't have a "surprised" delay on player teleport arrival.
                    Ball and breath attacks gain +1 radius.
                    Doesn't deliberately pick one melee target when having a choice
                    of several melee targets (just attacks indiscriminately).
                    Hacks down terrain features in its way that it can pass anyway.
                    Cannot be slowed by martial arts slowing techniques.
                    Harder to repel by kinetic shield or to affect by aura of fear.

TPORT   This is a spell flag rather than a normal flag. However, it is
                    noteworthy in that this not only allows a monster to teleport
                    at will, but also will cause it to try and teleport-follow the
                    player whenever he teleports away from it from within melee
                    range!

                    To teleport-follow, when the player initiates teleportation,
                    the monster must stand adjacent to player (ie in melee range)
                    and not have RES_TELE or IM_TELE flag.
                    Also the monster must not be asleep or running from the player.
                    Finally the monster will have to succeed a d100 roll against
                    its racial base level.

(6.3) Loot tables, treasure classes

Also called drop tables, specifying which type of items a monster might drop.
The type, level, quality and use-level of an item may depend on these factors:

-The level of the entity it is dropped by (monster or chest).
 Monsters have a loot table that you can review by pressing ~7. It knows five
 so-called "treasure classes":
 Treasure, combat, magic, tools, junk (see further below).

 Small chests have a higher chance of dropping gold instead of items, while
 larger chests drop more items than gold. Note that items found in chests have
 a high chance of being 'good' aka enchanted (same as DROP_GOOD monster flag).

 Monsters may have DROP_xxx flags that determine if they drop gold, items, how
 many of them, and whether the items have a higher chance to be enchanted or to
 possess ego powers or turn out to be an artifact than usual (those are the
 DROP_GOOD flag for enchantments and especially important the DROP_GREAT flag
 for it becoming and ego item or artifact - also see (6.2) for some tips on

hunting lower level monsters that have the DROP_GREAT flag).
Note that unique monsters have a higher chance of dropping enchanted items
(similar to the effect of the player having more 'Luck').

A higher chance to turn out 'good' (by luck or by the DROP_GOOD flag or
equivalent means as described above) will also carry over to become a somewhat
higher chance to turn out 'great' (ego item or artifact), so for example
unique monsters and chests don't just have an especially high chance to drop
enchanted items but will also drop ego/artifact (great) items somewhat more
often.

-The player's 'Digging' skill, for money mined from terrain features and for
 items discovered from mining - will affect potential item level and quality.
 Amount of gems mined and the level of items discovered will at the same time
 also depend on dungeon floor depth and get limited by it somewhat.

-The floor level (depth) and in the case of acquirement scrolls whether it's
 read on the world surface or not (reading it in a high-level town CAN produce
 the same results as reading it on a dungeon floor of similar level, but will
 not GRANT a high quality, which it does when you read it in a dungeon).

-The event type if it's a reward for some kind of event (for events other than
 extermination orders the use-level is usually zeroed, binding the item to your
 character so it cannot be traded).

-The player's 'winner' state (whether the player has beaten Morgoth or not) and
 the player's 'fallen winner' state (whether the player has died after having
 beaten Morgoth and hence lost the royal title).
 These states are used to determine whether an item is dropped that can only be
 used by winners (WINNERS_ONLY flag) or a random artifact being created
 receives +LIFE bonus (increases hit points) or not. LIFE bonus can also be
 influenced with '!L' inscription on Artifact Creation scrolls.
 The only WINNERS_ONLY items existing in the game are a couple of different
 types of royal armour which melee-oriented characters can utilize to improve
 their tankiness.

-The player's amount of 'Luck' for monster drops and items found by digging,
 see 'LUCK' in (5.8) for details. Luck will increase chances of those items to
 turn out good (enchanted) or even great (ego power or artifact) somewhat more
 often.

-The item's ego powers will increase the item's use-level. If it's an artifact
 it will influence the item's use-level depending on the predefined artifact
 level (for true artifacts) or the artifact's power (for random artifacts).

-The item base type in some special cases (the level may be tied to the
 item's power for certain types of items). For example the use-level of speed
 rings directly and only depends on their +SPEED bonus.

-Whether the item is stolen: Stealing a valuable item has a chance to
 set its level to zero, making it untradable. (There is always a chance for it
 to not get zero'ed though, keeping it tradable, even for the most expensive
 items.)

The most common case by far are items that are dropped by monsters when you
kill them. Neglecting the 'winner' state (that toggles WINNERS_ONLY items and
+LIFE randarts) for now, we are left with three factors which determine the
item that you will find on the floor:

1) The dungeon floor depth (aka dungeon level).
2) The monster race level (the level given in the ~7 monster lore. The actual

monster level can be higher depending on the depth where you encounter it,
since monsters get their level boosted if they appear on floors of much
higher level than their race level).

3) The monster's treasure class table. Each monster type (race) has a table
   of percentage values for these five treasure types, which you can again see
   in the ~7 monster lore. The lore displays the first four classes, while the
   5th is 'hidden' and is the rest chance not covered by the first four:

   -Treasure (dubbed 'Valuables' instead in some ~7 monster spoiler versions):
    Rings, amulets, dragon scale mails, crowns and chests.

   -Combat:
    Weapons, armour (except for boots and cloaks), shields, ammunition.

   -Magic:
    Mage staves, wands, staves, rods, runes, potions, scrolls (except for
    golem command scrolls which fall under 'Junk' category), books,
    parchments.

   -Tools:
    Boots, cloaks, diggers, light sources, flints, food, flasks, trap kits,
    spikes, climbing sets, picklocks,
    backpack safety locks, tarpaulins, mummy wrappings.

   -Junk (rest chance, not covered by the above four categories):
    Skeletons/skulls/bones, bottles, shards of pottery, broken sticks,
    firestones, all golem parts (massive pieces, arms, legs, command scrolls).
    Note: Monsters that don't have any treasure class at all are not set to
          100% junk, but can instead drop any item of all the five classes.

   Example: 'Green naga'.
   A Green naga has 25% chance of dropping 'Combat' loot and 65% chance of
   dropping 'Tools' loot. The remaining 10% chance translates to 'Junk' drops.

The formula for determining the item's level (the item base type level which
determines what kind of item you might get to see; not the actual use-level
that you will see on the item and that affects trading it between characters)
depends on the server configuration but is usually:

(dungeon floor depth + monster race level) / 2
to which (for each item anew) a random tolerance of 0..diff is added, where
'diff' is the difference of above's calculation result to the higher value of
the two 'dungeon floor depth' and 'monster race level'. 'diff' caps at 13.

Note that the highest level items in the game at this time are these two level
115 items: 'Massive Piece of Adamantite' and 'Heavy Ribbed Adamantite Armour'.

(The theoretical max item level, technically capped, is MAX_DEPTH_OBJ = 128.
So the calculation result of monster level vs floor depth yada yada will always
get limited to at most 128.)

Example:

You kill a great wyrm of power on the deepest floor of Angband (-3050 ft), so
floor level is 127 and race level is 85.
(floor + race) / 2 = (127 + 85) / 2 = 106 (the result is always rounded down).
Now the higher of the two (floor and race) is 127. The difference of the result
(106) to 127 is 21. This gets capped at 13 and is the random 'tolerance' for
each item dropped by the wyrm.
The treasure class of the wyrm is 20% treasure and 80% combat.

Let's look at 3 items it drops:

1) 106 + random(0..20) = 106. An unlucky tolerance roll added 0 to the level
   average.
   The item level 106 is still quite high though: The One Ring might actually
   drop since it's level 100 (provided we're not a winner yet, who cannot find
   true artifacts) or a power dragon scale mail (level 100 too) could drop as
   well.
   What cannot drop on this attempt is a Heavy Ribbed Mithril Armour, for
   example, because it is level 110 (see in k_info.txt spoiler file).

2) 106 + random(0..13) = 119. A lucky tolerance roll, we got the full 13 added
   to the level cap of the second item that the wyrm dropped.
   This means that this item could be anything that can possibly drop (from the
   treasure classes 'treasure' and 'combat' that is). So if we have beaten
   Morgoth and hence acquired a royal title, we might see any piece of royal
   armour drop.

3) 106 + random(0..13) = 114. The random tolerance roll of 0..20 turned out to
   be an 8 for this item, closely ruling out Heavy Ribbed Adamantite Armour
   which is level 115, but allowing all other items of the appropriate treasure
   classes of this monster.

Note that there is a small chance that an item is sometimes allowed to vastly
exceed the usual maximum level, an "Out of Depth" (OoD) drop!
This phenomenon accounts for finding Dragon Scale Mail in the Orc Caves and
other such occurances..

Enchantments - bpval and pval, to-hit, to-dam, to-AC:

Items can have 5 different types of numerical enchantments.

to-hit grants hit chance, to-dam increases the damage, to-ac increases the AC
ie your armour class to avoid/reduce incoming physical damage.
The visual format in the item's name for to-hit and to-dam is "(+hit,+dam)" if
they both occur on an item, otherwise just "(+hit)" or "(+dam)".
The format for to-ac is "[+ac]" or if the item comes with a base AC (eg armour)
it will be added to it after a comma: "[base ac,+ac].

pval and bpval are stat-increasing boni, for example to Strength or to BpR.
These numbers are in parentheses, eg a "Shovel of Digging (+1) (+3)" has
a bpval of +1 and a pval of 3.
The bpval is the 'base pval' which items get from their base type, like a
shovel always comes with a base pval of (+1) that grants digging power.
The pval is an extra bonus that comes from either an ego power or the artifact
powers of the item if it's an artifact.
Here the ego power 'of Digging' grants a random pval of (+3) which also
affects digging power, resulting in a total digging power bonus of +4 for
this shovel.
Often the bpval and pval affect different stats though, eg
a Shadow Blade of Extra Attacks (+2) (+3) grants a bpval of +2 to Stealth which
stems from the base item type 'Shadow Blade' and then a pval of +3 to your BpR
aka number of melee attacks/round.

For artifacts, all of these stats will be either totally random, independant of
the level where you found the item, or for player-created artifacts the three
boni to hit, dam and AC might be taken from the base item used in the process
if it is a jewelry item (meaning ring or amulet, also see (9.4) for more info.)

For all other items besides artifacts however, the hit/dam/ac and pval
enchantments on items are randomized but will be affected by the depth where

the item was found, meaning that deeper levels have a higher chance to produce
higher enchantments of these four types.
The pval (which comes from either ego powers or artifact powers) however is
generated completely randomly, independant of depth.

(6.3a) Special item drops of monsters

Some monsters have the DROP_CHOSEN flag. This means that in addition to the
normal loot (see (6.3) for loot tables) they may drop specific extra loot.
At the time of writing this entails:

Smeagol
    A ring of stealth.
Robin Hood
    A long bow.
Dragonriders
    Firestones, normal or small.
Raal's Tomes
    (Rarely) a tome of udun or an elementalist's or destroyer's handboook.
Gorlim
    His accursed helmet.
The Stormbringer
    Drops itself as (random-artifact-like) ego weapon, ie usable item.
Eol
    The Claymore 'Anguirel'.
Artsi
    The set of cesti 'Fist of Chaos'.
Kronos
    His sickle of unmatched sharpness.
Gothmog
    His terrible, fiery whip.
Mardra
    Her dragonrider coat.

Great Wyrms
    The amulet of Grom, the Wyrm Hunter...

Vlad Dracula and Mephistopheles
    Drop a random, heavily cursed true artifact if available.

Saruman of Many Colours
    The Star of Elendil and a mage staff of wizardry (+10).
Nazgul
    Their specific (yet randomly generated) ring of power each.
Morgoth
    His two-handed hammer Grond and his massive crown.

Bahamut
    A rod of healing of the istari.
The Living Lightning
    A randart lightning ring that grants speed, an air tome, a rune of mana and
    a rune of lightning, a rod of lightning balls of the istari and
    a randart sky dragon scale mail.
The Hellraiser
    A potion of learning and a scroll of artifact creation.
Dor
    A rod of havoc of the istari and an energy cell.
Zu-Aon
    A potion of learning and a scroll of artifact creation.

Further, even without any flags and independant of their r_info.txt loot table
monsters may tend towards item drops that fit their appearance and style.
This means that you will mostly see swordmasters drop swords, mages drop an
occasional mage staff, runemasters drop an occasional rune, monsters that are
martial artists rather drop light armour instead of heavy armour etc.

(6.4) Monster attack mechanism, armour class, damage caps

Monsters may try to attack you in three different ways:
-Hitting you.
-Shooting you.
-Casting a spell that may wound you.

Monster is trying to hit you:

If a monster tries to hit you, the following happens:
1) Any shielding magic around you is evaluated and may prevent the attack.
   (Note: Disruption shield is currently evaluated later on.)
   If this doesn't succeed..
2) your character may dodge. If this doesn't succeed..
3) your character may try to parry with a weapon or block with a shield.
   It will mostly choose the action (either parry or block) where it is more
   proficient, although it won't always be able to use the preferable method
   of those two, and sometimes randomly has to rely on the other one.
   If this doesn't succeed..
4) your armour class is evaluated and might catch the attack, in which case
   you don't take any damage, ie the monster misses you. If this doesn't
   succeed..
5) your character takes damage, but your armour class will at least reduce it.
   If disruption shield is active, the damage will instead hit your mana pool
   instead of your hit points (unless you don't have enough mana).

Note that some attacks can bypass some of those defenses.
More info further below.

Monster is trying to shoot you:

If a monster tries to shoot you, the following happens:
1) Your character may dodge. If this doesn't succeed..
2) any shielding magic around you is evaluated and may prevent the attack.
   (Note: Disruption shield is currently evaluated later on.)
   If this doesn't succeed..
3) if you have REFLECT (see (5.8)) you will try to reflect the shot.
   If this doesn't succeed..
4) your character may try to block the shot with a shield.
   If this doesn't succeed..
5) your character takes damage. Armour class has no effect.
   If disruption shield is active, the damage will instead hit your mana pool
   instead of your hit points (unless you don't have enough mana).

Monster is casting a spell that wounds you:

If a monster casts a spell at you, the following happens:
1) Your character may dodge if it's a bolt spell. If this doesn't succeed..
2) any shielding magic around you is evaluated and may prevent the attack.
   (Note: Disruption shield is currently evaluated later on.)
   If this doesn't succeed..

3) if you have REFLECT (see (5.8)) and if the spell is a bolt spell, you will
   try to reflect it. If this doesn't succeed..
4) if it's a bolt spell, your character may try to block it with a shield.
   If it isn't then your character may still try to cover behind a shield.
   If this doesn't succeed..
5) your character takes damage. Armour class has no effect.
   If disruption shield is active, the damage will instead hit your mana pool
   instead of your hit points (unless you don't have enough mana).

For details about parrying and blocking see (7.11).

Armour class:

First off: Armour class does not help against ranged attacks or spells, only
against melee attacks (hits, kicks, etc)!

Armour class helps you twice:
-It makes monsters miss you more often with attacks that don't bypass armour.
 The more AC the better, it's weighed against the level of the attacking
 monster. If the monster is (heavily) stunned it gets penalties here.
-It reduces the damage if a monster manages to hit you with a physical attack.
 This effect caps at 200 AC.

Critical hits by monsters:

Monsters can score critical hits which can (depending on the attack type)
result in a cutting or stunning effect against the player.

Attacks of HIT, CLAW or BITE type can result in a cut,
attacks of HIT, PUNCH, KICK, BUTT and CRUSH type can result in stun.
Cut and stun cannot both be applied by the same hit. If both effects are
eligible it's a 50-50 chance which one will make it.

For a hit to count as critical it must must deal at least 95% of its potential
damage maximum (rounded down), so for example a monster hit dealing 5d5 damage
must deal 24 or 25 damage.
Monsters that hit you for less than 20 damage aren't able to score critical
hits at all.
The intensity of the resulting cut/stun depends on the dealt damage too,
so a high armour class helps a lot, to avoid critical monster hits and to
further reduce their power.
For related information see (4.11), "melee-induced cuts and stuns".

Monster melee damage cap:

Basic monsters (that means before any ego-power such as 'Warrior' or 'Holy'
is applied as in 'Hill troll warrior' or 'Holy 5-headed hydra') have a cap on
melee attacks, which limits their attacks to an _average_ of 700 total damage
points per round (Monsters, depending on their race, can perform up to four
melee attacks each round they can move/act).
Note that the monster may attack for more damage, it's just the averaged value,
the real damage is random and can fluctuate above or below the average.
Wearing armour will further reduce the total average damage you can expect to
take per round from that monster. The cap will be used on the monster's raw
damage output _before_ the player's AC is factored in.
Sanity-draining melee attacks are capped at 55 points of _average_ sanity
damage per _blow_ (not per round).

WARNING: If the monster is an ego-monster (eg the aforementioned 'Warrior'

or 'Holy' ego power) this will modify its damage output _after_ the cap was
applied. That means that some very powerful ego-monsters may deal even more
than cap damage on average per round, although that's very rare.

Note that there are melee attacks that cannot be reduced by armour. It depends
on the way the melee attack is performed. See (6.5) for details.

(6.5) Monster attack types and brands

Monsters can strike you with branded attacks, for example acidic hits, or hits
that poison you if you get hit. If you resist the according brand you won't be
affected by it alot, and the overall damage will be reduced. If you're immune
you won't be affected at all and only take a physical part of the damage -
if there is a physical part. This depends on the attack type.
Here is a list of attack types and brands:

```
Attack type        Contact/Cut/Stun/Bypasses AC/No Block/No Parry
---------------------------------------------------------------
HIT                             + + + - - -
PUNCH,KICK,BUTT,CRUSH           + - + - - -
CLAW, BITE                      + + - - - -
TOUCH,STING,ENGULF,CHARGE,CRAWL + - - - - -
SPIT                            - - - - - -
GAZE,WAIL,SPORE,BEG             - - - + + +
INSULT,MOAN,SHOW,WHISPER        - - - + + +
EXPLODE                         - - - + - +
DROOL                           - - - - - +
(Note that 'Bypasses AC' also means that this attack type cannot be dodged.)
```

```
Brand          Needed resistance to reduce/avoid its effect
(also called   (These help to avoid the effect but do not mitigate damage
'damage type') unless explicitly states that they do.)
----------------------------------------------------------------------
HURT           Only AC - raw damage.
               This damage type can be mitigated by AC.
ACID,ELEC,FIRE,COLD
               According elemental damage.
               The damage can partially be mitigated by having the particular
               (double) resistances or immunities and gets amplified by
               susceptibility.
POISON         poison.
               The damage can partially be mitigated by having the particular
               (double) resistances or immunities and gets amplified by
               susceptibility.
DISEASE        no resistance (except in PvP, where it acts as poison instead).
               This attack can in rare cases also decrease your constitution,
               and in extremely rare cases decrease it permanently even.
               True vampires and initiated maiar are immune against the
               continuously damaging infection, although they may still
               suffer the initial consitution loss.
BLIND          blindness.
CONFUSE        confusion (or chaos).
TERRIFY        fear.
PARALYZE       free action.
EXP_xx         hold life; necromancy skill; necromancy AND unlife skill maxed;
               attaining character level level 99.
               This attack drains xp and the only full protection is being
               level 99 or having both Necromancy and Unlife both at 50.000.
               Other than that, reducing the chance to lose xp from this
               attack is done (stackingly) by having 'hold life', having a
```

```
                        higher saving throw, and having a higher 'necromancy' skill.
                        Variations: EXP_10, EXP_20, EXP_40, EXP_80.
LOSE_xxx                sustain the affected stat or even all stats for LOSE_ALL.
                        This attack would reduce your stat(s) if they're not sustained:
                        LOSE_STR, LOSE_INT, LOSE_WIS, LOSE_DEX, LOSE_CON, LOSE_CHR.
EAT_xxxx                There are five types with different means of mitigation:
                        - EAT_ITEM (item stealing) and
                        - EAT_GOLD (money stealing) attempts:
                          DEX and stealing skill increase your chance to resist these.
                          A backpack safety lock makes you highly resistant to both.
                        - EAT_FOOD (eats an edible item straight from your backpack)
                        - EAT_LITE (consumes the fuel of your light source, if fueled)
                        - EAT_MANA (drains your mana points):
                          Nothing helps against these three.
UN_BONUS                disenchantment.
                        If unresisted, this attack will disenchant a random piece of
                        your equipment. The damage can partially be mitigated by having
                        disenchantment resistance.
UN_POWER                magic device skill; fast-casting UN_POWER monster forms.
                        It drains charges/energy from your items:
                        "Energy drains from your pack" for magic devices or polymorph
                        rings in your inventory or "Energy drains from your equipment"
                        for worn polymorph rings.
                        Additionally it drains some of your mana.

                        Magic Device skill helps to prevent draining though.
                        See (7.10) for more information about the Magic Device skill.

                        Mimicking a monster form that has UN_POWER attacks and at the
                        same time is a very proficient caster (at least 1_IN_2 spell
                        frequency) will help to prevent draining too.

                        Also reduces the remaining duration of a polymorph ring form
                        the player is currently mimicking (this effect cannot be
                        mitigated by magic device skill or un_power-form).
TIME                    time resistance.
                        If unresisted it can drain xp, a single stat or all your stats
                        at once, same as any magical time-based attacks. The damage can
                        be mitigated partially by time resistance.
INSANITY                none. But certain mimicry forms, skills and classes/races gain
                        some damage reduction in three tiers, see (7.6) for details.
HALLU                   chaos.
                        If unresisted, you will hallucinate for some time.
PARASITE                <currently no effect>
DISARM                  'Fighting' ability.
                        Weapons wielded 2-handely are harder to disarm (stacking).
                        Artifacts are also harder to disarm (stacking).
                        Heavily cursed items are quite hard to disarm (stacking).
                        Note that DISARM effects have a chance to be blocked, parried
                        or dodged if their attack type can be blocked, parried or
                        dodged, which is currently the case for all monsters that can
                        disarm because the monsters all use the HIT attack type for it.

                        Sometimes disarmed weapons land in your backpack, but sometimes
                        you drop them to the ground instead. If there is no empty floor
                        (for example because you're fighting on mountain terrain) they
                        will instead be scattered across the dungeon level and you will
                        have to search it to retrieve them.

                        When dual-wielding, the secondary weapon cannot get disarmed
                        while the wielder is in 'Main-Hand' mode.
FAMINE                  none. Makes you hungry.
```

```
SEDUCE          none. Makes you take off equipped items.
                Can have random side effects, if your HP are still above 40%
                and if no other players or monsters are standing next to you:
                - drain half of current mana or hit points
                - drain constitution or wisdom
                - get a disease (damage over time)
                - lose an item or gold (monster steals it; tools won't help!)
                - gain some experience
                - regain some drained sanity, if any.
SHATTER         purely physical damage, therefore only AC helps.
                Hits & causes an earthquake - very dangerous, see (5.11).
                This damage type can be mitigated by AC.
LITE            Light or blindness resistance.
                Blindness resistance will prevent any blindness effect.
                The damage can partially be mitigated by having light
                resistance and gets amplified by susceptibility.
```

Getting hit by higher undead creatures may also infect you with the
Black Breath! (See (4.11a) for more information about Black Breath.)
In general, unique undead monsters of at least level 35 can infect you, and
non-unique undead monsters of at least level 40 can infect you. The chance of
infection increases with monster level.
Nazgul have an especially high chance (much greater than any other monster) of
infecting you. Aside from monsters, certain cursed items might infect you when
you equip them (such as weapons of Morgul).
Last but not least the Black Breath is contagious and can be transmitted by an
infected player bumping into another player (Bree and the Training Tower are
safe zones though).

Further, monsters may have one or more spells they can cast. Breathing elements
and shooting or throwing boulders belong to those too (but aren't affected by
anti-magic fields since they aren't 'real spells' but rather physical actions).

Among the monster spells, such as casting bolt or ball spells, teleporting,
healing, trying to blind/scare/confuse/paralyze/slow the player, summoning
other monsters for help, or speeding itself up with a haste-self spell, there
are some particularly special spells that will be explained here in more
detail:

```
SHRIEK          Not a real spell but a physical action, some monsters can emit
                an aggravating noise that will wake up all nearby monsters and
                even haste those within line-of-sight of the shrieker.
                This can be extremely dangerous and you'll see a light red
                message in the combat message log when a monster shrieks.
                If you have the sound pack installed, you'll also clearly hear
                it, which can help further to react quickly: On shallow levels
                shrieking might not be that bad, but on deep levels it might
                well be reason enough to teleport out instantly.
                The haste effect is permanent, but most non-unique monsters can
                be slowed down again by using any slowing magic.
TRAPS           Again not a spell but nasty nevertheless. The monster casts a
                3x3 'circle' of traps around you, watch where you step.
UNMAGIC         This can be extremely nasty for istari. Unmagic cancels nearly
                all kind of magic effects your character is currently under,
                such as speed from a speed potion and even Disruption Shield.
                This won't affect classes much such as warriors and archers but
                is life-threatening if it neutralizes the Disruption Shield
                of an Istar. (Note: Holy Martyr cannot be cancelled.)
MIND_BLAST      A psionic attack spell that hurts your sanity and can cause
                confusion and hallucinations.
BRAIN_SMASH     A powerful psionic attack spell that hurts your sanity and can
```

```
                        cause blindness, confusion, paralysis and slowness.
FORGET                  This mind blanking spell will create darkness around you and
                        make you forget about some or all of the items you are carrying
                        effectively un-identifying them (except for flavoured items).
HOLD                    Although not so special and already mentioned in the text above
                        this spell is listed because it's a ranged paralysis spell.
                        Ghouls can do this for example, so make sure that you get
                        Free Action as early as possible, definitely before venturing
                        into Mordor though.
```

(6.6) Dispelling/banishing/turning monsters

The terms 'dispel' and 'banish' are unfortunately used in an ambiguous manner
throughout the game:

In most cases it just means that damage is afflicted to specific monster types
but sometimes it can indeed mean that the target is teleported away or even
removed completely from the floor, or at least that there is a chance (usually
depending on the monster's level) for that to happen.
Refer to the spell description to find out if it deals damage or has a teleport
effect instead.

Dispelling magic that deals damage is irresistible and monsters don't even have
a saving throw against it. It also works (the same way) in PvP combat.

The term 'turn' as in 'turn evil' however is used in only one way: It refers to
a fear-like effect that makes them run away from you instead of approaching you
as a target.
Unlike dispelling, magic that 'turns' will let each affected monster or player
roll a saving throw.

(6.7) Monster auras

Some monsters have auras of flashing lightning, freezing cold or furious
flames surrounding them! If a player engages such foes in close combat, each
time he lands a blow the aura will retaliate, dealing lightning / cold / fire
damage depending on the aura type. Some monsters even have multiple auras.
The damage of such auras may be significant. Especially important is the fact,
that the faster a player hits a monster, the more he will suffer from its
auras, as they are applied on each hit.

The damage an aura deals is decided by a dice roll:
[1 + (monsterlevel/26)] d [1 + (monsterlevel / 17)]

Example:
A warrior of level 30 is fighting a storm giant. The storm giant has an aura
of lightning surrounding him. The warrior is able to deal 6 blows per round
with his current weapon. The warrior has a source of permanent lightning
resistance (elvenkind armour), he lacks potions of resistance or lightning
immunity though. This means:

Storm giant has monster level 35 (assumed the warrior encounters him on
dungeon level 35), so his lightning aura will inflict 2d3 damage each hit.
The warrior has lightning resistance, so the damage will be cut down to 1/3,
which is 1 or 2.
Since the warrior has 6 BpR, he will suffer between 6 and 12 (6*1 and 6*2)
damage per turn while hitting the storm giant.

(7) Character details
=====================

(7.1) Attributes

Characters have six 'attributes', also called 'stats', which are strength,
intelligence, wisdom, dexterity, constitution and charisma.
These depend on your race and class and the stat assignments you did during
character creation process.

Stats are displayed as values from 3 (minimum) to 18.
(Note: This can be changed in TomeNET options, press key =3 and toggle
'linear_stats' option. It is recommended to keep the traditional way though,
which represents the D&D system of throwing three 6-sided dice to determine a
stat).

Certain effects can drain stats, for example unresisted fire or cold damage can
drain your strength, unresisted lightning damage your dexterity, unresisted
acid damage your charisma. Also many monsters have stat-draining attacks.
Traps can also drain your stats, some temporarily and some permanently.
If a stat is drained and can be restored it will be displayed in yellow.
In that case buy a potion for restoring that particular stat from town store 5
provided it is not out of stock in which case you'll have to wait a bit or go
to another town. Maybe the stat drain isn't even that important to you and you
save your money for the time being.
Some traps can permanently drain a stat, in which case it gets lowered but
remains green instead of turning yellow. In this case a stat restoring potion
has no effect, instead you'll need a "stat potion" that increases a stat
permanently (up to a certain limit depending on class/race).

It is possible to gain even higher stats, those will be displayed as 18/xxx
where xxx is roughly the value above 18 multiplied by 10 (to allow fractions).
Examples:
18/10 is like 19 (ie 18+1).
18/120 is like 30 (ie 18+12).
18/47 is like 22. The fraction 0.7 is not factoring into actual gameplay.

The way stats are displayed can be toggled in =3 'linear_stats'. This will
change them to numbers from 3 to 40, where 40 equals 18/220 and is similarly
displayed as asterisks instead of a number to indicate that it's the limit.

If you quaffed the maximum of "stat potions" (potions raising your stats), the
maxed out attribute will be displayed in light umber.
An attribute is maxed out at 18/100 +/- racial/class modifiers.
Examples:
Human Adventurer has 18/100 + 0 + 0 = 18/100 cap for all stats, see (7.4) for
race boni and (7.5) for class boni.
Draconian Istar has an intelligence cap of 18/100 + 2 (Draconian) + 3
(Istar) = 18/150.

Stats can be raised over the character's cap by equipment. The total possible
maximum of an attribute is always 18/220 (40), which is displayed as '18/***'
or '**' if using linear_stats.

Strength (STR)
    -How heavy may your weapon, bow or shield be? You can't fight with a
     weapon that is too heavy for you.
    -How heavy may your armour be? You will lose mana, boni or combat abilties
     if it's too heavy for you.
    -How much damage do you inflict on enemies in melee combat? (to-mdam bonus)

-Are you able to deliver several blows per round with your weapon?
         (For details, also see (7.5).)
        -How much can you carry in your backpack without getting slowed down?
        -How easily you can bash doors open.
        -How far you can throw items.
        -Allows you to try hard to swim and not drown in deep water.
        -How easily you can dig.
Intelligence (INT)
        -Has influence on your mana pool size. (class-dependant)
        -How well can you cast spells that use INT to determine failure rate?
        -Has influence on your ability to activate magic devices.
        -Has influence on your trap-disarming (includes lock-picking) ability.
        -Do you notice if someone tries to steal from you?
        Also see (7.10) for more information about the 'Magic Device' skill.
Wisdom (WIS)
        -How well can you cast priest prayers or other spells that use WIS to
         determine failure rate?
        -Has influence on your mana pool size. (class-dependant)
        -How well can you resist malicious influences like poison, paralysis,
         or confusion? (Means, your Saving Throw is depending on your WIS. See
         (7.3) for details about Saving Throw.)
        -Wisdom directly increases your sanity. Be careful! If you're very low on
         sanity taking off a +wisdom item can mean your death, in case your sanity
         drops to 0 by taking off the item.
Dexterity (DEX)
        -Has positive influence on your armour class and on your chance to hit
         enemies, also quite important for ranged weapons to-hit chance.
        -How well can you steal (from shops)? (A high DEX won't help much if your
         'Stealing' skill is zero by the way ;)
        -Are you able to deliver several blows per round with your weapon?
         (For details, also see (7.5).)
        -How likely are items or money stolen from you?
        -Can you prevent getting stunned from bashing a door clumsily?
        -Allows you to try hard to swim and not drown in deep water.
        -Has influence on your trap-disarming (includes lock-picking) ability.
Constitution (CON)
        -How many HP (hit points) do you have? Very essential.
         Note that CON effect caps depending on your character level. Roughly:
         At level 20 you can't utilize more than 18/60 CON. That means even if
         you raise your constitution above that value, your Hit Points won't
         increase as long as your character is level 20.
         At level 30, CON cap is 18/130, at level 40 it's 18/190, and at level
         45 and higher the full CON bonus is utilized for determining Hit Points.
        -Also reduces the duration of poison, disease and stunning effects on you.
        -Increases your stamina regeneration rate.
        -Reduces drowning (also for aquatic forms outside of water) effects.
Charisma (CHR)
        -Helps getting good prices in shops for both buying and selling.
         Shop prices also depend on racial preferences of the shopkeepers vs their
         customers. It is said, that Half-Trolls have an especially hard time.
         Shop prices have certain limits though that you might hit when your race
         is already liked by the shop keeper, where even more CHR won't further
         improve your bargains.
         Certain shops also provide services for a fee (see (4.5a)). Unlike item
         prices, these fees are not affected by charisma.
        -Also affects house prices, buying and selling.
        -Allows you to resist getting seduced.
        -Affects mindcrafters' mana pool somewhat.

(7.2) Skills, opposed skills

If you rise in character levels by gaining experience, you also get skill
points to distribute on various abilities. To invoke the skill system overview
press 'G' (capital G!).
If you make a mistake while distributing skill points, look up the /undoskills
command in (0.2b). "/undoskills" can only be used once per level and must be
used before you go back into a dungeon or tower.

Skills of dark grey colour cannot be used by your character at all.
Skills that are light grey are just dummy skills that serve for organizing
other skills in paragraphs.
Skills coloured orange can be used by your character, but are currently still
at zero.
Skills that your character can train and that have already been increased above
zero will change from orange to white.
Skills that have reached their maximum possible value and therefore cannot be
increased any further are displayed in light blue.

You can collapse/expand blocks of subskills by pressing RETURN key while having
selected the parent skill of that block. Useful for example for collapsing
whole blocks of skills that you cannot or don't want to use anyway.

Here is a list of the available skills and brief explanations to each one:
Note that not every skill is available to every profession (class).
For skills where it is not clear how much of an increase makes an actual
difference for the skill's effect, that number is written in parentheses below
it. Eg '(0.500)' means that each 0.500 step of this skill will improve it, and
even having just a total skill level of 0.500 will already have an effect.
Some skills require a minimum value (usually 1.000) to become effective despite
having a finer grained resolution, in these cases the minimum value is also
stated.

+Combat   Lets you wear heavier armour without mana
  (1/6)   points penalty.

                                 Lets you wear heavier armour without losing
                                 dodge chance (gained from the 'Dodging' skill),
                                 or other roguish abilities like
                                 boni from dual-wielding, Critical-strike,
                                 area-searching and cloaking.

                                 Lets you wear heavier armour without getting
                                 a penalty to to-hit or sneakiness from being
                                 movement-encumbered.

                                 Note that Combat skill does NOT affect the
                                 continuous ranged-to-hit reduction based on
                                 armour weight.
                                 (See (5.5) for details about encumberment.)

                                 Note that Martial Arts penalties from heavy
                                 armour cannot be reduced by training Combat.

                                 Ability to pseudo-ID items: You can sense
                                 if items are terrible, worthless, cursed,
                                 average, good, excellent or special.
                                 At the beginning you will only feel 'cursed'
                                 or 'good', and only for melee weapons, armour,
                                 boomerangs, digging tools, and veryrarely for
                                 ranged weapons and ammunition.

Raise combat skill to at least 10 to get more distinctive feelings about melee weapons, armour, boomerangs and digging tools.
A powerful combattant (combat 30) senses the usefulness of shooting weapons and ammunition as quickly as for weapons armour etc.
A very powerful one (combat 40) can also notice curses on all kinds of items.
The further you train Combat, the faster you will pseudo-ID items.

Increases Fear/Stun/Confuse duration of the target (if attacking causes those).
Reduces duration of Fear/Stun/Confuse effects that are applied to you.

Increases 'Fighting' and 'Bows/Throw' abilities somewhat, thereby increasing your chance to hit in melee (weaponless and with weapons), ranged weapons and when throwing an item and reducing your chance to get disarmed.

If your Combat skill isn't zero, then you can press 'm' to check your actual chances of parrying (weapon) and blocking (shield), see (7.11) for more details about parry/block.

+Weaponmastery (1/3)	Slightly increases melee to-dam and to-hit for armed combat: Hit gets increased by 1/3 of your skill, damage by 1/10. Improves your 'Fighting' ability somewhat when wielding a weapon, thereby further increasing your chance to hit in melee and reducing your chance to get disarmed. Slightly increases your chance to score critical hits in armed combat (just 7.5% as effective as the 'Critical-strike' skill.) Weaponmastery will also increase your parry chance a good deal (see (7.11) for details): Up to +10% for 1-handers, +15% for 1.5-handers, +20% for 2-handers.
+Sword-mastery (1.000)	Greatly improves to-hit/to-dam with swords. At 25 and 50 you will get +1 blow per round while having a sword equipped.
.Critical-strike (0.025)	Increases your chance to score hits of extremely high damage. This skill improves the chance to score critical hits and adds to critical-hit bonus from your equipment. NOTES ABOUT CRITICAL-STRIKE SKILL: Critical-strike skill only helps light swords or light polearms, not heavier than 10.0 lbs. (Non-weapon items that increase your critical hits chance however will work with all kinds of weapons and martial arts too.)

The weight limit counts per weapon, so you may
dual-wield two 10.01b weapons just fine.
If you dual-wield one eligible weapon (ie sword
up to 10.01b) and a non-eligible weapon (ie a
too heavy weapon or not a sword) then the
eligible weapon will still get Critical-strike
skill applied for its hits, and the other
weapon won't.

(The skill effect does not depend on how heavy
exactly the weapon is, as long as it's not
above 10.0 lb, so that weight threshold is
basically an on/off toggle for the skill to
apply to your attacks.)

Also, Critical-strike skill will not give you
any benefits if your armour is so heavy that
you get a flexibility warning (compare (5.5)).

NOTES ABOUT CRITICAL HITS IN GENERAL:

You can always score critical hits,
independent on weapon class and crit-skill.
The probability to land a critical hit will be
small though, if you don't have +critical hit
items. Critical hit bonus on items counts
slightly more than this skill.

Critical hits are applied _after_ branding
(ie after the rolled dice are multiplied by
factors for applied brands or slay mods),
further boosting the effect.

Martial artists can score critical hits too,
although the Critical-strike skill won't do
anything for them (it only helps light swords
and polearms not heavier than 10.0 lb).

Crit boni on weapons only apply to the weapon
itself, while bonus on other items such as
gloves or rings count for all kind of physical
attacks. (Same goes for slaying/brand mods on
items by the way.)

For weapon users, the weight of their weapon
affects their critical hits:
If your weapon is lighter than 10.0 lb, your
chances to score a critical hit will further
increase. (However, that increase is much
smaller than the effects of this skill or of
items that give 'Critical Hits' bonus.)
Above 10.0 lb, the chance to hit your target
critically won't be worse than with a 10.0 lb
weapon.

Although your chance of hitting critical spots
is better with lighter weapons, the damage of
your critical strike -IF you manage to execute
one- is higher if your weapon is heavier
(in detail: the crit class is more likely

to be higher for heavier weapons). This effect
of getting bigger crits in if the weapon is
heavier has no upper weight boundary, so it is
true for all weapons up to Grond.
Although Critical-strike skill (if applied) and
'Critical Hits' bonus from items will also
(about equally) improve your chances to land a
higher-class critical hit, the weapon weight
has even somewhat more effect on average on the
crit class than either of those two alone.
However, for a good improvement in crit-class
just from weapon weight alone, the weapon would
need to be much heavier than 10.0 lb.

Note that 'critical hit' stacks. 'Critical hit'
bonus from items will be actually be somewhat
subject to diminishing returns (while the skill
won't!) but if we neglect this we can roughly
say that +2.500 skill results in +1 crit hit.
So for example if you have a ring of critical
hits (+7) and gloves that give (+4) and also
trained this skill to 10.000 (+4) you'll have a
total of roughly +15 critical hit bonus.

.Axe-mastery   See Sword-mastery, just substitute axes.
  (1.000)   Additionally:
                        If you are dual-wielding two axes, Traumaturgy
                        will grant you blood frenzy at 17.000 or higher
                        after a couple of attacks, the earlier the
                        higher your Traumaturgy skill, provided your
                        enemies can actually bleed. Blood frenzy will
                        temporarily grant 1 extra attack while active.

.Blunt-mastery   See Sword-mastery, just substitute blunts.
  (1.000)

.Polearm-mastery   See Sword-mastery, just substitute polearms.
  (1.000)

.Combat Stances   Allows you to switch between one of three types
                        of combat stance. You need to wield a weapon to
                        use stances, certain restrictions apply and are
                        explained further below.

                        This ability cannot be trained, but it is
                        increased automatically each time your
                        character gains a level.
                        If you attain the status of King, Queen,
                        Emperor or Empress and are at least level 45,
                        you will learn an additional royal rank version
                        of each stance, which is the most powerful
                        version. If you die and lose your title, you
                        won't be able to use the stance either.
                        Only warriors, mimics, paladins, rangers and
                        mindcrafters can learn certain stances.
                        On certain skill levels, you will learn a new
                        rank of a stance. A higher ranked stance
                        features more of its benefits and/or less of
                        its drawbacks.

                        Press 'm' to enter one of the combat stances
                        you have learned. You will learn four ranks

of three combat stances each, when you reach
a certain character level i.e. skill. The last
rank ('royal rank') is learned by defeating
Morgoth, independant of your level. You can use
the /ex command to check your current stance.
Each stance has advantages and disadvantages,
those are:

Balanced stance - the default, no boni/mali.

Defensive stance - you will block more,
                 - reduce the effect of most
                   combat-induced stun effects
                   (and possibly some others)
                   you suffer,
                 - intercept less often,
                 - you deal less damage with
                   melee and ranged weapons,
                 - reduces chance a monster can
                   steal from you.
                 Note: You can use it even
                 without shield - in that case
                 your chance of parrying is
                 increased instead of blocking.

Offensive stance - your hits get a chance to
                   stun opponents, depending on
                   - your strength,
                   - your Weaponmastery skill,
                   - your stance rank, and
                   - your opponent's prowess
                     (see (4.12) about stunning),
                 - intercept more often,
                 - parry and dodge only rarely,
                 - get an AC penalty.
                 Note: You must wield a weapon
                 that is not too small to be
                 gripped with both hands
                 (COULD2H, SHOULD2H, MUST2H).

Switching your combat stance costs you half a
turn of energy. Some details (R stands for
royal rank, available only to royalties):

	Inter cept	Stun self	With shield Block/Melee dam	Without shield Parry/Melee dam
D1	-50%	7/8	+9%/70%	+30%/60%
D2	-45%	5/6	+11%/70%	+30%/70%
D3	-40%	3/4	+13%/70%	+40%/70%
DR	-35%	2/3	+15%/70%	+50%/70%

Melee damage you inflict is reduced depending
on stance level. Ranged physical damage you
inflict (everything except for spells) is
always reduced by 50% in any defensive stance.

	O1	O2	O3	OR
Intercept	+4%	+7%	+10%	+15%
Parry/Dodge	-100%	-90%	-80%	-70%

All offensive stances reduce AC by 30.
If stun from offensive stance is successfully

applied, its power is affected by your strength and your skills 'Weaponmastery' and 'Combat'.

.Dual-wield   The ability to wield two weapons at once. This ability cannot be trained, it's always at 1.000 if your character's class can dual-wield, else at zero. (So it's basically a switch.) Classes that are able to dual-wield are warriors, rangers, rogues and hell knights. Note that both weapons must be 1-handed. 1,5- or 2-handed weapons cannot be used.

Dual-wielding will give you additional parry chance (see (7.11) for details about parrying) as well as a +1 blows/round bonus and a melee damage bonus of half the player's top level, capping at level 50, ie +25 mdamage at lv 50+. (The 'top level' is the highest level the character has ever attained so far.) And of course your character will gain all magical boni from both weapons (eg stats, abilities, resistances).

NOTE: If your armour is too heavy (see (5.5)) then you won't receive any bonus and your second weapon will actually be ignored as if you didn't wield it at all ie you won't gain any resistances/abilities/whatever from it.

In combat, a coin is flipped for each blow you deal, determining randomly which weapon will be used for that particular hit.

To avoid confusion: If you use weapons with different blows/round, their BpR will get averaged, and rounded up, then BpR bonus for dual-wielding is added. Example: 4BpR & 5BpR = 4.5BpR rounded to 5BpR. +1 bonus BpR for dual-wielding -> 6BpR total.

By pressing 'm' you can disable/reenable dual-wield mode. While disabled ('Main-Hand mode') you will just attack with your primary weapon exclusively, and not receive any dual-wield specific boni; this can be useful if it deals much more damage than your secondary weapon. You still gain all magical boni from both weapons while in main-hand mode, as usual. While enabled ('Dual-hand mode') you will attack with both weapons, picked randomly. Note: You can even enable Main-Hand mode while not dual-wielding - and this also means that if you lose your main hand weapon you will not leave main-hand mode automatically from that.

If you are dual-wielding two axes, Traumaturgy will grant you blood frenzy at 17.000 or higher after a couple of attacks, the earlier the higher your Traumaturgy skill, provided your enemies can actually bleed. Blood frenzy will temporarily grant 1 extra attack while active.

.Martial Arts   Ability to fight with bare hands.
 (0.228)   Martial Arts users do not and cannot wield any
                       weapons, except for boomerangs, or they get
                       penalised heavily.
                       Note that as a specialty MA actually works with
                       the 'Backstabbing' skill!

                       They also get an armour class bonus for each
                       unused equipment slot that can take a piece
                       of armour. Until the skill has been trained
                       quite a bit, armour will rather encumber them
                       instead of help. For this reason, martial
                       artists only wear very light armour or no
                       armour at all in the beginning and do not need
                       to rely on armour during the early game.

                       Slightly raises your character's speed and
                       stealth by +1 for every 10.000 skill increase -
                       the increase might be less or even zero if you
                       are encumbered in some way.

                       Increases your chance of intercepting an enemy.
                       The effectiveness is about 1/4 of what you get
                       out of training the 'Interception' skill.
                       If you train both, their effect will stack.

                       In addition to that, training Martial Arts will
                       provide a base interception chance if you don't
                       have the Interception skill available on a
                       character (see 'Interception' skill). These two
                       interception gains from Martial Arts skill add
                       up. (If you do have the Interception skill
                       available, you get a base interception chance
                       depending on your character level instead, to
                       which again the Martial Arts interception bonus
                       gets added. So you're gaining the same total
                       interception chance in both cases, as long as
                       you keep Martial Arts at maximum possible.)

                       You can check your interception chance against
                       monsters of same and double level by pressing
                       'm' and choosing "Check intercept chance".

                       Slightly increases your Dodging skill, simply
                       by increasing your Martial Arts skill, as if
                       'Dodging' was a parent skill of Martial Arts.
                       You can check your dodging chance against
                       opponents of same and double level by pressing
                       'm' and choosing "Check dodge chance".

                       Grants +1 extra attack at 2,10,20,30,40,45,50
                       each, so up to +7 blows per round in total.

                       At 10 you gain Feather Falling (see (5.8)).
                       At 15 you gain fear resistance.
                       At 20 you gain confusion resistance.
                       At 25 you get Free Action (paralysis immunity).
                       At 30 you're able to swim without problems.
                       At 40 you're able to climb mountains easily.
                       At 50 a martial artist will learn the
                       technique of levitation (see (5.8)).

Lets you attack with special fighting moves.
These MA techniques are used automatically and
semi-randomly (algorithmically chosen, mostly
the most powerful moves available are picked)
by your character during combat, they are not
player-controllable so you don't have to worry
about them. For a list and effects see (5.3a).
The dice of these martial arts special moves
are affected by elemental brands, but slightly
less than normal weapons (2/3 as much).
Martial arts moves can have high damage dice
of up to 8d7. Some moves have special effects
such as slowing or stunning your opponent.

Under certain conditions (encumberment) MA
abilities cannot be used and lose their effect.
About this and for more information about
Martial Arts in general, see (5.3a).

.Interception   Ability to interfere with adjacent enemies.
 (0.500)   Can prevent them from teleporting, casting,
summoning, running away.
The monster must be standing right beside you
(horizontally, vertically or diagonally).
To intercept an enemy it doesn't matter whether
you have a weapon or shield equipped or not or
whether you have autoretaliation on or off.

You can check your interception chance against
opponents of same and double level by pressing
'm' and choosing "Check intercept chance".

Classes that have the Interception skill
available for training will automatically gain
a certain base chance to intercept, even if
they haven't trained the skill. Training the
skill will then add to that base chance.
The base chance depends on the character's
level, capped at 50.
This base chance is also gained by classes that
cannot actually train Interception but that are
able to train in 'Martial Arts'. In this case
however the base chance won't depend on their
character level but instead on their current
skill in Martial Arts.
(So training Martial Arts on such a character
would actually increase the total interception
chance in two ways at once: Increase the base
chance and then add the Martial Arts
Interception bonus, see 'Martial Arts' skill
for details.)

The higher base level the monster has (rlevel)
the harder it is to intercept it.
Also, interception chance is reduced greatly
while you are blind and you aren't able to
intercept at all while you are
stunned, confused, paralyzed, resting, cloaked
or shadow running (compare (4.11)).
Player ghosts cannot intercept either.

Interception works best to prevent shooting a
ranged weapon. It's slightly harder to prevent
a monster from running away or casting a spell
and even somewhat harder to prevent a monster
from teleporting or blinking.
Some abilities cannot be intercepted at all:
Shrieking, unmagic, shooting missiles/rockets,
throwing boulders, breathing.

Note that multiple players trying to intercept
the same monster does not result in 'stacking'
of their interception chances:
The player who has (under given circumstances
such as being blinded etc) the best chance to
intercept will override the others.

Regarding spell suppression, interception
combines with Anti-magic in a special way, see
'Anti-magic' skill for details.

+Archery
(1/3)

Improves ranged to-damage bonus somewhat, by +1
for every 5.000 increase in skill.
Also increases 'Bows/Throw' ability somewhat
for when using slings, bows or crossbows, which
in turn increases your hit chance with those.

Allows you to learn shooting techniques and to
gain the ability to craft ammunition,
accessible via 'm', see (7.12) for details.

Increases your chance to score critical hits.

At 20 the quality of your handmade ammunition
becomes remarkably better.

Lets you pseudo-ID shooting weapons and
ammunition more often the higher the skill.
If increased to at least 10, pseudo-ID will
give you much more distinctive feelings about
the items. Before that, you can only
distinguish between cursed and good.

.Sling-mastery

Increases hit chance (while using a sling) by
+1 for every 2.000 skill increase.
Also increases Bows/Throw ability somewhat
while using slings, which in turn further
increases hit chance.

At 10,20,30,40,50 you will get +1 additional
shot per round each (while using a sling).

Also reduces the chance of your sling
ammunition to shatter by up to 90% at 50.
Example:
a shot that usually has 10% chance of breaking
will only have a 1% chance of breaking if your
skill is at 50.000.

At 50 you will get an additional bonus of
+1 extra might.

Artifact ammunition never breaks.

Note that the explosion of exploding ammo will
still hit "reflecting" monsters.

Ricochetting:
This happens only with slings or boomerangs.
Mastery adds 33% (at 0.000) to 75% chance for
shots to ricochet, randomly from once up to 5
times (at 50.000), hitting multiple enemies.
Note that magic and ethereal ammo fades away
the moment it hits, and never ricochets.
At mastery skill 15.000 you will be skillful
enough to make your shots ricochet at nearby
enemies instead of completely random directions
except if they hit a reflecting enemy.
At mastery skill 25.000 you will be skillful
enough to make your ricochets avoid any enemy
that sleeps or is charmed.
To disable ricochetting completely inscribe the
sling or ammunition: !R
To allow ricochetting on sleeping/charmed
targets at skill 25.000+ again, inscribe: !O

.Bow-mastery   At 12.5, 25, 37.5, 50 you will get +1 extra
                           shot per round each.
                           Otherwise same as Sling-mastery, except no
                           ricochetting.

.Crossbow-mastery   At 25 and 50 you will get +1 extra shot,
                           at 12.5 and 37.5 you will get +1 extra might.
                           Otherwise same as Sling-mastery, except no
                           ricochetting.

.Boomerang-mastery   At 16.6, 33.3 and 50 you get +1 extra throw.
                           Also increases 'Bows/Throw' ability somewhat
                           while using boomerangs and also regarding
                           throwing any other kinds of items,
                           which in turn further increases hit chance.

                           It is harder for monsters to intercept your
                           attempt of throwing a boomerang, than it is for
                           shooting with a sling, bow or crossbow.
                           Also unlike those ranged weapons, boomerangs
                           cannot be deflected by reflecting monsters.
                           Last but not least, boomerangs are the only
                           allowed weapon for martial artists - they will
                           not negatively impact martial arts in any way.

                           Increases ranged to-damage bonus when wielding
                           a boomerang by +1 for every 2.500 increase.

                           Grants +1/10 additional extra might every 5.000
                           points increased, resulting in full extra might
                           at 50.000.

                           Reduces the chance of a boomerang to land on
                           the ground instead of returning. All artifact
                           and ego boomerangs always return reliably.

                           Ricochetting:
                           This happens only with slings or boomerangs.
                           Mastery adds 33% (at 0.000) to 75% chance for

shots to ricochet, randomly from once up to 3
times (at 50.000), hitting multiple enemies.
Note that magic and ethereal ammo fades away
the moment it hits, and never ricochets.
At mastery skill 20.000 you will be skillful
enough to make your shots ricochet at nearby
enemies instead of completely random directions
except if they hit a reflecting enemy.
At mastery skill 30.000 you will be skillful
enough to make your ricochets avoid any enemy
that sleeps or is charmed.
To disable ricochetting completely inscribe
the boomerang: !R
To allow ricochetting on sleeping/charmed
targets at skill 30.000+ again, inscribe: !O

(Note that your 'Combat' skill determines your
ability to pseudo-ID Boomerangs.)

<< For more information about learning spells, see (7.8)
   Most spells will increase in power in one way or the other when you increase
   their school skill. Often their failure rate decreases, too. >>

+Magic   Increases your base mana by +4 per point.
  (0.250)
                                Lets you pseudo-ID magic items faster the
                                higher your skill is. Magic items are:
                                Mage staves, potions, scrolls, rings, amulets
                                and magic devices (wands, rods, staves).

                                You can also sense curses on any kind of item.

                                If 'Magic' is at least at 10 points, you will
                                get more distinctive feelings from pseudo-ID,
                                before that you only sense 'good' or 'cursed'.

   +Wizardry
      .Sorcery   Learn to use spells of ALL wizardry schools at
                                once, instead of training a particular branch!
                                Note that if you train Sorcery your character's
                                mana pool will become sensitive to usage of
                                gloves. You will need gloves that give any of
                                Free Action, Dexterity, +Mana or elven gloves
                                in order to not get encumbered and as a
                                consequence suffer reduction of your max MP.
      .Mana   Learn spells of the Mana branch.
      .Fire   Learn spells of the Fire branch.
      .Water   Learn spells of the Water branch.
      .Air   Learn spells of the Air branch.
      .Earth   Learn spells of the Earth branch.
      .Nature   Learn spells of the Nature branch.
      .Conveyance   Learn spells of the Conveyance branch.
      .Divination   Learn spells of the Divination branch.
      .Temporal   Learn spells of the Temporal branch.
      .Udun   Learn spells of the Udun branch.
      .Mind   Learn spells of the Mind branch.

      .Spell-power   Increases the power of learned spells by
                                adding a bonus to the spell level.
                                At 50, it will raise spell levels by 40%.
                                (It won't raise the level of spells which you
                                haven't learned yet.)

Note that Spell-power ONLY affects spells of
the 'Wizardry' schools!

+Prayers
    .Holy Offense   Learn prayers of the Holy Offense branch.
    .Holy Defense   Learn prayers of the Holy Defense branch.
    .Holy Curing   Learn prayers of the Holy Curing branch.
    .Holy Support   Learn prayers of the Holy Support branch.

+Occultism
    .Shadow   Learn spells of the Shadow branch.
    .Spirit   Learn spells of the Spirit branch.
    .Hereticism   Learn spells of the Hereticism branch.
    .Unlife   Learn spells of the Unlife branch.

+Druidism
    .Arcane Lore   Learn druid magic taught by arcane lore.
    .Physical Lore   Learn druid magic taught by physical lore.

+Mindcraft
    .Psycho-power   Learn mindcrafter spells of psycho-power.
    .Attunement   Learn mindcrafter spells of attunement.
    .Mental Intrusion   Learn mindcrafter spells of mental intrusion.
        Note: As soon as you train any of the three mindcraft schools your
        character's mana pool will become sensitive to heavy head gear.
        If your head gear's weight exceeds 4.0 lbs your max MP will suffer
        a reduction from encumberment.

+Runecraft   See '(7.8b) Runes & Runemastery'.
    .Light   Learn to evoke light runes.
    .Darkness   Learn to evoke darkness runes.
    .Nexus   Learn to evoke nexus runes.
    .Nether   Learn to evoke nether runes.
    .Chaos   Learn to evoke chaos runes.
    .Mana   Learn to evoke mana runes.

.Astral Knowledge   Learn spells of the Astral branch of magic,
                         exclusively available to the Maia race.

+Blood Magic   Blood magic doesn't require mana and doesn't
                         provide spells unlike most other magic schools.
                         Instead it provides passive or innate powers
                         that are fueled by your own blood to work.

    .Necromancy   Drains life and mana from killed monsters,
     (0.500)   replenishing your HP and MP.
                         Note that you need at least 1.000 Necromancy
                         skill in order for it to work.
                         Only works if you are able to see the target,
                         and if you are not a player-ghost.

                         The amount of points gained depends on the
                         skill and the target's level. To get maximum
                         drain, the skill should be at least half as
                         high as the monster level. There is always
                         a gain of at least +1 HP and +1 MP.
                         Necromancy has no effect on undead and
                         nonliving (constructs) monsters.

                         (Don't confuse Necromancy with vampirism:
                         Necromancy drains from the monster's soul on
                         its actual death, while any vampiric effects

your character might have drain by simply
hitting the monster. So vampirism will work
fine in conjunction with Necromancy as they
are different effects that don't overlap in
any way.)

Necromancy will reduce the chance of your life
force (experience points) getting drained by
nether or chaos or by experience-draining melee
attacks by +1% per point, up to 50% at 50.000.
(This is cumulative with the 'hold life' flag.)

If a character has Unlife and Necromancy both
at 50.000 the character gains ultimate hold
on his life force ('Keep Life'), rendering him
immune to experience drain, including the
permanent drain effect from DRAIN_EXP items.

A natural vampire race character who has both
Necromancy and Traumaturgy at 25.000 or higher
will get his intrinsic melee vampirism drain
rate increased from the usual 50% by +1% for
each further point in either school, up to
100% when both schools reach 50.000.
(The 'body modification' doesn't matter, eg
whether in 'normal' body or 'fruit bat' form.)

.Traumaturgy   Drains mana from monsters when you inflict
  (0.500)   damage on them, replenishing your MP.
Only works if you are actually able to target
the opponent, eg there must not be a wall
between you and the target; Traumaturgy does
not require light but also works in darkness.
The amount of points gained depends linearly
on your skill level and also somewhat on the
damage you inflicted.

Even if your inflicted damage and/or skill
level is so very low that the total amount is
between 0 and 1 and therefore would actually
get rounded down to zero, each attack still has
a (small) chance of replenishing at least 1 MP.

Traumaturgy is most effective with spells that
have an area of effect and can therefore hit
multiple monsters, such as balls and especially
clouds.
Traumaturgy has no effect on undead and
nonliving (constructs) monsters.

Traumaturgy has insanity-reducing synergy when
trained together with Hereticism. It also can
prolong the 'Boundless Rage' spell, the better
the higher Traumaturgy is trained. See (7.8)
for details.

If you are dual-wielding two axes, Traumaturgy
will grant you blood frenzy at 17.000 or higher
after a couple of attacks, the earlier the
higher your Traumaturgy skill, provided your
enemies can actually bleed. Blood frenzy will
temporarily grant 1 extra attack while active.

A natural vampire race character who has both Necromancy and Traumaturgy at 25.000 or higher will get his intrinsic melee vampirism drain rate increased from the usual 50% by +1% for each further point in either school, up to 100% when both schools reach 50.000.
(The 'body modification' doesn't matter, eg whether in 'normal' body or 'fruit bat' form.)

.Aura of Fear
(0.500)

Monsters that hit you are stroke by fear. Mindless undead, non-living monsters and those that resist fear (NO_FEAR) are not affected.
The chance for the aura to trigger depends on your skill alone. Whether it has effect on your foe or not only depends on its rlevel compared to your skill - uniques and powerful monsters receive a small bonus in their favour.
At a skill of 20 the aura is so strong that your melee attacks (weapon as well as martial arts) will have a chance to terrify monsters. This chance increases with skill, but will not affect monsters with an rlevel more than 10 above your character level.
Also at 20 it will grant you fear resistance while the aura is active.
The aura is automatically enabled when you train the skill; you can disable the aura in the 'm' menu. Typing '/ex' command into chat will display the state of all your auras.
Being blood magic, auras will feed from your blood. This means that the speed of your hit point regeneration will be reduced while the aura is active.

.Shivering Aura
(0.500)

Monsters that hit you are stunned. Monsters that are immune to cold and those that resist stun (NO_STUN) are not affected.
The chance for the aura to trigger depends on your skill alone. Whether it has effect on your foe or not only depends on its rlevel compared to your skill - uniques receive a small bonus in their favour.
At a skill of 30 the aura is so strong that your melee attacks (weapon as well as martial arts will be branded by it (cold brand) and you are granted resistance to cold.
Additionally at 30, cold magic or breaths you generate will solidify into cutting ice shards while your aura is active, dealing ice damage. This element conversion reduces damage to 2/3.
The aura is automatically enabled when you train the skill; you can disable the aura in the 'm' menu. Typing '/ex' command into chat will display the state of all your auras.
Being blood magic, auras will feed from your blood. This means that the speed of your hit point regeneration will be reduced while the aura is active.

.Aura of Death
(1.000)

Monsters that hit you are hit by waves of plasma and ice, alternating randomly.

The chance for the aura to trigger depends on your skill alone.
At a skill of 40 the aura is so strong that your melee attacks (weapon as well as martial arts) will be branded by it (alternating plasma or ice brand). (See (5.3) for brand details.)
Additionally at 40, cold magic or breaths you generate will solidify into cutting ice shards while your aura is active, dealing ice damage. Fire produced will likewise ionize into plasma! This element conversion reduces damage to 2/3.
The aura is automatically enabled when you train the skill; you can disable the aura in the 'm' menu. Typing '/ex' command into chat will display the state of all your auras.
Being blood magic, auras will feed from your blood. This means that the speed of your hit point regeneration will be reduced while the aura is active.

.Mimicry
(0.500)

Ability to shapechange into a monster!
To learn a monster form you must kill an amount of it equal to its level, while your Mimicry skill must be at least half as high as the monster level for you to get credit.

To see which monsters you have killed or which forms you have already learned, press ˜ 2 or conveniently use the "/forms" command if you just want to see a list of all learnt forms.

Example: To learn Uruk form, you need to kill 16 Uruks because Uruk is a level 16 monster (see ˜7 for monster lore to check level) and your Mimicry skill must be at least 8 while you kill them, or you won't gain any knowledge.

You also inherit the monsters abilities, weaknesses and resistances!

See section (7.7) for more info.
To find out details about a monster form, press ˜ 7 in game or consult a spoiler file. (See (8.4) for more info about spoiler files.)
You can also use Mikael's monster search page, accessible via knowledge menu, just press ˜R .

For each point that Mimicry is trained above 30.000 the character's mana pool will expand by an extra +5 MP (so up to +100 MP at 50.000). Note that this extra mana is NOT affected by +MANA items.

The further Mimicry is trained above 35.000 the faster a player can shapechange. Usually it takes a full turn to change into another form (or back to player form), but each point above 35.000 will cut this down by 5%, so at 50.000 Mimicry shapechanging will only take 1/4 turn.

Note: Some monsters exist in two versions that are identical except that one is solo and the

other appears in packs (FRIENDS flag).
For example novice warriors.
Your kill count of these two versions will be
unified, so they both count for the same form.

.Magic Device   Mainly reduces fail chance when trying to use
  (1/16)   magic devices (wands, staves, rods, activatable
                  items – see (5.9a)), increases their power and
                  speeds up recharging of rods you carry.
                  See (7.10) for more information on magic
                  devices, the skill and the ability.

                  To reduce inventory space usage go to the magic
                  shop and buy a antistatic wrapping.

.Anti-magic   Generated from your strong disbelief in magic
  (1.000)   an anti-magic field surrounds you, preventing
                  nearby monsters and players from casting
                  spells (but does not prevent them from using
                  magic devices).

                  NOTE that as soon as you invest a point into
                  this skill you won't be able to use any spells
                  or magic devices (wands, staves, rods, items
                  that can be activated) anymore!
                  Being anti-magic still allows you to use
                  scrolls and potions though.

                  The skill effect stacks with the anti-magic
                  field of a Dark Sword and the DISBELIEVE flag
                  of monster forms acquired by Mimicry skill.
                  (See (5.9) for more info about dark swords and
                  (7.7) for details about DISBELIEVE flag.)

                  It's capped at 75% (after stacking) chance of
                  interrupting enemy spells. Party members are
                  not affected adversely.
                  Note: While ball and bolt attacks are spells,
                  breathing is not and is therefore not hindered.

                  The radius of your anti-magic field is approx.
                  the field's power / 9 and caps at range 9.
                  (The field's "power" is its chance to interrupt
                  spells, so 75% power / 9 results in radius 8.
                  To get radius to 9 you'd have to equip another
                  item that generates an AM field or shapechange
                  into a form that generates an intrinsic AM
                  field – these are rare edge cases though..)
                  The field's power is uniform everywhere within
                  the radius, ie it does not decrease outwards.

                  Each point in Anti-magic adds 1% to your
                  AM chance, so the max gain is +50% from skill.
                  If you use a dark sword that gives the maximum
                  amount of anti-magic they can give (+30%) then
                  you only need Anti-magic skill at 45 instead of
                  50 to reach the anti-magic cap value of 75%
                  (30% from dark sword + 45% from skill = 75%).

                  Warriors that specialize in Anti-magic are
                  called 'Unbelievers' (The anti-magic powers
                  result from their strong disbelief in magic).

Training the Anti-magic skill will shorten the duration of certain magical temporary buffs and debuffs on your character, which are: ESP, space/time anchor, probability travel, wraithform, infra-vision, see invisible, invisibilty, haste, slowness, resistances, invulnerability obtained from a potion, deflection, shield.
On the other hand, it will also reduce the frequency of you suffering from continuous experience-draining effects (eg Nazgul rings).

Regarding spell suppression, Anti-magic fields combine with interception in a special way: The total chance to suppress a monster's attempt to cast a spell will yield diminishing returns if the monster's attempt gets hindered by both, Interception and Anti-magic. This means that having high values in both, Interception and Anti-magic, will still give benefits for spell suppression, but the total chance of suppression that results from applying both to a single spell casting attempt will actually come out somewhat reduced.

+Sneakiness
(1.000)

Slightly increases your character speed (+7 at 50, so approx +1 every 7..8 points). Slightly increases perception and searching. Slightly reduces speed loss while in searching mode, and very slightly while in rogues' cloaking mode.

.Stealth
(2.000)

Increases your stealth, which determines how fast sleeping monsters on your dungeon level will wake up. Important if you don't like to wake up everything at once and prefer to sneak past monsters or pick your fights one by one. The stealth gain is 70% as much as from items that give +Stealth.

If your character is really bad at stealth, like Draconians, it might seem as if the skill doesn't help. But if you invest a lot of points you will eventually see an improvement ;).

.Stealing
(0.100, at least 1.000)

Ability to steal items from many NPC stores. Also helps noticing if someone else is trying to steal from you.
You need to be at least level 5 to steal and at least level 10 to steal anything of somewhat higher value.
This skill Will have no effect if your armour is too heavy so that you get a 'flexibility' warning, compare (5.5).

Your chance to steal an item from a shop depends on your stealing skill (by far your most important aspect), your dexterity, and to a minor extent your stealth and invisibility, and on the other hand the price and weight of the item you try to steal.

For example it's nearly impossible to steal a large piece of wood without the store owner noticing it, although it's not worth much. There's always a minimum fail chance of 1/30.

If you get caught by an NPC shopkeeper you will be on the 'blacklist of merchants' for a while, which can be from 0 up to 76 minutes, depending on the value of the item you tried to steal from the shop. Afterwards you may still be watched sharply by shopkeepers for 100 seconds up to 4 1/2 minutes during which you cannot attempt to steal again.
For very low-value items compared to your Stealing skill you might actually only get on the watchlist, not on the blacklist, lucky you.

The item price used to calculate both stealing chances and blacklist/watchlist duration is the 'normal' price with discounts applied if any, not the increased display price items get in shops like black markets.
So for example an item in a black market would be exactly as hard to steal as from the town's alchemist shop. And an item that has a 50% off discount tag on it would be easier to steal and result in less penalty than if it was not discounted.

While blacklisted it's impossible to steal from shops, and you will get BAD prices (quadruple, like in the blackmarket usually) in all NPC shops. (Player stores are unaffected.)
Shops will refuse you any services, eg repair. If you have an open item order it will not be processed (even if the ordered item is actually in stock) but stay on hold until your blacklist timer runs out.

After the blacklist runs out you'll now be on the 'watchlist' for a bit more time, meaning that you can shop at normal prices and use all shop services as usual, but the shopkeepers still keep a sharp eye on you meaning you are unable to steal anything.
The watchlist always extends for 4 1/2 minutes after the blacklist ran out, but it can also be lower in cases when you didn't make it on the blacklist, down to a minimum of 100 seconds.

The blacklist and watchlist will be on hold for a character that isn't logged in, so it's best to steal before going to the dungeon or AFK, so your black-/watchlist have time to run out.

Messages when you enter a shop, how the shopkeeper regards you will roughly give away your remaining Blacklist time:
----
gives you a murderous look   40-76 min.
gazes at you angrily   <40 min.
eyes you suspiciously   <20 min.

```
looks at you disapprovingly   <10 min.
gives you a cold glance       < 5 min.
------------------------------------------
And for the watchlist:
keeps a sharp eye on you      < 4 1/2 min.
```

If you succeed to steal an item, the message
will vary depending on what your chance to
succeed was:
```
------------
At least 70%:        "You easily stole ...",
between 30% and 70%: "You stole ...",
Up to 30%:           "You barely stole ...".
```

Stealing items which have a base value (meaning
without discount applied) not higher than your
stealing_skill * 10 (eg 50 Au->5.000 Stealing)
are especially easy to steal.
Also, if you still get caught on such an item,
the blacklist time will be much shorter too.
Some popular potion/scroll/wand/staff break
points regarding this:
```
----------------------
?Magic Mapping, !Cure Serious Wounds: 40 Au.
?Identify: 50 Au.
!Neutralize Poison: 55 Au.
!Cure Critical Wounds: 100 Au.
?Enchant Weapon/Armour: 125 Au.
?Recharging/Word of Recall: 150 Au.
!Speed, ?Holy Chant, _Treasure Location:200 Au.
!Restore stat, -Stone to Mud: 300 Au.
!Healing, ?Teleportation: 400 Au.
!Resistance, !Restore Mana, Athelas: 450 Au.
?Wilderness Mapping: 500 Au.
```

Note that usually people don't want to be seen
with stolen goods, which means that very
expensive items, depending on their value, have
a certain chance of their level becoming 0,
making them untradable. (Note: Even if you were
stealing Morgoth's crown, which has a value of
10 million Au, you'd still have at least a 5%
chance of it retaining its original level.)

You have a (tiny) chance to successfully steal
an item even if you don't have any stealing
skill and even if your dexterity low, so in
theory everyone could give it a try if they see
an item they really want.

It's more difficult to steal from certain
stores, eg stores that are found in the dungeon
or that don't belong to the basic town stores
(numbered 1-9, including the rune repository).
It is even impossible to steal from expensive
black market (the one located somewhat hidden
in Minas Anor), secret black market (the one
you can only find in dungeons), rare footwear
shop and rare jewelry shop (both in dungeons),
or from a dungeon town's temple, potion store
or black market.

Trying to 'steal back' an item that was already
owned by a player, ie an item that has been
sold to the shop, is especially hard.

Actually you can decrease your blacklist timer
by buying items costing at least 100 Au while
you are blacklisted, as buying items lessens
the shopkeepers' distrust somewhat.
You will gain the amount of gold spent divided
by 200 in seconds subtracted from your timer.
Example:
If you are on the blacklist for maybe 10 more
minutes and buy an item for 40000 Au (which
would usually only cost 10000 Au if you weren't
blacklisted) then you'd get 40000/200 = 200 s
deducted and your remaining blacklist timer
would now be at 6 minutes and 20 seconds.
Of course the loss of 30000 Au that you paid
too much here is *quite* substantial.

Training the 'Stealing' skill will carry over
strongly into its parent skill 'Sneakiness',
thereby granting you some dungeoneering or
combat benefit too.

.Backstabbing   Lets you backstab enemies, afflicting high
 (1/7, at least 1.000)   damage. Works if the opponent is asleep or
                         running away in fear, exposing his back to you.
                         Also works when you are cloaked (only once per
                         monster though, so re-cloaking won't help) or
                         shadow running. Increasing this skill increases
                         the damage your backstab attacks deal.

                         Backstabbing requires sword-type weapons or
                         polearms, up to 10.0 lbs in weight.
                         Alternatively it works if you use Martial Arts,
                         in which case it transforms into neck-twisting;
                         that means your target must possess a neck,
                         read: A head and a torso.

                         If you dual-wield, you will also dual-backstab
                         if the moster is either asleep, or you perform
                         the attack from cloaking mode or shadow run.
                         Although you'll deal somewhat less damage with
                         each stab, since they are executed both at once
                         you will do more overall damage than with a
                         single weapon.

                         Backstab hits and critical hits do not stack.
                         If you roll a critical hit on backstabbing, the
                         damage is compared to what the pure backstab
                         would do and the higher one is used.

                         Backstabbing a non-fleeing monster has a chance
                         to apply a stun effect based on your DEX, your
                         Backstabbing skill, slightly depending on your
                         Weaponmastery skill, and on the r-level and AC.
                         Uniques and undead are harder to stun.
                         There is no difference between dual-wield or
                         one-handed use regarding stun effectiveness.

                         Vampires will feed especially much from

backstabbing a sleeping opponent to death.

.Dodging
  (1/3, at least 1.000)

Ability to evade attacks. In order to get any benefits from dodging skill at all, your armour mustn't be too heavy. If it is, you will get a flexibility warning (compare (5.5)).
Also, you must not be using a shield.

A low dodging skill will already help greatly against monsters of similarly low level, so it is helpful right from the beginning of your character's career.

There are various attacks that can be dodged: Melee attacks mostly, bolts, arrows and the likes (both magical and physical) shot by enemies or traps at you. And it slightly helps to dodge rubble coming down during an earthquake.

Your actual chance to dodge an attack depends on the total weight you are carrying around with you, where inventory usually weighs most and will encumber you the most.
Your equipment also musn't be too heavy, although your weapons are allowed to weigh quite a bit, as long as your armour isn't too encumbering. However, for weapons, armour, and inventory always goes: The lighter, the higher your chances will be.
And of course your dodging chance depends on your dodging skill, which (after penalized by the weight of all your stuff) is compared to the opponent's level or trap level.
(For dodging monsters, the rlevel (0.4) of that monster type is important. Any additional levels the monster may have gained due to dwelling deeper than usual will not affect your dodge chance.)

You can check your dodging chance against opponents of same and double level by pressing 'm' and choosing "Check dodge chance".
Depending on the server version you might see textual descriptions instead of raw numbers:
"Almost no chance" means less than 5%,
"Slight chance" -> less than 14%,
"Significant chance" -> less than 23%,
"Good chance" -> less than 30%,
"Very good chance" -> less than 40%,
otherwise "High chance" (may occur in actual game play if opponent is much lower than you).

Against monsters that have way higher level than you, you receive a minor penalty. You can still dodge them quite effectively though.

Dodging also gets slightly increased by the "Martial Arts" skill (see above in this skill table).

As a rule of thumb, your dodge chance (at maxed

dodging skill in relation to your character's level) will usually cap at 67% for monsters of equal level and at 50% chance for monsters of twice your level.
If your dodging skill isn't maxed out to your current character level, your dodging chance will drop in a linear manner, eg if skill is half your level, you'll have half the chance to dodge.

.Calmness
(0.625)

Ability to not get hindered by enemies.
Monsters can try to intercept some of your actions, the Calmness skill counters these interception attempts. In detail: Monsters can interfere if they are standing on an adjacent grid (ie right next to you) and if you try to..
-shoot with ranged weapons,
-use a void jumpgate,
-set a monster trap.
That's it. So calmness does not affect, for example, spellcasting.
Calmness does not depend on the enemy's level.

.Trapping
(0.450)

Improves your ability to set traps:
Gives you a higher chance to successfully place a trap if a monster is close to you and trying to interfere. Also, monsters will have a harder time to discover your traps.
By training Trapping you also learn to optimize your traps for higher damage output.
(Note that 'Magic Device' or 'Runecraft' skill have no effect on trap damage output, even if it is loaded with a device or a rune.)
See (4.7) for details about monster traps.

Improves your ability to recognize traps and ammunition (pebbles, shots, arrows, bolts):
Lets you pseudo-ID trap kits and ammo more frequently the higher your skill.
If increased to at least 10, pseudo-ID will give you more distinctive feelings instead of just 'good' or 'cursed'.

Trapping also improves your disarming ability, making it easier to pick locks and to disarm traps via the manual disarm command. (The experience you gain from manually disarming traps is not affected by the skill but only by the traps' level).
You also will get a chance to identify the type of a trap on disarming, increasing with skill.

Being more proficient in trapping will also increase your chances of spotting traps, ie improving your 'Searching' ability. And should you still trigger a trap accidentally, your chances of avoiding it will increase too!

At 10.000 Trapping you will learn the fighting technique 'Steam Blast' which can blast open doors and chests.

Last but not least Trapping gives you a chance
(depending on your skill) to salvage a trap kit
from any trap you disarm!

Tip: Inscribe all your trapping components
     '!=' for easy auto-pickup and make sure
     to create macros so you can place a trap
     by simply pressing a single button.

     To reduce inventory space usage, go to
     general store and buy a trap kit bag.

+Health   Increases your hit points by 2 for each point.
 (0.500)   Note that this gain stacks with +LIFE items
                 (compare '+LIFE' in (5.8)) granting you up to
                 30% more HP at the cap of +3 LIFE ie ~+2.67 HP
                 for each +1.000 points in Health.
                 (The HP bonus is factored in before the HP
                 bonus granted from training 'Nature' school.)

                 Increases your hit point regeneration rate:
                  (skill_level * 2)% chance to regenerate 1.5x
                  the normal amount of HP per turn (stacks with
                  other regeneration effects and item flag).
                 Increases your stamina regeneration rate.

                 Helps you to recover from temporary stats drain
                 drain, hallucination, blindness, confusion,
                 poison, disease and cuts faster.

                 Lets you pseudo-ID food faster the higher your
                 skill is. If 'Health' is at least at 10 points,
                 you can get more distinctive feelings instead
                 of just 'worthless' or 'good'.

                 If you spend 10 points into Health, your
                 sanity will be displayed as a bar.
                 At 20 points you'll get the percentage
                 displayed. At 40 the value will be shown.

                 For mimicry users, Health skill is less
                 effective than for other classes, because the
                 hit point bonus is applied before the player's
                 base hit points and monster form hit points are
                 averaged to calculate the mimic's final amount
                 of hit points in a particular a monster form.

                 Note that the subskills of Health listed below
                 in general spill over quite a good chunk of
                 skill points into their parent skill Health.

 .Swimming   Allows you to swim better, allowing to carry
                 more weight and to better protect your items
                 from water.

                 Skill maxes at 1.000, with the ability to swim
                 improving steadily while increasing it.
                 At 0.700 you become able to swim very swiftly
                 if no monsters are within sight, enabling you
                 to 'run' through water.

                 This skill spills over especially generously

into its parent skill 'Health'.

For more details about swimming see (4.15).

.Climbing You need this at 1.000 to be able to climb, which is also the maximum this skill can reach. (Before reaching it, this skill will have no beneficial effects, so it's like a toggle.)

Climbing allows you to pass mountain terrain without the need for a climbing set, special boots or magical means.
Dwarves have little use for this skill as they learn climbing intrinsically when they reach level 30.

This skill spills over especially generously into its parent skill 'Health'.

.Digging How well you are able to dig. Also affects your chance to find items (from digging only), and chance for those items to be good or even great, and it affects the amount of cash generated from mining mineral veins.
It also grants you additional chances to find chests, golem arms or legs from rubble, golem material pieces from walls, runes, and at the appropriate skill level crafting ingredients for your Demolitionist perk, as well as laying open buried fountains or staircases sometimes.

This skill spills over especially generously into its parent skill 'Health'.

Note that for the Digging skill to get applied, which includes any boni it might give such as improving what you can find or uncover (see above), you must dig manually ie via tunnel command or by using demolitionist charges (see below on how Digging skill grants this perk).

If you instead use any kind of digging magic or the insta-tunneling ability gained by mimicking a monster that has KILL_WALL flag, the Digging skill boni/perks will NOT be applied.
The only thing you can uncover this way are random occurances of shallow water or lava, and random buried items except for runes (all other features or wall materials or runes are just turned to mud or annihilated).

In particular, every 10 digging skill you will have a chance to find an additional pile of cash from mining a treasure vein, up to 6 piles if you're lucky at skill 50.000 (provided your dungeon floor depth is greater than half of your digging skill, otherwise the number of piles is limited to depth/5, eg 5 piles for dungeon level 25, while starting at dungeon level 26 you may uncover the full amount of 6 piles if your skill is actually 50.000).

Depending on the skill, you might also uncover
unusual features such as fountains or
staircases or somewhat more often (compared to
finding just random items from digging)
find chests, runes or heavy material pieces
suitable for golem creation.
The quality of objects found also depends on
your digging skill.

Certain tools such as shovels, picks and
mattocks will also increase your digging speed
greatly (independant of the skill), see (5.9).
Also, when hacking through trees and bushes,
axes will help a lot and swords somewhat, in
case you have no good digging tool at hand.
2-handed weapons even more than 1-handed.
For hacking away spider webs, certain polearms
used for slashing (scythes and sickles) may
help too, at least as well as swords or axes.
See (3.4c) for more information on digging
tools and (5.17) for technical details on
digging.

Demolitionist perk (EXPERIMENTAL):
Shortly before 4.7.3 a new experimental perk
was added to the Digging skill: Demolitionist.
This just means that if you train Digging to at
least 5.000 you will be able to find or acquire
certain ingredients that you can use to create
blast charges. The effect of charges does not
increase with skill, level, or anything else.
All ingredients as well as the items you craft
from them are level 0 and hence bound to your
character (untradable).
Ingredients are auto-inscribed by default (via
client option 'auto_inscr_server_ch') for easy
use of the '/mix' command for crafting.
Some ingredients are acquired by digging, some
by actually killing monsters or by other means,
and then there is the 'grinding tool' that you
can buy in town in the alchemy shop for little
money that allows you to grind items containing
a significant amount of rather reactive metal
types to reactive metal powder or to grind
items made of significant amounts of wood into
wood chips.
Some recipes might even use basic lamp oil
which you could just by from the general store.
Note that some ingredients might need higher
skill to find:
Vitriol at 15.000, ammonia salt, saltpetre and
sulfur at 10.000, reactive metal powder at
10.000 (when found, not when created by using a
grinding tool, so it can be acquired at 5.000).
For information on crafting charges see (7.2b).

At 10.000 Digging, if Demolitionist is enabled,
you will learn the fighting technique
'Steam Blast' which can blast open doors and
chests.

If you don't want ingredients to drop to reduce

loot clutter, You can turn them off (and on
again) with the /ing command.

The client option 'autopickup_chemicals' and
the slash command '/chem' toggle automatically
picking-up freshly dropped chemicals by simply
walking over them.

To reduce inventory space usage, go to the
town's alchemy shop and buy an Alchemy Satchel.

The abilities Swimming, Digging and Climbing are also granted by items you
can find. Those are for example items that grants you levitation, so you may
just hover across water instead of swimming across. Wands of stone-to-mud will
turn any obstacle to mud that you could dig through, and some boots or a
climbing set might grant you the ability to climb highest mountains. Dwarves
also learn this ability automatically when they reach level 30.

Here is what the numbers mean (we will use the Axe-mastery skill for this
example:

```
+Combat                        10.500  [0.800]
    +Weaponmastery              5.250  [0.800]
        .Axe-mastery           15.000  [0.500]
```

As we can see this player has 10.5 skill points in Combat, 5.25 in
Weaponmastery and 15 in Axe-mastery. He just reached a new level and hence
gained 5 skill points. Now he decides to invest them all into Axe-mastery.
He presses <DOWN> key until the Axe-mastery line is selected. Now he presses
<RIGHT> key 5 times to invest all his 5 spare skill points here.
Axe-mastery will be increased by 0.500 points per invested skill point (hence
the [0.500] on the right), leaving him at 17.5 Axe-mastery now.
Since sub-skills always slightly affect their parent skills, Weaponmastery
and Combat will also be raised slightly. The result might look like this:

```
+Combat                        10.750  [0.800]
    +Weaponmastery              6.250  [0.800]
        .Axe-mastery           17.500  [0.500]
```


Opposed skills

Some skills don't go well together, and will have negative influence on each
other when increased, decreasing their opposite!
Take care on the following combinations:
```
        Weaponmastery   <->     Sorcery
        Archery         <->     Sorcery
        Martial Arts    <->     Sorcery
        Anti-magic      <->     excludes any type of magic and magic devices,
                                including mimicry.
                                However, a mimicking player won't lose his
                                current form on training in Anti-magic.
                                He just won't be able to transform ever again
                                by using his mimic powers.
                                His form CAN still change though, if he is
                                zapped with a wand of polymorph, quaffs a
                                potion of Chauve-Souris, uses Morph Restoration
                                service of a shop or.. dies, three
                                things that he probably wants to avoid at all
                                costs in order to keep his 'final' form.
```

(7.2a) Maiar initiation effects

Maiar start with a low-profile skill chart, which on initiation gets multiplied
or diminished depending on their alignment (enlightened vs corrupted).
Low-profile means that their "good" and "evil" skills - all holy schools and
all occult schools if available, as well as all Blood Magic schools - are all
about 30% lower compared to what most other races start out with.

When a skill's ratio has been modified on initiation, the skill will
automatically be set as close as possible to its previous value, and the extra
skill points will be refunded, so the character does not "lose" any skill
points by training skills prior to initiation.

Skills that become disabled on initiation will not be nulled and hence will
continue to have effect, although the character won't be able to increase them
any further after that.

Besides changes in their skill tree, Maiar also gain particular abilities on
initiation, depending on their alignment. All the changes are listed here:

Enlightened:
    - Gain time resistance and they no longer have any need for worldly food.
    - Susceptible to evil-based attacks. (Currently only one damage type exists
      that deals extra damage to good-susceptible characters: Hellfire.)
    - Able to almost instantly sense curses on items.
    - Able to see invisible and resisting light.
    - Intrinsic light aura that adds to any light source's radius, starting at
      +1 and growing by another +1 every 6 levels above 20.
    - +1 bonus AC for every 2 levels above 20, up to level 50.
    - At level 50 they will be able to levitate, become resistant to poison,
      electricity, cold and be enveloped in an aura of frost and lightning;
    - also, their melee attacks will slay evil opponents intrinsically.

    - Blood Magic/Occultism: Necromancy, Traumaturgy, Aura of Death, Shadow,
      and Unlife and Hereticism become disabled but you will keep them at their
      currently trained level.

    - Melee combat: Sword-, Blunt- and Polearm-mastery skill ratios x 1.2.
    - All four prayer school ratios x 1.6.
    - Wizardry: Divination school x 1.4.
    - Occultism: Spirit school x 1.6.
    - Runecraft: Light and Mana rune ratios x 1.25.
    - Blood magic: Fear and Shivering Aura ratio x 2.0.

Corrupted:
    - Gain time resistance and they no longer have any need for worldly food.
    - Susceptible to good-based attacks.
    - Able to take off lightly cursed items.
    - Resist fire and darkness.
    - +2 bonus HP for each level above 20, up to level 50, then +1 bonus HP
      for each level above 50.
    - At level 50 they will become resistant to poison, immune to fire, and
      be enveloped in a fiery aura.

    - All four prayer schools and Spirit (Occultism) become disabled (cannot
      be trained further, but you keep their current status),
      priests and paladins however get them completely reset (refunded).

    - Priests: Sword-mastery is enabled and receives the same skill ratio as
                Blunt-Mastery, then it gets boosted by x 1.2 (as replacement
                of non-existant Axe-mastery for this class).
    - Paladins: Sword-mastery ratio x 1.1.

Blunt-mastery ratio receives a x 1.1 bonus; because its ratio
ends up lower than before, its points will be refunded.
Axe-mastery and Blunt-mastery ratios are swapped, so Axe will
now have the higher ratio and Blunt will have the lower ratio.

- Melee combat: Axe-mastery and Martial Arts skill ratios x 1.2.
- Wizardry: Fire, Air, Conveyance school ratios x 1.1, Udun x 1.4.
- Occultism: Shadow and Unlife x 1.6, Hereticism x 1.7.
- Runecraft: Darkness and Chaos rune ratios x 1.25.
- All Blood Magic ratios x 2.0.

Note: After a skill's gain ratio has been boosted as stated above, it will be
capped against a maximum value of 2.000, which can never be exceeded.

(7.2b) Demolition charges (Blast charges)

At 5.000 Digging skill your character acquires the passive 'Demolitionist' perk
that allows finding certain chemicals and crafting explosive charges from them.
(The effect of charges does not increase with skill, level, or anything else.)

See 'Digging' skill in (7.2) for details about acquiring chemicals, note that
you can use the "/ing" command to turn off/on ingredients drop if you ever feel
it's spammy. To store ingredients more efficiently, buy an Alchemy Satchel at
any town's alchemy shop.
Use a grinding tool (also available at the alchemy shop) to grind items that
you don't need anymore to easily obtain wood chips or reactive metal powder.

By combining ingredients you obtain mixtures (or sometimes new ingredients)
depending on the validity of the combination you chose.
Mixtures are works in progress containing at least two different ingredients,
that can be combined with further ingredients until you are satisfied with the
combination. A mixture based on a valid recipe can be finalized to yield a
crafting result, mostly some type of blast charge, but there are other recipes
too.

There are two ways to perform demolitionist alchemy. The results and recipes
are the same, it's just about whether you prefer a lot of button pressing
(which seems unlikely) or a single slash command to do the job instead:

A) By pressing 'A' to activate ingredients or mixtures you can combine them to
   create new ingredients or to create new mixtures. The order in which mixing
   is done is not important. This is the old way that was implemented first,
   and will entail either a lot of button 'A' pressing or creating macros to do
   that for you.

B) By using the slash command '/mix' which is much easier to handle.
   This was added later as a quality-of-life way to craft faster, more easily
   and more efficiently (as you can even craft whole stacks at once).
   Ingredients come auto-inscribed by default to allow easy use of the '/mix'
   command (you can turn that off via client option 'auto_inscr_server_ch').

Finalizing a mixture you deem finished, to obtain a craft result:

A) If you don't use the '/mix' command but rely on 'A'ctivation instead, you
   can activate a mixture you deem final and choose itself when prompted what
   you want to 'combine' it with (think of it as some kind of drying process^^)
   and if you used a valid combination of chemicals you will craft a type of
   blast charge (or whatever the recipe entails) from it!

B) If you use the '/mix' command, finalization (ie self-activation of the final
   mixture) is done by specifying the '*' character. See below for examples.

The simple way to create mixtures - using the slash command "/mix":
This command has two different ways of specifying ingredients to mix.
The clou is that you can actually combine both syntaxes as you wish!

(1) With '@Cn' tags the items must be inscribed with, where the numbers 'n' on
    the tags of the items are given to the /mix command.
    This is a safe way to craft, as it will be independant on the inventory
    position of the items. You do not need to tediously inscribe the chemicals
    manually, as there is an option 'auto_inscr_server_ch' which is enabled by
    default and will auto-inscribe ingredients you pick up.

(2) by specifying inventory slot letters instead of tag-numbers in the command,
    with lower-case letters refering to items inside an Alchemy Satchel if you
    have one, and upper-case letters refering to items in normal inventory.
    This is a very fast way to craft things on the fly, but of course requires
    you to pay attention which ingredient is in which inventory slot.

Here are the two syntaxes in detail with examples:

Syntax (1):
  /mix <tag numbers 'n' of chemicals inscribed '@Cn'> [<'*' to self-activate>]
This command mixes chemicals and/or self-activates a mixture, which must all be
inscribed @C<n> where <n> is a numerical tag from 0 to 9.
Examples:
  /mix 1233   -> mix chemicals inscribed '@C1', '@C2' and two times '@C3'.
  /mix 1233*   -> mix those chemicals and self-activate the mixture.
  /mix 0   -> Self-activates a mixture inscribed '@C0'.

Syntax (2):
  /mix <satchel-lower-case / inven-upper-case slot letters> [<'*' activates>]
Lower-case for alchemy satchel, upper-case for inventory:
Example:
  /mix accD*   -> mix chemicals from the satchel slot (a), two units from the
                   satchel slot (c), one from normal inventory slot (d), and
                   finally self-activate the resulting mixture.

Last but not least, you can optionally specify a 'repeat' parameter in the
beginning, denoted by an 'x' followed by the count. If you use it it must be
the first thing in the mix command-line, before ingredients:
 Optional 'x<0-9>' parameter, must be first in line, repeats the whole process!

Here is an example that uses repeat and combines both syntaxes (1) and (2):
  /mix x5 bc7E* -> performs the crafting attempt 5 times.
Each craft will be combined from:
 -an ingredient from alchemy satchel slot (b),
 -an ingredient from alchemy satchel slot (c),
 -an ingredient that is inscribed '@C7',
 -and finally an ingredient from normal inventory slot (e).
 -finally the resulting mixture is 'finalized' ie turned into a ready-to-use
  craft result item - provided you got all the ingredients correct and it was
  actually a valid combination, of course.

A mixture that contains no valid combination of the correct ingredients in the
correct amounts is ruined and you can just discard it with 'k' (ie 'kill item'
command key).

If you successfully created a blast charge from the mixing and finalizing

process, you then activate the charge to carefully place and arm it.
Its fuse will automatically burn down in a matter of seconds and it will go
off, so depending on the fuse length you might want to hurry up and get away.
If you change your mind in time, you can try to disarm an armed charge before
it goes boom, take care.
See the table below about fuse lengths and note the tip about !F inscription.

An alternative method is to just throw the charge, which will auto-arm it.
(Basically the same conditions as for activating a charge will apply.)
Thrown charges are inferior to carefully planted ones, and will have reduced
effect such as smaller blast radius or lower damage.

Increasing your 'Digging' skill will increase the power of many charge types.

Obtaining chemicals/ingredients:

Ingredient	mining	looting	other source
Water		Potion	Fresh water sources
Salt water		Potion	Seawater sources
Lamp oil		Flask	General store
Acid			Crafting
Wood chips	Trees, bushes		Grinding
Charcoal			Burning wood, crafting
Sulfur	Magma	Medium firebreathers (or bigger)	
Saltpetre	Sandwall	Bats, Birds, Hybrids, Novice Mages (rarely)	
Ammonia salt		Quadrupeds, Canines, Hydras, Yetis, Medium poisonbreathers (or bigger)	
Reactive metal powder	Quartz		Grinding
Caustic metal ash			Crafting
Caustic salt			Crafting
Vitriol	Magma	Medium acidbreathers (or bigger)	

Note that in order to find some of these you need a minimum digging skill:
Ammonia salt   at least 10.000 in 'Digging'
Reactive metal powder at least 10.000 in 'Digging'
Vitriol   at least 15.000 in 'Digging'
All other chemicals than these three listed drop at demolitionist perk unlock
level ie at Digging skill 5.000.
For reactive metal powder you can get it earlier than listed by using a
grinding tool on items that contain metal.
If you kill monsters that are 'runemaster' egos, they have a chance to drop
any kind of chemicals as long as you have demolitionist unlocked (5.000 skill).

Crafting ingredients from raw materials:

- Wood chips can be processed into charcoal (requires fire-based light source).
- Sulfur + saltpetre + water = flask of acid.
- Vitriol + water or salt water = flask of acid.
- Reactive metal powder + salt water or ammonia salt = caustic metal ash.
- Reactive metal powder + acid or vitriol = caustic salt.
- To obtain water or salt water you can just fill up an empty bottle with
  seawater or fresh water at the appropriate terrain. To obtain empty bottles
  you can make use of the "/empty" command or the "keep_bottle" option in =0 .

Crafting actual explosive charges:

Activate a mixture with itself after you added all required ingredients or use
the "/mix" command described above, to craft an explosive charge from it.
The type will depend on the ingredients.
Note that you can inscribe charges !Fn where n ranges from 0 to 15 and sets
the fuse timer in seconds until it blows up. If the inscription is omitted
the charges use type-specific standard fuse lengths listed in this table.

Charge type	Char-coal	Sul-fur	Salt-petre	Ammonia salt	Reactive m.powder	Caustic m.ash	Caustic salt	Lamp oil	Std. fuse
Blast	1	1	2						3s
(alternative)				3				1	
Basic detonation									
Large Blast	1	1	3						5s
(alternative)				3		1		1	
Basic detonation									
Surgical	2	2	3	3					5s
Beam-like detonation									
Ground-shaking	1	1	3				1		9s
Earthquake									
Destructor	2	2	3				3		10s
Destruction									
Fire	2	1	2			1			5s
Fireball									
Firestorm	2	2	3			2			9s
Firestorm									
Firewall	3	2	2			1			2s
Firewall									
Wrecking			3			1		2	2s
Creates rubble									
Cascading			3			3		2	2s
Creates walls									
Tactical			3			2		2	2s
Stone prison									
Flash bomb	1	1	2		2				2s
Blinding									
Concussive	1	1	2			1			2s
Stunning									
L-Concussive	1	1	2			2			3s
Stunning									
Underground	1	2	2				1		7s
Open up water/lava grids from underground streams									

Aside from blast charges it's possible to craft fireworks:

Charcoal + sulfur + 2x saltpetre + 2x reactive metal powder
 + scroll of light or scroll of fire = scroll of firework (of random type)
Using a scroll of fire will always result in 'big' types of firework scrolls.

(7.3) Abilities

Depending on your race and class, you will be better or worse at certain
generic abilities. You can see your abilities in the character screen
(press 'C').

Miscellaneous Abilities can range from Bad to Legendary:
Bad   (red)   (or 'Very Bad' if negative, no real difference)
Poor   (red)
Fair   (yellow)

```
Good         (light green)
Very good    (light green)
Excellent    (light green)
Superb       (light green)
Heroic       (light green)
Legendary    (light green)
```

Some of those abilities have a maximum value after which they cannot be
increased any further. Such abilities show 'legendary' in different colours
than just light green. Instead they use:

```
Legendary    (dark green)    This means it's good enough to deserve being
                             called 'legendary', but that it can actually be
                             further increased up to a specific maximum.
Legendary    (golden)        This means, that you have reached the absolute
                             highest possible value, ie the maximum, for this
                             ability.
```

Here is a list of detailed information about miscellaneous abilities:

Fighting
      How well you can fight (hit chance; further boni like skills or +hit from
      equipment are added to the ability) or how easily you get disarmed
      ("You lose the grip of your weapon(s)!").
      (Note that any +tohit bonus increases the displayed Fighting ability:
      The displayed value is the sum of your actual ability and your hit boni.)
Bows/Throw
      How well you can shoot with slings, bows and crossbows or throw any kind
      of item, including 'firing' boomerangs.
      (Note that any +tohit bonus increases the displayed Bows/Throw ability:
      The displayed value is the sum of your actual ability and your hit boni.)
      This ability is internally divided into its 'bows' and its 'throw' part:
      If you don't wield a ranged weapon, it will display the 'throw' part.
      If you do wield a ranged weapon it depends on its type: For slings, bows
      and crossbows the skill will now display your 'bows' proficiency, but if
      you equip a boomerang, it will display your 'throw' proficiency again.
Saving Throw
      How well you can resist attacks that have influence on your status
      other than just hit points (except for monster curses, which can be
      prevented too). Saving throw is rolled (possibly modified) against:
      -Cause Wounds spells (player spell) and monster curses (monsters' version
       of the cause wounds spell, ie an attack where the monster points at you
       and curses: "Monster points at you and curses/incanting terribly/screaming
       the word 'DIE'", depending on the spell's power level).
      -Fear and paralysis melee attacks
      -Confusion, fear, blindness, slowness, paralysis spell effects
      -Non-friendly teleportation effects
      -All nexus/morph effects (except polymorphing from bat form back to normal)
      -Unmagic effects
      -Suffering damage from dispelling effects
      -Psi attacks of all sorts (damage and effects), including mind-blanking and
       the terribly adverse effects of an encounter with an eldritch horror,
       which can be: Confusion, hallucination, insanity, paralysis, amnesia
       and (sometimes permanent) loss of intelligence and wisdom.
      -The draining effects of an ancient foul curse (TY_CURSE)
      -Seasoned traveller trap effect.
Stealth
      Determines if monsters will immediately wake up if you're nearby or if
      you are able to sneak past sleeping monsters without waking them.
Perception
      This is your 'spontaneous' searching frequency that has a chance to trigger
      one turn of 'searching' each time you move, without actually actively

pressing the search key or being in 'searching mode'.
Whether you really discover something depend on your 'Searching' ability:

Searching
Determines how easily you spot hidden traps/doors on adjacent fields
while searching for them (with 's' or 'S'), or when you automatically
search for them due to your Perception ability.

Disarming
How well you can disarm traps (without setting them off), and how likely
you avoid known traps if you accidentally step on them again.
Disarming also improves your chances to pick locks.
(Note that manually disarming traps like this will yield experience points
if successful, while disarming via magic or magic devices won't.)

Magic Device
How well you can use magic items like wands, staves, rods (these are often
especially hard to use) or activate magic items like Dragon Scale Mails.
See (7.10) for more information.

Blows/Round
How often per round you are able to strike with your weapon. This depends
on your strength, dexterity, your class, your weapon.
Spending points in specific weapon masteries will give you an additional
blow at 25 and at 50 (like Sword- or Blunt-mastery).
Tables of blows/round limits are at (5.3a) for Martial Arts, and at (7.5)
and (7.5a) for melee weapons.

Shots/Round
How often per round you are able to use your ranged weapon.
Spending points into specific archery skills will give you additional shots
(see (7.2) for details).
Mimics may get additional shots per round if the monster form they use has
the ability to shoot with ranged weapons (see (7.7) for details).

Infra-Vision
How far you can see warm-blooded monsters in the dark, even those that are
invisible to normal sight.
10 ft equal a distance of 1 field.
IV can be very helpful for spotting monsters outside of your light radius
that don't carry a light source themselves.
Note that (at the time of writing, v4.7.3) the general maximum range of
sight in TomeNET is 20 grids aka 200 ft, beyond which you cannot notice
anything. This means that infra-vision too is capped at a maximum of 200 ft
aka 20 grids.

These miscellaneous abilities can also change when your character progresses,
depending on your +hit and +dam (concerning Fighting and Bows/Throw) or your
character level or certain skills you invest points into.
How much an ability changes when a property of your character (skill, level or
weapon enchantments) it depends on changes, depends on your class: The relative
numerical modifiers are given in the class table in (7.5).
Here is a list which ability changes depend on which factors:
(The factors in relation to the values in (7.5) are marked by underscores.
All other factors listed here are further modifications, independant of (7.5).)

```
Fighting        _'Combat'_, _'Weaponmastery'_, melee +hit boni
Bows/Throw      _'Combat'_, _'Archery'_, ranged +hit boni
Saving Throw    Wisdom, _level_, AM-shell
Stealth         Mimic form weight, stealth items, _'Stealth'_, cloaking,
                'Martial Arts'
Perception      search items, _'Sneakiness'_
Searching       search items, _'Sneakiness'_, cloaking
Disarming       Intelligence, dexterity, _'Trapping'_
Magic Device    Intelligence, _'Magic Device'_
```

For age, height, weight, social class and gender see (7.14).

Apart from those generic abilities, there are several class- or race-specific
active or passive abilities, given in the race/class descriptions in (7.4)
and in (7.5).

(7.4) Races

Depending on your race, you might need different amounts of experience to gain
a new character level. You also might have certain intrinsic abilities.

For Beginners a powerful yet simple race/class combination like Half-Troll,
Half-Orc or Dwarven Warrior is strongly recommended. (Warrior being by far the
most straight-forward and most forgiving class in the beginning.)

The Maia race is not recommended for beginners due to its complexity.

The Yeek race is not recommended for beginners because it's extraordinarily
weak in all fields (its only upside being that it needs the least amount of
experience of all races to gain levels).

The Vampire race is not necessarily recommended for beginners due to its
various quirks that you'll need to pay attention to (feeding, light sources,
certain healing/curing effects that instead damage vampires).

List of all races (make sure to read the paragraph about your race, when you
create a character!):

- Human
    Humans are allrounders with no special weaknesses or strengths.
    Humans have no experience penalties and tend to go up levels faster than
    most other races. No racial adjustments or intrinsics occur to characters
    choosing human.
    Humans get a large bonus on 'Climbing' and 'Interception'.

- Half-Elf
    Half-elves tend to be smarter and faster than humans, but not as strong.
    Half-elves are slightly better at searching, disarming, saving throws,
    stealth, bows, and magic, but they are not as good at hand weapons.
    Half-elves resist light intrinsically.
    They get bonus on 'Bow-mastery' and 'Interception', a small bonus on
    the 'Nature' and 'Spirit' and a small malus on the 'Shadow' school.

- Elf
    Elves resist light effects intrinsically and see invisible creatures.
    Elves are better magicians then humans, but not as good at fighting.
    They tend to be smarter and faster than either humans or half-elves and
    also have better wisdom.
    Elves are better at searching, disarming, perception, stealth, bows, and
    magic, but they are not as good at hand weapons.
    Elves get bonus on 'Bow-mastery', 'Magic', 'Stealth', 'Dodging',
    'Calmness', 'Sneakiness' and the magic 'Water' and occult 'Spirit' schools,
    a large bonus on the magic 'Nature' school and a malus on 'Shadow'.

- Hobbit
    Hobbits have their dexterity sustained. Further, they get a dexterity bonus

from not wearing shoes! Hobbits, or Halflings, are very good at shooting, throwing, and have good saving throws. They also are very good at searching disarming, perception, and stealth; so they make excellent rogues, but prefer to be called burglars. They are much weaker than humans, and no good at melee fighting. Halflings have fair infra-vision, so they can detect warm-blooded creatures at a distance. Hobbits resist black breath somewhat, both in terms of initial infection chance and suffering the consequences. Since Hobbits have a great passion for mushrooms they are able to determine the quality of them immediately when they find them.
They get bonus on 'Sling-mastery', 'Sneakiness', 'Dodging' and a large bonus on 'Stealth'.

Note:
Since hobbits have low hit points you might consider training the skill 'Health' to make up for it, depending on which class you choose to play.

- Gnome
    Gnomes are intrinsically protected to paralysis effects. Gnomes are smaller than dwarves but larger than halflings. They, like the hobbits, live in the earth in burrow-like homes. Gnomes make excellent Warlocks & Sorcerers, and have very good saving throws. They are good at magic, searching, disarming, perception, and stealth. They have lower strength than humans so they are not very good at fighting with hand weapons. Gnomes have fair infra-vision, so they can detect warm-blooded creatures at a distance.
    Gnomes receive bonus on 'Crossbow-mastery' and 'Magic' and a large bonus on 'Dodging' and 'Digging'.

- Dwarf
    Dwarves can never be blinded and at level 30 they gain intrinsic 'Climbing' allowing them to travel mountain regions easily.
    Dwarves are the headstrong miners and fighters of legend. Since dungeons are the natural home of a dwarf, they are excellent choices for a warrior or priest. Dwarves tend to be stronger and tougher but slower and less intelligent than humans. Because they are so headstrong and are somewhat wise, they resist spells which are cast on them. Dwarves also have very good infra-vision because they live underground. They do have one big drawback, though. Dwarves are loudmouthed and proud, singing in loud voices, arguing with themselves for no good reason, and screaming out challenges at nearby foes. In other words, dwarves have a miserable stealth. They receive a bonus on 'Axe-mastery', a huge bonus on 'Digging' and 'Climbing' and a large malus on 'Swimming'.

- Half-Orc
    Because of their preference to living underground to on the surface, Half-orcs resist darkness intrinsically. They make excellent warriors and decent priests, but aren't good at magic. They are as bad as dwarves at stealth, and horrible at searching, disarming, and perception. Half-Orcs are quite ugly, and tend to pay more for goods in town. Half-Orcs do make good warriors and rogues, for the simple reason that Half-Orcs tend to have great constitutions and lots of hit points.
    They get a slight bonus on 'Backstabbing', a large bonus on 'Weaponmastery' and a bonus on 'Necromancy' and occult 'Shadow' magic and receive penalties on 'Spirit' and large penalties on 'Magic', 'Sorcery' and 'Swimming'.

- Half-Troll
    Half-trolls have their strength sustained. They are very strong, but also very stupid and slow. They make great warriors and iffy priests. They are bad at searching, disarming, perception, and stealth. They are so ugly that a Half-Orc grimaces in their presence. They need to eat often but they also regenerate hit point especially quickly (1.5x as fast as from 'regeneration' flag, doesn't stack with any regen items) and even keep regenerating while still suffering from cuts.

Thanks to their thick skin, they also get an (albeit very small) bonus to armour class. Half-Trolls get bonus on 'Blunt-mastery', 'Health'. They receive a large penalty 'Climbing' and huge penalties on 'Critical-strike', 'Magic', 'Sorcery', 'Archery' and 'Swimming'.

– Dunadan
  Dunadain have their constitution sustained. Dunadain are a race of hardy men from the West. This elder race surpasses human abilities in every field, especially constitution. However, being men of the world, very little is new to them, and levels are very hard for them to gain.
  A Dunadan gets bonus on 'Combat', 'Archery' and 'Interception' and a small bonus to 'Magic' and a large bonus to 'Swimming'.

– High-Elf
  High-Elves can see the invisible and resist light and the flow of time intrinsically. They are a race of immortal beings dating from the beginning of time, masters of all skills, strong and intelligent, although their wisdom is sometimes suspect. They do very well in all professions. There are few things that they have not seen already, and experience is hard for them to gain.
  High-Elves receive boni on 'Bow-mastery', 'Magic', 'Stealth', 'Dodging' and the magic 'Nature' school, a large bonus on 'Calmness' and 'Swimming', a slight bonus on 'Spirit' occultism and a malus on 'Shadow' occultism.
  High-Elves also recieve boni on 'Light' and 'Mana' runecraft.

– Yeek
  Being weak and losing many childhood fights, they have learned the ability to float gently to the ground. They have intrinsic feather falling.
  Often having to escape from precarious situations, yeeks are able to pass through dense forest quickly.
  Yeeks are the least powerful of all the races. They suffer disadvantages in all stats and have attributes similar to humans. However, to compensate Yeeks learn, and thus gain levels, extremely quickly.
  Yeeks don't receive boni or mali on any skills except that they are very good at 'Swimming'.

  Note:
  Since yeeks have low hit points you might consider training the skill 'Health' to make up for it, depending on which class you choose to play.

– Goblin
  Goblins have a decidedly mixed reputation. They are almost always grinning, and more often than not you cannot tell whether or not they are eyeing you like a side of meat. They are as sturdy as Dwarves and are quite agile making them good fighters, rogues, and mimics. Being creatures of the night, Goblins have natural resistance to darkness.
  They receive bonus on 'Boomerang-mastery', 'Stealing' and occult 'Shadow' magic and a malus to 'Spirit' and all four holy schools.

– Ent
  The Ents are a powerful race dating from the beginning of the world, eldest of all animals or plants who inhabit Arda. Spirits of the land, they were summoned to guard the forests of Middle-earth.
  Being much like trees they are very slow but strong and do not have to feed as often. Because they consist of wood, they are quite susceptible to fire and they don't drown in water.
  As the Shepherds of the Trees, they can learn to sense the presence of others, such as animals at level 10, orcs at 15, trolls at 20, giants at 25, dragons at 30, demons at 40 and all evil-minded creatures at level 50.
  At level 4 Ents learn to see invisible things. In general, they accumulate

experience very slowly and they do not eat normal food but they are able to
consume liquids. Trees will slightly bend aside to let ents pass through.
Ents are able to slowly replenish their nourishment by rooting themselves
into the ground by entering 'R'esting mode, provided it's natural ground
such as grass, earth, mud or water. Their food state will go up to 'Full'
that way. They cannot eat normal food but will feed greatly from drinking
potions that provide nourishment. They can never be gorged though.
Ents intrinsically resist the force of unleashed water and their bark skin
provides a small bonus to armour class.
They get bonus to 'Health', a slight bonus to 'Spirit' and a large bonus on
'Calmness' and on the magic schools 'Earth', 'Water' and 'Nature'. They
receive a huge penalty on 'Fire' school, a large penalty on 'Axe-mastery'
and a penalty on 'Sword-mastery'. They cannot train 'Climbing' or any
blood magic at all.

– Draconian

These humanoid half-breeds of dragon and man surpass common humans in all
ways, except that they are really bad at moving stealthily. Similar to
dragons, they can eat firestones to temporarily boost their powers.
(See (5.9) for firestone details.)
Draconians need a very long time to gain further experience and need to eat
often. They have feather falling instrinsically from birth.
At level 5 they gain intrinsic telepathic powers (ESP) to spot dragons
anywhere on the level. At level 6 this power advances to additionally being
able to notice all nearby creatures that have a mind and the radius expands
as the Draconian gains levels. At level 30 they learn how to levitate.
Unlike other races, draconians are susceptible to the void connecting
void jump gates and may get hurt by it when they travel through it,
perceiving it as "cold" even if they resist or are immune to normal frost.
The greater the gate distance, the higher the damage from 'going between'.
Armour can help to mitigate this effect somewhat.
Draconians possess a certain lineage trait from birth, providing them with
intrinsic resistances and an elemental breath (learned at level 8) which
they can use if they have sufficient stamina (costs 3, accessible with 'm')
and which is a physical ability of theirs, not a magic spell.
'Breathe element' inflicts damage equal your current hit points divided by
3 and capped between 350 and 500 depending on your element, with the basic
element types doing the most damage and shards and sound doing the least.
This breath weapon cannot be used while polymorphed, except if the form is
a reptile (including Hydras) or an actual dragon (including dragonriders).
The resistances and other abilities obtained from a trait remain active
even while polymorphed.
Thanks to their scaly hide they receive a small bonus to armour class,
especially the metallic lineages – bronze, silver and gold.
Draconians receive a bonus on 'Polearm-mastery', 'Attunement',
'Nexus' runemastery, 'Magic devices', a large bonus on 'Aura of Fear' and
'Swimming'.

Table of their traits:

Lineage	Breath	Resistances/abilities
Blue	Lightning	lightning, brand (5), aura (15), immune (25)
White	Frost	frost, aura (15), immune (25), susceptible to fire
Red	Fire	fire, immune (25), susceptible to cold, hit point regeneration
Black	Acid	acid, immune (25)
Green	Poison	poison, immune (25)
Multi-hued	Any of the five above *	lightning (5), frost (10), fire (15), acid (20), poison (25)
Bronze	Confusion	confusion (5), paralysis and electricity (10), reflection (20); a small extra AC bonus

```
Silver      Inertia       cold (5), acid (10), poison (15),
                            reflection (20); a small extra AC bonus
Golden      Sound         fire (5), acid (10), sound (15),
                            reflection (20); a small extra AC bonus
Law         Shards        shards (5), paralysis (10), sound (15)
Chaos       Chaos         confusion (5), chaos (15), disenchantment (20)
Balance     Disenchantment  disenchantment (10), sound (20)
```

(*) Multi-hued lineage can use specific breaths in the 'm' menu.

-- Tip: --

Make sure to set your breath attack to a hotkey when you learn it.
You can do this in the macro wizard: Press % for macro menu, z to invoke
the wizard, then L and type 'Breathe element', finally press a for method
of targetting.

- Kobold
    These somewhat smallish dog-faced humanoids who tend to live in lairs
    and often make up for their size by laying out clever traps resist poison
    intrinsically.
    They are able to take most roles, being somewhat better at archery than
    close combat. Their intelligence is somewhat suspect, and although they do
    not pick up careers as mages or other very elaborate professions, they can
    become shamans or druids.
    Kobolds are omnivores but since many of them live underground, a primary
    food source are mushrooms. Kobolds are able to determine the quality of a
    mushroom immediately when they find one.
    They can see in the dark thanks to infra-vision, have extraordinarily sharp
    senses, and can move very silently, making them hard to spot. They are also
    good at disarming traps.
    Kobolds receive a large bonus on 'Trapping' and 'Digging', a huge bonus on
    'Swimming' and a slight bonus on 'Sneakiness'.

- Dark-Elf
    Dark-Elves dwell below the surface in huge caverns of their underground
    city. The children are already drilled to become sworn enemies of most
    other races of the underground, and also of the hated Elves and High-Elves
    who live on the surface under the burning light of the sun. Overthrowing
    rivals by treachery and murder are acknowledged ways in their society,
    as long as noone is left alive who might bring charge against the victors.
    Dark-Elves are good fighters and sorcerers, but also decent priests.
    Dark-Elves intrinsically resist darkness, but are susceptible to light.
    At level 20 they learn to see the invisible.
    They get bonus on 'Stealth', 'Dodging', 'Sneakiness', 'Backstabbing', a
    large bonus on occult 'Shadow' magic and a malus on all four holy schools
    and the occult 'Spirit' school.

- Vampire
    These powerful undead creatures move out in the night to hunt living prey
    and suck its blood to sustain themselves. Vampires resist darkness, but
    are susceptible to light and certain purifying and anti-evil effects, be it
    on items such as scrolls, on magic devices, or on equipment such as weapons
    and light sources (which may drain their hit points if equipped, even if
    the vampire acquired resistance to light).
    Vampires fear the sunlight and any kind of items giving off powerful light
    (radius of 3 or more; lights that are blessed or have undead/evil slaying
    effects; white-light sources that either have radius 2 or are artifacts or
    the vampire doesn't have a source of light resistance). Asides from strong
    light sources they fear all items that are blessed, and non-weapons that
    have *slay undead* ability.
    Any such item that is adverse to undead will burn them, draining their hit

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points, or draining their mana if worn on head or hands. Exceptions are cursed items, chaotic items and the "Stone of Lore", these are always safe. Vampires start with a mummy wrapping, because it can protect them from the sunlight. If they are moving on the world surface (meaning not in a dungeon or tower) while it's day, the sun will burn them if they don't resist light or wear a protective wrapping.

They don't actually need a light source, since they are able to determine their close surroundings even in complete darkness thanks to an intrinsic trait of the vampire race: Darkvision.

This ability grows when the vampire rises in character-levels, starting at torch-wide radius and growing to lantern-wide radius already when reaching level 10. At night on the world surface, darkvision increases even more.

Regarding items, Vampires do not suffer a hit point drain from wielding a spectral weapon. They are even able to wear or wield heavily cursed items such as Morgul weapons and benefit from them, turning their negative boni into positive ones! The only exception are weapons of Nothingness, which won't do them any good either. Since Vampires are immune to Black Breath, using a Morgul weapon will not pose a problem to them. Heavily cursed randarts will even get rerolled mostly, see the end of (5.12) for details, although some randarts may fail and remain cursed and useless.

Vampires are good fighters and decent mages. However, they are unable to conjure holy fire (Fireflash spell) or utilize magic of water or nature school. Neither can they make use of mimicry techniques (with the exception of vampire bat and vampiric mist, see below) or holy or spirit spells.

As a specialty, vampire istari are able to learn the occult shadow school and unlife school, which are not accessible to istari of other races. These two schools are not affected by Sorcery though, so they have to be trained separately.

Vampires are unable to train in anti-magic in order to suppress magic, but they can make use of items that provide anti-magic effects.

Aside from darkness they also resist sanity-draining effects somewhat, cold, time, nether, they're immune to poison and it's hard to drain their life force – this is also true for life force drained by items a vampire has equipped: Those will drain exp at only half the normal rate.

As they aren't living, they cannot be infected by continuous diseases.

Vampires have a high chance to resist the adverse effects of encountering an eldritch horror (see (7.3) under 'Saving Throw' for details on those). They also intrinsically have partially life leeching (vampiric) attacks (see '(5.13) Vampirism' for more information) which they can further improve by training in both Necromancy and Traumaturgy (see skill details).

Being undead, vampires don't drown as easily as other races, but the water still has a somewhat damaging effect if they cannot swim at all.

At level 15 they become able to turn into a vampire bat (mimicry code 391). Vampire bats are fast, can fly (basically as effective as 'levitation') and are more resistant to sun burn than the humanoid vampire form, making them useful for travelling, although they move slightly erratically. While vampires are in bat form, their mana pool is greatly reduced though. As a specialty, vampires can use their full equipment in vampire bat form but cannot fight or cast well while transformed (reduced BpR and MP pool).

At level 30 they can become able to turn into vampiric mist (mimicry 365). In mist form, they can pass closed doors, traps without triggering them, have maximum stealth and be granted a shivering aura (or have their existing shivering aura boosted). They will also gain the 'invisibility' effect (as from items) against monsters, but not against other players. (Note: This invisibility effect will not result in the usual purple colour of the player's symbol, it's still there though.)

Last but not least once mist form is learned, vampires can pass through walls of houses they have legal access rights to, even without the player explicitly changing into vampiric mist.

However, Vampires cannot perform a lot of physical actions in mist form, such as fighting, and the creeping mist moves slower than they would in their normal form. Vampires can use their full equipment in mist form too.

Vampires cannot eat normal food, instead they need to feed off living creatures. This means that you need to kill monsters in melee range (though not necessarily by using melee attacks – spells or arrows work fine too) in order to satisfy your hunger, which might be quite easy for melee classes but sometimes a hassle for ranged/caster classes. On the plus side, a vampire won't get gorged by drinking too many potions. In fact, Vampires can never get gorged, their 'feeding' will stop just below that threshold. Items that provide 'Slow Digestion' do work for vampires.
At level 40 they will also start to need less and less food to sustain themselves. Vampire royalties will require the least amount of food, independant of their level, enabling them to survive a very long time without feeding – even an item granting 'Slow Digestion' will not improve this any further.
Vampires hate 'Blunt' weapons, are very bad at 'Swimming', cannot use certain magic schools at all as described above, get a large penalty on 'Divination' magic but receive a bonus on 'Mental Intrusion' and 'Mind' and a large bonus on 'Shadow', 'Unlife', 'Necromancy', all aura skills and a small bonus on 'Traumaturgy'.
As undead, Vampires gain a moderate skill bonus for 'Nether' runes but in turn find it extremely hard to improve in 'Light' runes.

-- Tip: --

In case you lose your mummy wrapping and the general store doesn't have one in stock, you can order one there (press 'o' key in the store).

- Maia
  The Maiar are lesser spirits who are associated with one or more Valar, the greater gods. Being of divine origin they can shape themselves in fashion of elves or humans as they see fit, often acting as powerful wizards to guide elves and man by gaining their trust. Appearing in such shape, their abilities will seem somewhat superior in all aspects and they also possess infra-vision.

  Maiar have a choice of ascending to enlightenment, or submit to corruption of the promise of demonic powers. To determine their fate, they must kill either a candlebearer, a servant of good (to become corrupted), or a darkling, a harbinger of demonkind (to become enlightened) before reaching level 20 or they will lose the ability to stay in the realm and their physical form will be destroyed by indecisiveness:
  "Your indecision proves you aren't ready yet to stay in this realm!"
  Maiar who kill both, a darkling and a candlebearer, before initiation at level 20, will see the message "Your presence in the realm is forfeit!"
  and also meet their fate and be destroyed by indecisiveness at level 20.

  You can verify your current status anytime either by checking your monster list with ˜ 2 or by using the '/ex' chat command, which will give you one of these status messages if you are a Maia:
  - no harbinger killed yet: "Your destiny in the realm is still undecided."
  - killed a darkling: "Your are treading on the path to enlightenment."
  - killed a candlebearer: "Your are treading on the path to corruption."
  - killed both types, oops!: "Your presence in the realm is forfeit."

  After they underwent initiation at level 20, they may just kill all of them indiscriminately, same as any other monster, without consequences.
  At level 13, maiar will get a reminder if they haven't killed any darkling or candlebearer yet: "We all have to pick our own path some time..."
  At level 19, there will be another reminder, as it's now their last chance: "Your soul thirsts for shaping, either enlightenment or corruption!"

  Maiar start with a low profile skill chart which gets boosted on initiation depending on their alignment. Their skills will be adjusted on initiation

so that they remain as close to their previous values as possible while the
character gets back any skill points that are freed up due to higher skill
ratios after the initiation took place, see (7.2a) for details.

Using but their mind Maiar can easily perceive both good and demonkind
telepathically. The servants and harbingers of those factions that Maiar
need to slay occur from dungeon level 12 to 20 (which correspond to
-600..-1000 ft in dungeon 'Barrow-Downs' for example, since that dungeon
starts at level 1). In the IDDC, they appear from level 10 to 20.
If a Maia generates the dungeon level, there will be a guaranteed spawn, so
if you are in a party with non-Maiar, make sure you are the first one
taking the staircase so you generate the level.

Maiar are able to train in the 'Astral' school, an exclusive divine magic
which has spells of different effect depending on the caster's alignment.
Some astral spells use intelligence for determining their spell failure
rates, some use wisdom.
Initiation to either enlightened or corrupted beings, or during their first
few character levels the lack thereof, will decide the effect of astral
spells.
Maiar can be any class that can utilize mana. They get the best shop prices
of all races since they are either greatly respected or feared by all other
creatures.
They gain experience extremely slowly, and rarely need to feed before
initiation (intrinsic slow digestion). Afterwards they have no more need
for any worldly food at all (and they cannot become gorged either).
Likewise, when initiatied they become immune to the lingering damage effect
of any continuous disease.

Maia get a bonus on 'Sneakiness' and 'Stealth' no matter the alignment.

-- Tip: --

Since all Maiar start with a point in 'Astral Knowledge' skill, you should
buy a spell scroll of Power Bolt I right away from the bookstore, because
you will already be able to use it.


Here is a table showing boni/mali of the different races:

| Race | STR Di | INT MD | WIS ST | DEX St | CON Pe | CHR Sr | Fi | HP die BT | Exp% | Infra-Vision (caps at 200 ft) |
|------|------|------|------|------|------|------|------|------|------|------|
| Human | 0 | 0 | 0 | 0 | 0 | 0 | | 10 | 100% | 0ft |
| | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | | |
| Half-Elf | -1 | +1 | 0 | +1 | -1 | +1 | | 10 | 110% | 20ft |
| | 2 | 5 | 3 | 1 | 11 | 6 | -2 | 5 | | |
| Elf | -1 | +2 | +1 | +1 | -2 | +2 | | 9 | 120% | 30ft |
| | 5 | 9 | 6 | 2 | 12 | 8 | -5 | 15 | | |
| Hobbit | -2 | +2 | +1 | +3 | 0 | +1 | | 8 | 115% | 30ft |
| | 15 | 12 | 15 | 4 | 15 | 12 | -10 | 20 | | |
| Gnome | -1 | +2 | 0 | +2 | +1 | -2 | | 9 | 125% | 40ft |
| | 10 | 18 | 12 | 3 | 13 | 6 | -8 | 12 | | |
| Dwarf | +2 | -2 | +2 | -2 | +2 | -3 | | 11 | 130% | 50ft |
| | 2 | 9 | 18 | -1 | 10 | 7 | 15 | 0 | | |
| Half-Orc | +2 | -1 | 0 | 0 | +1 | -4 | | 11 | 115% | 30ft |
| | -3 | -3 | -3 | -1 | 7 | 0 | 12 | -5 | | |
| Half-Troll | +4 | -4 | -2 | -4 | +3 | -6 | | 12 | 135% | 30ft |
| | -5 | -8 | -8 | -2 | 5 | -1 | 20 | -10 | | |
| Dunadan | +1 | +2 | +2 | +2 | +3 | +2 | | 10 | 160% | 0ft |
| | 4 | 3 | 5 | 0 | 13 | 3 | 15 | 10 | | |
| High-Elf | +1 | +3 | -1 | +3 | +1 | +3 | | 10 | 200% | 40ft |

```
          4   20   15   3   14   3   10   25
Yeek   -5   -5   -5   -5   -5   -3   8   80%   0ft
          0   0   0   0   10   0   -7   0
Goblin   0   -1   -4   +4   +2   -5   10   120%   30ft
          2   -3   -3   0   8   2   12   -5
Ent   +8   -4   +2   -4   +8   -4   14   280%   0ft
         -4   0   15   -6   4   5   0 -20
Draconian +4 +2   +2   +1   +3   +2   12   300%   50ft
          0   7   10   -5   10   10   15   5
Kobold   -1   -1   0   +2   +2   -2   8   110%   50ft
         10   5   4   4   15   15   0   10
Dark-Elf 0   +2   +1   +3   +1   -6   10   140%   80ft
          7   3   6   4   6   10   15   15
Vampire +2   +2   -1   +2   0   +3   11   240%   150ft
         -2   3   20   2   13   -4   10 -10
Maia   +2   +3   +3   +1   +1   +2   11   400%   100ft
          3   20   3   0   5   1   5   5
```

```
(Di:Disarming,    MD:Magic Device,    ST:Saving Throw,    St:Stealth,
 Pe:Perception,   Sr:Searching,       Fi:Fighting,        BT:Bows/Throw)
```

(7.5) Classes/professions

Depending on your class, your start-up equipment and your skill tree will
vary. For example a warrior cannot learn magic spells.

Classes most straight-forward/most forgiving to play for starters are:
 -Warrior
 -Rogue (dual-wielding sword-type weapons makes them powerful early on)
 -Paladin (similarly tough as warriors)
 -Druid (utilise their shapeshifting powers they gain every 5 levels!)
 -Mindcrafter (just make sure to get Psionic Blast spell macroed right away)

Intermediate starting difficulty:
 -Archer (easy when teaming up with a meat shield who keeps monsters at bay)
 -Mimic (mostly plays straight-forward like a warrior, but need to hunt for
         monster forms which can be hard for beginners, especially if they
         don't know much about monsters)
 -Ranger (can do well in many fields such as melee, ranged weapons and spells,
          somewhat similar to an adventurer).

Hardest classes for beginners to play maybe:
 -Adventurer (cause it's a jack of all trades so you can end up mediocre in
              every regard if you don't know what you're doing)
 -Shaman (triple-relation of forms, combat skills and magic spells)
 -Priest (weak in almost all regards the beginning, but great early on party
          asset if he gets the 'Cure Wounds' spell and uses it to heal his party
          members from the back line)
 -Istar (glass cannon in the beginning, so if you are out of mana at the wrong
         time you could die fast)
 -Runemaster (needs some time to get a grip of the spell system, and has not
              that high hit points, ie glass cannonish).

Approximate 'power levels' for the classes are given further down in (7.5c).

List of all classes (make sure to read the paragraph about your class, when you
create a character!):

- Warrior
    A warrior is a hack-and-slash character, who solves most of his problems
    by cutting them to pieces, but will occasionally fall back on the help of
    a magical device. His prime stats are strength and constitution, and a
    good dexterity can really help at times. Warriors will be good at melee
    and bows, but bad at most other skills. They don't learn any magic but can
    train to use magic devices; also they may dual-wield two one-handed weapons
    at once, although they will need to use light armour for this strategy to
    be effective (see (7.2)).
    Provided his strength is high enough, a two-handed weapon will usually
    be preferable over dual-wielding when a warrior seeks to forego defense to
    maximize damage, because two-handed weapons will still allow the use of
    heavy armour which dual-wielding doesn't.
    Warriors have more melee attacks per round than any other class.
    They may decide to become 'Unbelievers' by spending points irreversibly
    into the 'Anti-magic' skill. As soon as they spend the first point here
    they will immediately become unable to use any magic wand/staff/rod!
    The full opposite of sorcerers, unbelievers so strongly despise magic that
    not only do they refuse to use magic spells, they refuse all training in
    the use of magic items, which leaves them almost totally incompetent when
    trying to use a magic item, although they can still quaff potions and read
    scrolls. Because they are so unattuned to magic, trained unbelievers will
    suppress any sort of magic from occurring around them at high probability,
    which is dubbed 'anti-magic field'. They can further strengthen it by
    wielding a Dark Sword (see (5.9)).
    Warriors can also choose to become weaponless fighters, by training the
    'Martial Arts' skill. This will require them to wear no armour or only very
    light armour later on.
    The warrior class is recommended for beginners because it's forgiving in
    the early game and you can do fine with just a macro for potions of cure
    wounds and maybe also a macro for phase door scrolls until you reach a
    somewhat higher level.
    You can create macros by pressing % for macro menu, then z to invoke the
    wizard and select the type of action you want the macro to perform.

    -- Tips: --

    Pick one of the four weapon masteries (Sword/Blunt/Axe/Polearm),
    or Martial Arts if you don't want to use weapons, and always keep it
    maximized!

    On character creation increase your strength to 18/30 at the very
    least to get a decent attack speed (3 blows per round 'BpR' with a very
    light weapon). Typical desired starter configurations are:
    - If you train sword-mastery: Dagger + small metal shield.
    - If you train blunt-mastery: Whip + small metal shield.
    - If you train axe-mastery, you'd need 18/40 STR to get 3 bpr with a
      cleaver, the lightest existing (1-handed) axe (4.0 lbs).
    - If you train polearm-mastery, you'd need 18/50 STR to get 3 bpr with
      a sickle, the lightest existing (1-handed) polearm (5.0 lbs).

    Make sure to create a macro for your fighting techniques 'Sprint' and
    'Taunt' when you learn them, which you do pretty early on. They are great
    for catching annoying monsters that try to keep their distance to you.
    And Sprint is also useful for escaping perilous situations!
    (See (7.12) for details about fighting techniques.)
    You macro these by pressing % for macro menu, then z to invoke the
    wizard, then i for fighting techniques.

    Dual-wield trick if you lose your items on death:
    If you die and revive, you could save a lot of money by foregoing heavy
    armour for attack power. Just buy some cheap, light armour and two cheap

and very light 1-handed weapons which you wield both at once (Dual-wield)!
The lightest weapons of each class are:
- Daggers (Sword-mastery)
- Whips (Blunt-mastery)
- Cleavers (Axe-mastery)
- Spears (Polearm-mastery)
Dual-wielding requires light armour. This should be adequate until you find
some heavy armour in the dungeon, then you can switch back to 1-handed
weapon with a shield (or to a 2-handed weapon if you have excessive enough
strength to get at least 2 blows per round with it).
(For details on the benefits of dual-wielding, see (7.2).)

- Istar (the Quenya word for "mage")
Istari use intelligence primarily, determining how much mana they have
to cast spells and how low their failure rate is.
They are the all-around best magicians, having both devastating and highly
useful supportive spells (at least for their own benefit) of very wide
variety.
On the downside, they are the worst fighters, being unable to use any
weapon but a Mage Staff comfortably, and until they learn how to
effectively use the 'Disruption Shield' spell they are very vulnerable.
A high-level istar can be very powerful, but getting there can be a
difficult journey.
As a specialty, vampire istari are able to learn the occult shadow school
and the occult unlife school, as they cannot train water or nature school
and also don't have access to the holy-fire based Fireflash spell.
These two schools, Shadow and Unlife, are not affected by Sorcery though,
so they have to be trained additionally to any Sorcery skill.

-- Tip: --

An istar has very few hit points compared to other classes, making
survival difficult in the beginning. That's why this class is not
recommended for beginners.

You can create macros by pressing % for macro menu, then z to invoke the
wizard, then d for prayers that don't use a target or e for spells that
use a target.

- Priest
Priests use certain divine magic, uttered as prayers. Unlike mages they
have a fair fighting potential with blunt or blessed weapons. If a priest
wields a blessed weapon he will get his 'Blunt-mastery' skill applied to it
even if it's not actually a blunt-type weapon.
Alternatively to blunt weapons, priests can choose the way of the monk by
training Martial Arts instead, to fight without weapons.
Priests can learn many spells that are helpful to their party members. They
use mainly wisdom for their prayers, determining the amount of mana and how
low their failure rate is.
A Priest is a character of holy devotion. They explore the dungeon only
to destroy the evil that lurks within, and if treasure just happens to
fall into their packs, well, so much more to the glory of their church!
They are very good with magical devices, preferring to call them
instruments of their god, but are not as good as istari in their use.
Priests also have excellent saving throws due to divine intervention.
Although weak in the beginning, they can make decent fighters who strongly
prefer blunt weapons over edged ones. They are not able to train in edged
weapons, and if they wield one that isn't blessed, they receive an
additional severe penalty.
Priests are especially adept at sensing curses on any sort of item, an
ability that grows with their character level, perfecting this at level 35
at which they are able to notice curses almost instantly.

Wisdom is the priest's primary stat and they get a bonus on 'Holy Curing'.

-- Tips: --

Note that their spell Call Light can be used to deal decent damage
after it's been brought up a few levels. Orcs are said to fear it a lot.

Priests aren't easy to play in the beginning, since they don't deal much
damage and also can't take a lot of punishment, so they aren't recommended
for beginners.

If you're a team player and want to support your team right from the
beginning, get the spell 'Cure Wounds' as soon as possible and macro it.

You can create macros by pressing % for macro menu, then z to invoke the
wizard, then d for prayers that don't use a target or e for prayers that
use a target.

- Corrupted Priest
   There are rumours of ultimately corrupted priests which have lost all their
   holiness and align with the forces of hell instead.
   They have the same abilities as priests in all regards but while they too
   can make use of shadowy occultism, they are not able to utilize any kind of
   holy prayers and are susceptible to holy effects.
   Instead they command blood magic and heretic magic of flame and chaos.

   While under the effect of Blood Sacrifice, Corrupted Priests can flip
   heavily cursed items same as Hell Knights and Vampires can. When the spell
   effect ends they will flip back though, so it might be a good idea to
   just 't'ake them off while still in Bloodthirster form, as due to its
   demonic might it can just do that without need for *Remove Curse*.
   See the end of (5.12) for details on item-flipping.

- Rogue
   A Rogue is a character that prefers to live by cunning, but is capable of
   fighting their way out of a tight spot. The master of traps and locks, no
   device is impossible for him to overcome.
   Their main way of combat is by either dual-wielding two sword-class weapons
   such as daggers, or - rather rarely seen - utilizing martial arts. (As a
   specialty the 'Backstabbing' skill actually works with martial arts.)
   Their primary stats are intelligence and dexterity, intelligence being very
   important if they aim to become proficient at magic, while dexterity makes
   up in combat prowess for what their strength might be lacking.
   Rogues have very high stealth allowing them to sneak around many creatures
   without having to fight, or to sneak up and get the first blow,
   backstabbing their opponents. They also have access to exclusive fighting
   techniques.
   Rogues are especially fond of dual-wielding two light one-handed weapons at
   once (see (7.2). They prefer light armour, since dual-wielding and many of
   their special abilities won't work with heavy armour or two-handed weapons
   (see (5.5)).
   A rogue's perception is higher than any other class, and often they
   notice traps or secret doors without needing a search. Rarely will a
   rogue be unable to avoid or disarm a trap. Rogues also have the unusual
   ability to train stealing from shops and their fellow men, a dangerous but
   sometimes very rewarding profession.
   Searching (or entering searching mode) will actually search within a radius
   instead of just the adjacent grids, another special trick of this class -
   this ability can even detect staircases, shops, hostile rune- or monster
   traps making navigation easier without relying on stair-detection magic or
   mapping magic.
   Rogues are better than warriors or paladins with magical devices, but still

can not rely on their performance. They can also learn a few magic spells.
When searching for hidden traps, doors and stairs, they may spot them more
easily, even from a distance, which increases when the rogue gains levels.
At level 15, rogues will learn another special ability: Cloaking mode.
(Press 'V' to make your character prepare for cloaking up / uncloaking.)
By cloaking their physical appearance and body warmth pattern perfectly,
which takes a certain time to get prepared, they become completely
untrackable to almost any monster, for exceptions see (0.2).
Attacking, taking damage (with the exception of floor grid induced damage
such as fire damage from lava) and a couple of other actions immediately
break cloaking, again see (0.2) for details.
Being masters of cloaking, at level 30 they become able to see through any
similar cloaking or shadowing techniques employed by their opponents
(monsters only).

-- Tips: --

Make sure to create a macro for your fighting techniques 'Sprint' and
'Taunt' when you learn them, which you do pretty early on. They are great
for catching annoying monsters that try to keep their distance to you.
Sprint is also useful for escaping perilous situations!
(See (7.12) for details about fighting techniques.)
You can macro these by pressing % for macro menu, then z to invoke the
wizard, then i for fighting techniques.

Always keep your Sword-mastery skill at maximum (if you don't go for an
unusual build that uses Martial Arts instead).

- Mimic
Mimics are melee fighters who can learn how to shapechange and use the form
of any monsters (except for unique ones) they slay, thereby inheriting
nearly all of the monster's abilities. That way they may even cast spells
the monster was able to use or breathe elements like the monster did.
Their primary stats are same as the warrior i.e. strength and constituion
with dexterity coming in handy too.
Intelligence is not of primary importance but it can help somewhat to
increase the mana pool for making use of monster spells/breaths, and it
also affects the success chance when attempting to use a monster power.
Mimics learn forms by killing an amount of that monster type that is the
same as the monster's level. Further, their 'Mimicry' skill must be at
least 1/2 of the monster level or you won't gain knowledge from the kills.

Example: To use the form of an Ancient Bronze Dragon (level 40) the
mimic has to kill 40 of them and have a mimicry skill of at least 20.

To find out the level and special abilities of a monster form, press '~'
followed by '7' and look it up, then consult section (7.7) for how the
monster details translate into mimic abilities.
To find out how many monsters you already killed, which forms you have
learned and how many you need in total to learn a form, press the '~'
key followed by '2'. To see all your learned forms, you can alternatively
use the "/forms" chat command.

To polymorph into a form, press 'm' key, like casting a magic spell.
(Forms that have DISBELIEVE ability are skipped when using the normal
'Polymorph Self' spell. You have to explicitly use your (c) power:
  'Polymorph Self into a specific form'
if you want to use these forms.)

A list of useful low-level humanoid forms for weapon-using mimics is given
in (7.7b) because weapon-using mimics have a somewhat harder time to find
usable forms early on than martial artists who might just utilize

easy-to-get forms such as fruit bat, wild cat, crow or spiders right away
for great effect.

Mimics can get the highest amount of hit points of any class, even in the
very long run ie at very high character levels far above 50, provided they
acquire an appropriate high-level form (preferably level 80 or better).
Low- and mid-level forms won't help high-level mimics that much to keep up
their advantage in hit points, ie the extra hit points they gain from such
forms will diminish as they continue to rise to very high character levels.

-- Tips: --

Maybe there's a friendly mimicry-user around who can forge some
'Rings of Polymorphing' for you from forms he or she no longer uses.

As for all shape-shifters going with fruit bat body modification is not
recommended, since it will restrict your equipment even if you polymorph.

Pick one of the four weapon masteries (Sword/Blunt/Axe/Polearm), or Martial
Arts if you don't want to use weapons, and always keep it maximized.

Forms giving a strength bonus are relatively common, eg Forest Troll, so if
your BpR is close to a break point and just requires +1 or +2 more STR, try
using troll form to see if its STR bonus gives you that juicy +1 BpR.

- Archer
  Archers aren't good at fighting, but can deliever extremely high damage
  with their ranged weapons. They can die quickly too, however.
  Archers are to bows what warriors are to melee. They are the best class
  around with any bow, crossbow or sling and their primary stat is dexterity.
  An Archer is very bad at melee, being only better than mage-like classes.
  Archers will receive an array of special techniques to their disposal from
  training the 'Archery' skill, such as setting up a precise sniping shot at
  a target asleep or how to craft ammunition from rubble or from the bones
  of their opponents (see (7.12)), accessible via 'm' key or macro wizard.

  The F1 key comes with a predefined macro for firing your bow at the closest
  enemy. Test this in town against one of the target dummies or townspeople.
  Alternatively you can just make your own macro for firing:
  Press % and then z to start the macro wizard, and then c for firing and
  finally press a for the targetting method.

  -- Tips: --

  Enchanting your ranged weapon to-damage is especially effective because
  the damage bonus will be multiplied by the weapons multiplier, eg (x3) for
  a long bow. So buy enchant to-dam scrolls from the alchemy shop as soon as
  you can afford them.
  Rings of Accuracy will further boost your early/mid combat prowess.

  Also make sure to have an ample supply of 'Scrolls of Phase Door' to stay
  out of melee range and keep shooting things from afar instead.

  Pick one of the three ranged masteries (Bow/Crossbow/Sling) and always
  keep it maximized.

  You can determine the order in which ammunition is listed in your backpack
  by simply dropping it and picking it up again in your preferred order.

  An amulet of infra-vision can help to greatly extend your view in dark
  hallways, to allow you shooting enemies before they can come close.

Look out for magic arrows, magic bolts or magic shots. These will return
to your quiver magically so you can manage with only a single one of them.
(On the down side these cannot carry any form of enchantment.)

- Paladin
    Paladins are a combination of warrior and priest. Holy knights that
    fight evil with a variety of melee weapons and divine support.
    Their primary stats are thus strength for fighting and wisdom for making
    use of divine prayers, with constitution and dexterity helping as usual.
    Paladins are nearly as strong as pure warriors and also highly proficient
    with shields which they use to deflect incoming attacks - although there
    is certainly no rule stating that they may not instead choose to use huge
    two-handed weapons for bestowing divine retribution upon their foes.
    Paladins however are not very good at missile weapons. They are poor at
    stealth, perception, and searching. They are better than warriors with
    magical devices and have an outstanding saving throw due to divine
    protection. On the downside they lack the proficiency of warriors when it
    comes to handling ranged weapons and they do not benefit as much from
    equipment that increases their mana pool as priests do.
    While they may train in all sorts of holy schools, they are slightly less
    adept at 'Holy Curing'.

    -- Tips: --

    Note that the spell Call Light can be used to deal decent damage after it's
    been brought up a few levels. Orcs are said to fear it a lot.
    You can macro prayers by pressing % for macro menu, then z to invoke the
    wizard, then d for prayers that don't use a target or e for prayers that
    use a target.

    Make sure to create a macro for your fighting techniques 'Sprint' and
    'Taunt' when you learn them, they are great for catching annoying monsters
    that try to keep their distance to you. (See (7.12) for details.)
    Sprint is also useful for escaping perilous situations!
    You can macro these by pressing % for macro menu, then z to invoke the
    wizard, then i for fighting techniques.

    Pick one of the four weapon masteries (Sword/Blunt/Axe/Polearm), and always
    keep it maximized. Unlike priests, paladins cannot train Martial Arts.

- Death Knight
    Death Knights are unfortunate souls who were paladins in life. Unable to
    die in peace they rose again as bloodthirsty, undead warriors.
    They have the same abilities as paladins in all regards but they are not
    able to utilize any kind of prayers and are susceptible to holy effects,
    instead they command unholy blood, unlife and shadow magic.
    Also, they are significantly better than paladins at using magic devices.
    Death knights resist fear intrinsically.

- Hell Knight
    This ultimately corrupted paladin can only be brought into existance when
    an astral spirit on its way of becoming a paladin forsakes enlightenment
    and turns into a demonic traitor instead.
    Imbued by the powers of chaos and hellflame, these warriors represent
    absolute treason without remorse.
    They have the same abilities as paladins in all regards but they are not
    able to utilize any kind of prayers and are susceptible to holy effects,
    instead they command blood magic and heretic magic of flame and chaos.
    Unlike paladins they can actually also dual-wield two one-handed weapons at
    once, although they will need to use light armour for this strategy to be
    effective (see (7.2)).
    Also, they are somewhat better than paladins at using magic devices.

Similar to Vampires, Hell Knights can wield some heavily cursed items to great effect, flipping their negative boni to positive ones. (With the same exception as for vampires: Weapons "of nothingness" will do them no good either, and some randarts may fail to flip.) See the end of (5.12) for details on item-flipping.
Hell Knights fear items giving off enchanted light (lights that are blessed or demon-slaying or evil-slaying; white-light sources that either have at least radius 2 or are artifacts). Asides from these light sources they fear all items that are blessed, and non-weapons that have the *slay demon* ability.
Any such item that is adverse to demons will burn them, draining their hit points, or draining their mana if worn on head or hands. Exceptions are cursed items, chaotic items and the "Stone of Lore", these are always safe.
Hell Knights have a very high chance to resist the adverse effects of encountering an eldritch horror (see (7.3) under 'Saving Throw' for details on those).

- Ranger
    Second only to adventurers regarding versatility rangers excel at a lot of skills: They are able to fight well in close combat and may even dual-wield two one-handed weapons at once which requires light armour to be effective. This goes well with magic or archery which also would suffer from heavy armour.
    Devoted to nature in a similar way as druids rangers will avoid corrupted magic such as necromancy. They are however very adept at most other types of magic and also skilled trappers. Last but not least rangers display great performance with ranged weapons, able to train 'Archery' skill up to 10.000, which apart from increasing their damage dealt also unlocks various special techniques to employ as they see fit.
    Rangers have good stealth, perception, searching, saving throws, and are good with magical devices. Rangers can find several different ways out of any situation. They use intelligence for spellcasting same as mages, they need strength if they rely on fighting in close combat, and they should have good dexterity if they aim at training ranged weapons.
    At 7 they learn the ranger-exclusive fighting technique 'Track Animals'.
    At level 8 rangers learn to find paths passing thick woods, and at 15 they have become able swimmers as well.

    If you're planning to make use of ranged weapons:

    The F1 key comes with a predefined macro for firing your bow at the closest enemy. Test this in town against one of the target dummies or townspeople. Alternatively you can just make your own macro for firing:
    Press % and then z to start the macro wizard, and then c for firing and finally a for the targetting method.

    Buy arrows (to use with your bow) in store 1 or store 3 in town and put them in your quiver (w key). If you instead get a crossbow you will need bolts instead of arrows, and slings would need shots or pebbles. Inscribe the ammunition != to pick it up automatically from the floor by simply walking over it.

    -- Tips: --

    If you are training in ranged weapons, check out the tips for Archer class further above in this chapter!

    Regarding melee combat, make sure to create a macro for your fighting techniques 'Sprint' and 'Taunt' when you learn them, which you do pretty early on. They are great for catching annoying monsters that try to keep their distance to you. Sprint is actually also useful for escaping peril. (See (7.12) for details about fighting techniques.)

You can macro these by pressing % for macro menu, then z to invoke the
wizard, then i for fighting techniques.

Since rangers can dual-wield and you start with light armour which is
required for dual-wielding you might want to buy a secondary weapon right
away, for example a cheap dagger, or even dispose of your starter weapon
completely and go with two cheap, light weapons instead. (See (7.2) for
details on dual-wielding.) This will increase your BpR by 1 or even 2!

- Adventurer
    Adventurers are hardy and versatile, they have no preferred way of fighting
    or magic, and can adapt to any situation at hand.
    They have no big big strengths nor weaknesses.
    Adventurers can train nearly all skills, but do not excel at any specific
    one. The size of their mana pool depends on both their intelligence and
    their wisdom in equal parts.
    Adventurers are often hybrids that combine various features of different
    and more distinct classes in one character, creating unusual mixtures of
    abilities.

    -- Tip: --

    Adventurers are difficult to play for beginners because to fully utilize
    them you need to know exactly what you are trying to achieve and how you
    want to distribute their skill points to make them effective.

- Druid
    Druids are able to call upon the mystical powers of nature. Their wisdom
    is of primary importance to determine their mana and success chances when
    casting spells. Apart from the druidic schools, the other magic schools
    available to druids use intelligence for determining spell success chance.
    Druids fight using Martial Arts, which is the only melee skill they are
    able to train, as well as a variety of magic spells. Martial Arts means
    weaponless combats, not even ranged weapons except for boomerangs, and only
    light armour, if any at all. (Martial artists actually get bonus armour
    class for each slot of armour that has no item equipped in it.)
    Druids can shapechange into several forms (mostly animals) without having
    to fight or kill them in order to learn those forms. Instead they learn
    one or more new forms automatically every five character levels.
    Even while transformed, druids can still equip all items they could equip
    in untransformed form, even if the monster form usually cannot use them.
    Because of this, going with a 'fruit bat' body modification in character
    creation would be especially ineffective for druids, because the fruit bat
    item restrictions would carry over to the druid forms, making otherwise
    usable slots unavailable.
    Despising the use of weapons they aren't as superb at close combat as
    warriors, but their Martial Arts training will make up for that and allow
    them quite a respectable performance.
    Druids learn how to quickly pass through thick forest at level 10 --
    note though that they can already do this at level 5 by simply polymorphing
    into an animal ('m' key), since all animals can pass forest easily.
    Also starting at 5 they learn the first form (cave bear) that can pass
    mountain terrain, and later they also learn flying forms (griffon).
    To review which forms you can transform into, use the "/ex" or the "/forms"
    chat command, or press ~ followed by 2 and @.
    To see an overview of the forms and their abilities, see (7.7c).

    -- Tips: --

    Druids have a powerful ranged area attack spell they can use very early
    on: Toxic Moisture, from Arcane Lore skill. Look for it in the bookstore!
    They also have a spell that satisfies hunger, later on cures poison and

more: Herbal Tea, from Physical Lore skill. Could also be essential.

Make sure to create a macro for your fighting technique 'Sprint' when
you learn it, which you do pretty early on. It is great for catching
annoying monsters that try to keep their distance to you. (See (7.12).)
You can macro these by pressing % for macro menu, then z to invoke the
wizard, then i for fighting techniques.

As martial artists, druids do not require any armour early on in the game,
it could even lower their AC instead of improving it.
Always keep your Martial Arts skill maximized.

If you find a weapon that grants you ESP (eg 'of Aman' or 'of Gondolin')
inscribe it @x0 to be able to swap it in and out for quick monster ESP by
pressing SHIFT+X (once to swap it in, again to swap it out again to resume
using martial arts, since as a martial artist you cannot use weapons except
for boomerangs).

- Shaman
    Shamans are able to call upon both spiritual and magical powers, whatever
    they deem most appropriate. Their mind is also trained in a very versatile
    manner, allowing them to collect energy from intelligence or wisdom,
    whatever currently is easiest for them!
    Shamans are able to shapeshift same as mimics (see mimics above for details
    about how to learn forms) but they are limited to animals, trolls, giants,
    dragons and dragonriders, angels, hybrid creatures, golems, spirits,
    elementals and ghosts.
    However, they may use the latter three types while still wearing their full
    equipment and they are always able to move straight even if the creature in
    whose shape they appear usually moves erratically - these two are feats
    that mimics cannot achieve.
    Shamans learn elemental ('E') and semi-elemental ('X') forms especially
    quickly (one kill of any of these counts as three kills towards learning
    the form).
    They cannot use non-living or undead forms except for ghosts, spirits,
    elementals and golems. Shamans also cannot learn the three non-elemental
    aberrations of the 'E' forms: Invisible Stalker, Unmaker and Death Orb.
    While shamans are excellent at magic they have weaker combat abilities than
    rangers or paladins but still don't need to hide from a melee if trained
    properly.
    Their spiritual abilities allow them to easily train various aspects of
    necromancy as they see fit. Accordingly at level 20 shamans learn to
    perceive the invisible.

    A list of useful low-level forms for mimicry users, that includes shamans,
    is given in (7.7b). It points out some forms that are usable exclusively
    by shamans too and are not so useful to normal mimics. It also lists some
    humanoid forms in case you are training a weapon skill.

    -- Tips: --

    Maybe there's a friendly mimicry-user around who can forge some
    'Rings of Polymorphing' for you from forms he or she no longer uses.

    In the beginning shamans have few hit points and skill point distribution
    isn't easy either, that's why this class is not recommended for beginners.

    As for all shape-shifters going with fruit bat body modification is not
    recommended, since it will restrict your equipment even if you polymorph.

    Note that all 'O' Ogre type monsters count as 'giants' too, so their forms
    are usable in shaman mimicry.

A tip for weapon-using shamans who are short on STR for gaining more BpR:
Forms giving a strength bonus are relatively common, eg Forest Troll, so if
your BpR is close to a break point and just requires +1 or +2 more STR, try
using troll form to see if its STR bonus gives you that juicy +1 BpR.

- Runemaster

Runemasters use arcane symbols or 'runes' to summon pure elemental magic.
They use their intelligence and dexterity to both manipulate and protect
themselves from the fickle and dangerous forces of their art. Runemasters
are not the most dedicated or systematic of adventurers, and often rely on
trickery and sleight-of-hand. Because of this, and their tendency towards
thievery, they are often mistaken for rogues. This roguish nature allows
them to train in rogue-specific weapon proficiencies and skills, although
their lack of dedication leaves 'Weaponmastery' as an unattainable goal.
Runemasters are unable to to train in the martial arts, but are adept with
boomerangs. High level users of runecraft may eventually enhance their
armor and weapon with runic 'sigils', benefitting from elemental boons.
Elemental resistances are of particular importance to runemasters, who
suffer backlash from the evoked element instead of outright spell failure.

For more information about runecraft, see '(7.8b) Runes & Runemastery'.
Note that physical runes are not required to cast runespells, and are
instead used only to apply sigils to worn equipment, granting some boni
depending synergistically on both the rune element and recipient item.

-- Tip: --

Runespells cause backlash of the active element on spell failure.
For that reason you might use basic elemental spells in the beginning,
against which you can easily acquire the required resistance, for example
by buying a ring or amulet from the magic shop or maybe even by choosing
a race that has intrinsic resistance to the element you are planning to use
mainly. If you want to test rune combinations that pose a risk of going
wrong badly, do so in the arena of the 'Arena Monster Challenge' event so
you will get away unscathed.

- Mindcrafter

Mindcrafters are great melee fighters who additionally train the use of
telepathy to unleash spells formed by their psychic powers.
Their intellect is superior compared to primitive warriors, making them
calm and silent fighters who are hard to read and are dangerously sharp.
They have a lot of possibilities to positively or negatively influence the
minds of others. However, their repertoire is more limited when they are up
against creatures of little or no intelligence.
Their primary attribute is intelligence, which determines their spell
fail rates as well as the majority of their mana pool. Also somewhat
affecting their mana pool are charisma and wisdom, although they are
not mandatory for becoming an able telepathy user.
Aside from intelligence as primary spell-casting stat they will also want
decent strength for engaging in close combat.
Putting on heavy head gear (above 4.0 lb) will negatively impact their
amount of psychic energy.
Mindcrafters will learn to resist sanity-draining effects a bit at level
10, somewhat better at level 20 and even better at 40.
They also have a high chance to resist the adverse effects of encountering
an eldritch horror (see (7.3) under 'Saving Throw' for details on those),
they also resist mind-blanking attemps and psionic attacks in general much
better than other classes.
A lot of their spells can actually be cast while blinded (or even
confused), and their targetted spells often do not require a clean line of
sight, meaning there can be other monsters between you and your target,

since they manifest whereever their mind is focused on (eg Psionic Blast).
Their spells also cannot be reflected by monsters for that same reason.
Some of the mindcrafters' spells that interact with party members will
require them to prepare and open their mind for telepathic contact. This
is done by the party members pressing the 'p' key. Pressing it again will
close off their mind again, disabling further telepathic attempts.
The effects of some necromancy skills are distracting to mindcrafters, so
training them will require more effort.
They are able to detect 'Telepath' ego monsters via ESP which usually are
able to conceal their presence telepathically versus all other classes.
Similarly at level 30 they become able to pinpoint opponents that attempt
to make use of cloaking or shadowing techniques (monsters only).
Mindcrafters learn to judge their own sanity much more accurately as they
gain levels, getting a more detailed sanity display at level 10, 20 and 40
(same as other characters get when they actually train 'Health' skill to
10, 20 or 40).

-- Tips: --

Mindcrafters have a powerful ranged attack spell they can use very early
on, Psionic Blast. Look for it in the bookstore right away.

Get the spell 'Autokinesis I' early on, which is a form of phase door.

Pick one of the four weapon masteries (Sword/Blunt/Axe/Polearm), or Martial
Arts if you don't want to use weapons, and always keep it maximized.

As you gain levels, you will get new profession titles. These are displayed
between your class name and your character level in the main window. If you die
and become a ghost, the title will change to 'Ghost' until you get revived.
Titles change every 5 levels, the final title is received on level 50.
From level 60 and upwards there are special titles available every 10 levels.
You can find a list of all titles in (7.5b) further down.

Here is a table showing boni/mali of the different classes:
'Blows/Round' is the maximum base number of melee attacks per round a class
can get, based solely on strength and dexterity and on the weapon's weight.
You can further increase your BpR later via mastery skills, items or magic.
BpR limits count only for weapons, not for martial arts usage, see (5.3a).
"Parrying" is done with weapons, "blocking" is done with a shield, see (7.11).

| Class | STR | INT | WIS | DEX | CON | CHR | | HP dice | Exp% | Max. base attacks | |
@ colour	Di	MD	ST	St	Pe	Sr	Fi	BT		Parrying/Blocking	
Warrior	+5	-2	-2	+2	+2	-1		+10	+0%	6	
brown	25	18	18	1	2	14	70	55		superb	superb
Istar	-5	+3	0	+1	-2	+1		+0	+35%	1	
red	25	36	30	2	20	16	34	20		bad	bad
Priest (*)	-1	-3	+3	-1	0	+2		+5	+20%	4	
green	20	25	32	2	8	16	48	35		fair	fair
Rogue	+2	+1	-2	+3	+1	-1		+5	+15%	5	
blue	45	28	28	5	32	24	60	66		superb	fair
Mimic	+1	0	0	+1	+1	-4		+6	+30%	5	
light grey	20	30	28	1	18	18	60	46		good	good
Archer	+1	0	+2	+3	+1	-1		+5	+10%	3	
orange	25	22	28	2	20	24	56	72		fair	fair
Paladin	+3	-3	+1	0	+2	+2		+8	+30%	5	
yellow	10	21	54	1	16	13	60	40		good	superb
Ranger	+2	+2	-1	+1	+2	0		+7	+35%	5	
light brown	40	32	30	5	30	30	50	60		superb	fair

```
Adventurer       0    0    0    0    0    0          +6   +25%          4
 violet         30   22   20    3   15   15   50   50               fair    fair
Druid           +1    0   +2   -2   -2   +1          +5   +35%          4
 light green    25   35   30    4   25   25   50   44               poor    poor
Shaman           0   +1   +2   -2    0    0          +3   +40%          4
 light red      15   30   30    4   30   20   45   23               poor    poor
Runemaster       0   +2   -2   +2   -2    0          +4   +40%          4
 light blue     35   32   20    3   30   26   45   40               fair    poor
Mindcrafter     +2   +2    0    0    0   +1          +7   +25%          5
 grey           30   28   36    3   35   14   55   45               good    fair
Death Knight    +3   -3   +1    0   +2   +2          +8   +30%          5
 dark grey      10   28   54    1   16   13   60   40               good    superb
Hell Knight     +3   -3   +1    0   +2   +2          +8   +30%          5
 dark grey      10   25   54    1   16   13   60   40               good    superb
```

```
(Di:Disarming,     MD:Magic Device,    ST:Saving Throw,    St:Stealth,
 Pe:Perception,    Sr:Searching,       Fi:Fighting,        BT:Bows/Throw)
```

(*) Corrupted Priest is same as Priest in this table.

Some classes can make full use of parrying/blocking, others are less adept.
The last two columns in the table above show their effectiveness:
```
 'superb'  =  full benefit (100%)
 'good'    =  5/6 benefit  (83%)
 'fair'    =  2/3 benefit  (67%)
 'poor'    =  1/2 benefit  (50%)
 'bad'     =  1/3 benefit  (33%)
```
This makes up the character's base chance. The actual chance in-game to parry
or block specific effects will depend on weapon/shield type, type of effect,
status effects on the character and possibly other circumstances.

For melee characters, it's especially vital to know how many blows per round
they will get right after character creation, to avoid them being unnecessarily
weak during low-mid levels.
So a melee-oriented character should make sure to start with sufficient
STRength and DEXterity to be able to get at least 2 blows/round with the
lightest possible weapons. (Getting more BpR with heavy weapons is a luxury
that will have to be put aside until later in the game.)

Note that a (heavier) startup weapon at 2 BpR might beat a very light weapon at
3 BpR for a few levels at the beginning, maybe up to 4 or so. So you can wait
for a little a bit until spending $ on it.

(7.5a) Start-up blows/round table (BpR)

Since 4.7.3 the client allows you to see your BpR with lightest existing
weapons of each of the four classes already during the character creation
process, when you distribute your stat points, so you no longer need to study
this table in detail anymore to find out what STR and DEX you'd like to pick.

Here is a table, showing you some BpR numbers you can expect your newly
created character to have, depending on certain combinations of class, STR,
DEX, given for both, lightest possible weapon and startup weapon:
(Don't forget that some classes can dual-wield, adding an extra +1 BpR on top!)

Note: 'Light' weapon may refer to as low as 3.0 lb (varies depending on STR
      and DEX - any weapon that weighs at most 3.0 lb will definitely work).
      Since axes and polearms don't have such light weapons, for most classes
      their requirements to get 3 BpR are different and specifically mentioned.

```
Class           STR    DEX     Light weapon    Startup weapon
```

```
------------------------------------------------------------------
Warrior         17        18/10   2               1
                18        10      2               1
                18/10     any     2               1
                18/30     any     3               1-2 (depends on weapon)
                18/40     18/10   4               2
                18/50     any     3               2
                18/70..110 any    3-4             2-3 (depends on weapon)
                18/80     18/10   3-4             3   (depends on weapon)

                for axes, the cleaver is lightest at 4.0 lbs:
                18/40     10      3
                for polearms, the sickle is ligthest at 5.0 lbs:
                18/50     10      3

                note: there are more break points, too many to include all,
                mainly at STR 18/10, 18/20, 18/50, 18/60 and at DEX 18/10.


Istar           -


Priest          18/10     10      2               1
                18/50     10      3               2


Rogue           15        18/10   2               2
                18/10     10      2               1-2 (depends on weapon)
                18/10     18/50   3               3
                18/20     18/10   3               3


Mimic           similar to priest, also:
                18/30     18/10   3               2

                for axes, the cleaver is lightest at 4.0 lbs:
                18/40     10      3
                for polearms, the sickle is ligthest at 5.0 lbs:
                18/50     10      3


Archer          -


Paladin         18/10     10      2               1
                18/20     10      2               1-2 (depends on weapon)
                18/30     10      3               2
                18/20     18/10   3               2

                for axes, the cleaver is lightest at 4.0 lbs:
                18/40     10      3
                for polearms, the sickle is ligthest at 5.0 lbs:
                18/50     10      3


Ranger          similar to priest, also:
                18/50     10      3               2-3 (depends on weapon)
                18/30     18/10   3               2-3 (depends on weapon)

                for polearms, the sickle is ligthest at 5.0 lbs:
                18/70     10      3


Adventurer      similar to ranger.


Druid           -


Shaman          similar to priest.


Runemaster      similar to rogue.
```

```
Mindcrafter      similar to ranger.

Death Knight     same as paladin.

Hell Knight      same as paladin.

Corrupt.Priest   same as priest.


So if you're playing a melee-oriented characer, make sure you start with at
least 2 BpR (in some cases you might have to buy very light weapon and discard
your starter weapon to achieve this)!

If you think it's strange that for example 'Mimic fights similar to Priest'
keep in mind that this is not about actual melee potential, but rather about
some sort of 'blows/round improvement curve' displayed by a class.
If a class is busy studying other things in parallel (magic), its improvement
curve gets less steep. :)
This, however, doesn't determine its final melee performance, which is actually
given by the 'Max. base blows/round' shown further above, and other parameters
such as blocking/parrying effectiveness.


(7.5b) Titles
-------------
Each character class has specific 'titles' that change with the player level.
For levels up to 50 the title will change every 5 levels (except for the first
title change at level 5 occurring after 4 levels, since character start at
level 1, not zero).
For levels above 50 the title will change every 10 levels, with the final title
being awarded at level 99, the maximum level reachable.
```

Class	Level	Male	Female
Warrior			
	1		Rookie
	5		Mercenary
	10		Soldier
	15		Veteran
	20		Captain
	25		Champion
	30	Hero	Heroine
	35		General
	40	Baron	Baroness
	45	Duke	Duchess
	50	Lord	Lady
	60		Highlord
	70		Overlord
	80		Destroyer
	90		Annihilator
	99		Titan
Istar			
	1		Novice
	5		Apprentice
	10		Trickster
	15		Illusionist
	20		Spellbinder
	25		Spellweaver
	30		Evoker

35		Conjurer	
40	Sorcerer		Sorceress
45		Warlock	
50		Archmage	
60		Savant	
70		Grand Wizard	
80	Dragon Lord		Dragon Lady
90		Dimensionalist	
99		Omniscient	

Priest

1		Acolyte	
5		Adept	
10		Curate	
15		Canon	
20	Priest		Priestess
25		Exorcist	
30		Bishop	
35		Arch-Bishop	
40		Cardinal	
45	High Priest		High Priestess
50	Patriarch		Matriarch
60		Protonotary	
70		Saint	
80		Ascended	
90		Demi	
99		Divine	

Rogue

1	Vagabond
5	Cutpurse
10	Robber
15	Burglar
20	Filcher
25	Sharper
30	Thief
35	Master Thief
40	Infiltrator
45	Grandmaster Thief
50	Assassin
60	Phantom
70	Myth
80	Nightmare
90	Terror
99	Death Fate

Mimic

1	Pretender
5	Modifier
10	Elastic
15	Copier
20	Multiple (1st)
25	Multiple (2nd)
30	Metamorph
35	Many-Faced
40	Changer
45	Master Changer
50	Grandmaster Changer

Class	Level		Title	
	60		Faker	
	70		Doppelganger	
	80		Transformer	
	90		Replicator	
	99		Limitless	
Archer				
	1		Rock Thrower	
	5		Slinger	
	10		Great Slinger	
	15	Bowman		Bowmaiden
	20		Marksman	
	25		Archer	
	30		Sharpshooter	
	35		Veteran Archer	
	40		Master Archer	
	45		Grandmaster Archer	
	50		Deadeye	
	60		Elite Archer	
	70		Grand Elite Archer	
	80		Legendary Archer	
	90		Sirring Death	
	99		Golden Eye	
Paladin				
	1		Page	
	5		Squire	
	10		Faithful	
	15		Zealot	
	20		Chaplain	
	25		Defender	
	30		Crusader	
	35		Knight	
	40		Banneret	
	45		Paladin	
	50		Knight Commander	
	60		Sacred Defender	
	70		Venerable Templar	
	80		Holy Avenger	
	90	Holy King		Holy Queen
	99		God's Hand	
Ranger				
	1		Rookie	
	5		Path Finder	
	10		Deputy	
	15		Guard	
	20		Scout	
	25		Sentry	
	30		Overseer	
	35		Guard Captain	
	40		Supervisor	
	45		High Ranger	
	50		Ranger Chieftain	
	60		Elite Ranger	
	70		Champion of Law	
	80	Lord of Law		Lady of Law
	90		Legend	
	99		Justice	

Adventurer

1	Rambler
5	Walker
10	Tripper
15	Tourist
20	Strider
25	Traveller
30	Discoverer
35	Spelunker
40	Voyager
45	Navigator
50	Explorer
60	Seasoned Adventurer
70	Famous Adventurer
80	Grand Adventurer
90	Legendary Adventurer
99	Mythical Adventurer

Druid

1		Green
5		Tree Hugger
10	Flower Boy	Flower Girl
15		Herbalist
20		Spiritualist
25		Elder
30		Druid
35		High Druid
40		Master Druid
45		Wildlife Preserver
50		Arch-Druid
60		Forest Guardian
70		Wind Evoker
80		Forest Keeper
90		Autumn
99		Evergreen

Shaman

1		Smoker
5		Novice Walker
10		Walker
15		Spiritwalker
20		Bonecaster
25		Bonefletcher
30		Cursed
35	Chanter	Chantress
40	Elder Chanter	Elder Chantress
45		Shaman
50		Elder Shaman
60		Spirit Keeper
70		Spirit Master
80		Grand Sage
90		Realm Keeper
99		Presence

Runemaster

1	Digger
5	Rune Tracer
10	Rock Collector

Level	Title	
15	Fire Starter	
20	Treasure Hunter	
25	Archaeologist	
30	Earth Guard	
35	Rune Knight	
40	Rune Keeper	
45	Runemaster	
50	Grand Runemaster	
60	Runescribe	
70	Elemental Master	
80	Force Master	
90	Grand Channelist	
99	Vortex	

Mindcrafter

Level	Title
1	Wary
5	Fathomer
10	Thinker
15	Biaser
20	Convincer
25	Warper
30	Psychic
35	Telepath
40	Manipulator
45	Controller
50	Master Mindcrafter
60	Master Manipulator
70	Master Controller
80	Reality Shifter
90	Alterator
99	Truth

Death Knight (aka Vampire Paladin)

Level		Title	
1		Faithless	
5		Forfeit	
10		Unresting	
15		Hungering	
20		Tainted	
25		Unhallowed	
30		Dark Adept	
35		Crypt Keeper	
40		Fallen Champion	
45		Antipaladin	
50		Death Knight	
60	Crypt Lord		Crypt Lady
70		Herald of Ruin	
80		Dark Legate	
90	Unholy King		Unholy Queen
99		Death's Hand	

Hell Knight (aka Corrupted Maia Paladin)
    -The first four titles do not exist as this class cannot be acquired
     before reaching level 20, up to which the Paladin titles are used.-

Level	Title
20	Traitor
25	Fanatic
30	Cultist
35	Heretic
40	Chosen
45	Unholy Zealot

```
                50                         Hell Knight

                60                         Plaguebringer
                70                         Grand Tormentor
                80                         Vizier of Chaos
                90          Demon Prince            Demon Princess
                99          Demon King              Demon Queen

     Corrupted Priest (aka Corrupted Maia Priest)
          -The first four titles do not exist as this class cannot be acquired
          before reaching level 20, up to which the Priest titles are used.-
                20          Priest                  Priestess
                25                         Execrator
                30                         Bishop
                35                         Arch-Bishop
                40                         Cardinal
                45          High Priest             High Priestess
                50          Patriarch               Matriarch

                60                         Protonotary
                70                         Great Deceiver
                80                         Ascended
                90                         Demi
                99                         Chaos God
```

(7.5c) Power levels

Classes fare differently depending on their progress in the game. Here are some
rough approximations of 'power levels', trying to give an idea how strong each
class is at different progress stages of the game.

Note: For some classes the power curve can depend heavily on the way you
      distribute skill points so this is only a hand-picked estimate of the
      most average builds (not necessarily the most interesting ones).

      Also, some classes and builds might shine in parties rather than solo,
      and some might be more dependant on acquiring great items than others.

      If you train 'Martial Arts' skill you will be elevated to '+++' in
      'Start' and 'Early' stages, no matter the class.

      Istari lose their weakness aka their fragility when they acquire the
      Mana school spell 'Disruption Shield' which is considered essential.
      They are unmatched in terms of controlling almost any situation and
      at the same time being able to focus on raw +speed accumulation while
      maintaining very high survivability thanks to disruption shield.

      Especially non-martial-arts melee-classes can reach '++++' in the
      'Post-winning' stage if they are able to acquire a great set of equipment
      which will take lots of effort.
      The reason is that their damage output and damage mitigation depends on
      gear mostly rather than on skills, unlike for spell-casting characters.

      Archers and Runemasters can reach '++++' in 'Endgame' and 'Post-winning'
      in terms of damage output if they can rely on a good party.

      Shamans can reach '++++' in 'Late', 'Endgame' and 'Post-winning' in terms
      of utility, as they may access all features of Istari, Priests and also
      those of Mimicry and Runecraft without that much expense of skill points.

      Mimics can reach '++++' in 'Late', 'Endgame' and 'Post-winning' in terms

```
          of survivability/power balance if they obtain the most powerful forms.


                  Start     Early     Mid       Late      Endgame   Post-winning
                  (Lv 1)    (10+)     (30+)     (40+)     (50)      (After Morgoth)
       ---------------------------------------------------------------------------
       Warrior    +++       +++       +++       +++       +++       +++
       Istar      ++        ++        +         +++       ++++      ++++
       Priest     +         +         ++        +++       +++       +++
       Corrupted P. +       ++        ++        +++       +++       +++
       Rogue      +++       +++       +++       +++       +++       +++
       Mimic      ++        ++        +++       +++.      +++.      +++.
       Archer     ++        ++        ++        +++       +++       +++
       Paladin    ++        ++        +++       +++       +++       +++
       Death Knight ++      +++       +++       +++       +++       +++
       Hell Knight +++      +++       +++       +++       +++       +++
       Ranger     +++       +++       +++       +++       +++       +++
       Adventurer +         +         ++        +++       +++       +++
       Druid      +++       ++++      ++++      +++       +++       +++
       Shaman     ++        ++        +++       +++.      +++.      +++.
       Runemaster +         +++       +++       +++       +++       +++
       Mindcrafter +++      ++        +++       +++       +++       +++
```

(7.6) Sanity (or insanity)

When your character loses sanity, temporary halluciations (flashbacks) may
occur and become more frequent when you lose even more sanity, you will see the
the message "A flashback storms your head!".
Hallucinations are not just visually confusing when things seem to pop up that
don't really exist and things that do exist become unrecognizable. They will
also hinder your character's abilities in various ways, for example you become
unable to target anything.

If your character loses all sanity ie turns completely insane, you will
permanently die - even if you are everlasting-mode! Your character will be gone
and erased.

Your sanity, displayed as 'SN:', can have the following text 'values' depending
on how much sanity you have left:
Sound (90%+), Sane (75%+), Weird (50%+), Crazy (25%+), Insane (10%+), Mad (>0%)
and finally Vegetable (0%, you are permanently dead).

If you spend 10 points on your 'Health' skill, the sanity display will turn
into a bar, displaying exacter values. At 20 points you'll get the percentage
displayed. At 40 the value will be shown.
You can type the '/snbar' slash command into chat to cycle through these.

Monsters, traps or too much booze can reduce your sanity.
Fortunately there are potions available that cure insanity, although they
are not very common and cannot be bought in NPC shops. Wisdom helps against
insanity by inceasing your 'sanity capacity'. As you gain levels, your sanity
capacity will also increase. Certain classes such as priests or mindcrafters
may (depending on their skills) be able to cure insanity too.

When your sanity suffers from an attack, you'll see a message in the message
window telling you so, instead of the usual white or yellow combat messages it
will be coloured in red tones to make it easily visible:
- When your sanity value is still relatively high there will be no message yet.
- When your sanity is down to half, warning messages will be displayed, in red:
  'You feel insanity creep into your mind..'
- When your sanity is down to one quarter already, messages will be light red:

'You feel severly disturbed and paranoid..'
    – When your sanity is at 1/8 or worse it will be fiery (red/yellow flashing):
         'You can hardly suppress screaming out insane laughters!'
         If you don't have any way to restore it right away this is probably when you
         want to teleport out and back to town immediately to seek professional help.
    – The final message when you die to insanity by turning into a vegetable-brain,
         that message will be purple – game over:
         'You turn into an unthinking vegetable.'
In addition to the message, sanity attacks will play a whispering sound effect,
named 'insanity' in the sfx jukebox (press = n to access).

For details about attacks using 'psi' damage, also see (5.6) under 'Psi'.

There are no items granting any insanity resistance, but there are certain ways
to reduce incoming insanity damage, depending on the flags of a mimicked form
or your race, class or skills, in three tiers:
    Mimicry: UNDEAD/WEIRD_MIND/MIND_BLAST/RES_PSI = tier 1.
    Mimicry: NONLIVING/EMPTY_MIND/BRAIN_SMASH/IM_PSI = tier 2.
    Mind school skill: Level 40/50 = tier 1/2.
    Hereticism + Traumaturgy skills: Both level 15/30/45 = tier 1/2/3.
    Mindcrafter class: Level 10/20/40 = tier 1/2/3.
    Vampire race: Tier 2.
    Player ghosts: Tier 3.
These tiers will randomly reduce incoming sanity damage to:
    Tier 1: 9/12...12/12
    Tier 2: 6/12...12/12
    Tier 3: 6/12... 9/12
Insanity reduction also helps resisting the adverse effects of encountering an
eldritch horror (see (7.3) under Saving Throw).

(7.7) Mimicry details

If a mimicry-user polymorphs into a certain monster form, stats and some
abilities will be averaged between the normal ('@') body and the form. In most
cases if the form is performing worse than @-form in a certain field, the '@'
form (ie the normal 'player' form) will dominate and the ability will be only
slightly worse than normal, if even at all.
The averaging is done because the mimic with all his equipment polymorphs into
the target form. It's not like the polymorphing is done first and afterwards
armour, weapon or jewelry is equipped.
So wearing a ring of protection for example won't plainly add to the mimic's
AC but just contribute to the @-form AC which is then averaged in the process
of determining the final form's AC.
How exactly stats are calculated is written below for each case.

If a mimic wields a weapon while using a form which usually cannot use weapons
the number of blows per round will be set to 1 (regardless of extra attacks).
(This only really applies to druids, shamans or perma-cursed weapons (5.12)).

If a mimic polymorphs into a form that cannot wear certain pieces of equipment,
these will all be taken off and placed into the inventory in the usual sorting
order, possibly overflowing your pack if there is not enough room, dropping the
bottom-most item from it to the floor for each item too many. An exception are
perma-cursed items, which can never be removed except by death.

Apart from blows-per-round, all the other resistances and abilities of a
perma-cursed item will be applied normally though, so you could wear the
Massive Iron Crown of Morgoth to get all the resistances and ESP with a form
that usually cannot wear any head gear.

To find out the special abilities of a monster form, press ~ 7 in game or
consult a spoiler file. (See (8.4) for more info about spoiler files.)
You can also use Mikael's monster search website under ~R .
It's abilities will transform to the mimic's body as follows.

Very useful for searching for monster forms with specific abilities is
Mikael's monster search website, linked on tomenet.eu and invokable in-game via
~ R (Shift+R in the 'Knowledge' menu, this requires at least client 4.7.3).

Form aspects as specified in ~ 7 monster lore:
(Make sure to keep your r_info.txt spoiler file up to date, as the lore
displayed via ~7 is derived from it.)

W: depth : rarity : corpse weight : experience for kill
  depth:
    The depth is also the basic level of these monsters. It tells you how
    many of them you need to kill to learn mimicking their form.
    The level has additional use for calculating the mimic's final hit points
    regarding very high character levels (see 'hit points' below).
  corpse weight:
    The weight of the form has impact on its stealth. A huge form that weighs
    a lot will give a stealth penalty, while small and light forms may give a
    bonus.
    Also, the mimic will burn food faster while mimicking a heavier monster.

I: speed : hit points : vision : armor class : alertness
  speed:
    110 means normal speed. If the monster is faster, the mimic will
    receive a speed bonus of 30% of the monster's speed above 110.
    If the monster is slower, the mimic will receive a speed malus of
    20% of the monster's speed malus below 110.
    So a monster moving at 130 speed will give the mimic +6 speed.
  hit points:
    The monster's hit dice xdy are multiplied and then somewhat capped against
    ~2500, so HP gain might decrease in higher regions. (Cap details: The
    monster HP is calculated by the following formula before further
    calculations are made: monster HP = 50000 / ((50000 / hdice*hsides) + 20).)
    Now, if the mimic's HP are less then the result, the mimic's HP will
    become approx. 2/5 of that capped monster HP + 3/5 of the player's original
    HP. If the mimic's HP in player form (code 0) are higher than the monster
    HP then the monster HP will not have any adverse effect, instead the normal
    HP will stay.
    A specialty: Players in very high character levels can see their hit points
    'overtake' the monster form hit points, if the monster form level isn't
    very high in comparison. Example: While a green dragonrider will provide a
    great HP boost, if the player himself has reached say level 70 and has lots
    of HP even in normal form, the green DR hit points won't add much anymore.
    If however the monster has high hit points and also a very high level, the
    monster HP will 'stay ahead' of the player hit points ie keep adding a
    steady bonus that will put him well ahead of his player-form hit points.
    So players of very high character level who want to retain a large bonus of
    hit points will want to look for forms of monsters which are also of
    relatively high level.
  armour class:
    Mimicking a monster is already a very difficult task. By changing
    shape, the usual armour class of the monster will magically influence
    the armour class of the player.
    Depending on the body parts of the monster, its AC has different
    influence on the player. The following formula helps:
    body_influence = 0.
    if the monster has a head, body_influence is increased by 1.

```
        if the monster has a torso, body_influence is increased by 3.
        if the monster has arms, body_influence is increased by 2.
        if the monster has legs, body_influence is increased by 1.
        calc_ac = monster_AC * 14 / (7 + body_influence)
        Now if calc_ac is smaller than the player's AC, the final AC will be
        (3/4 player_base_AC) + (3/4 player_magical_to_AC) + (1/4 calc_ac).
        Otherwise, the final AC will be
        (1/2 player_base_AC) + (1/2 player_magical_to_AC) + (1/2 calc_ac).


E: hands : torso : arms : finger : head : leg
    These values indicate how many pieces of equipment the player can
    wear while using this form. For example snakes can only wear a helmet
    (E:0:0:0:0:1:0).
    NOTE: Mimics can never wear MORE items than in their normal form. So
    even a form with 8 legs would allow only 1 pair of boots to be equipped!
    In the monster lore (~7) some monsters may show 'tentacles'. These count
    for three limb-types together: Hands regarding wielding a weapon, fingers
    (can wear rings) and arms (can wield shields). Tentacles are not fit for
    wearing gloves though.


B: attack method : attack effect : damage
  attack effect:
    POISON,DISEASE,FIRE,COLD,ELEC,ACID:
      If the monster poisons or infects with disease, this will result in
      a poison brand. Similar it's for fire/cold/lightning/acid attacks.
    BLIND won't work on monsters that have NO_SLEEP, otherwise the target
      will be confused.
    HALLU and CONFUSE won't work on monsters that have NO_CONF,
      otherwise the target will be confused.
    TERRIFY won't work on monsters that have NO_FEAR, otherwise it'll
      scare the target.
    PARALYZE won't work on monsters that have NO_STUN, otherwise it'll
      stun the target.
    EXP_xx means the monster drains life on attacking. The player will
      receive HOLD_LIFE (resist life-draining attacks) from this form.
      (It doesn't matter how strong the attack is, all of the variations,
      EXP_10, EXP_20, EXP_40, EXP_80, have the same effect.)
    SHATTER will result in a bonus to player's STRength attribute.
    LOSE_xxx will give the according sustenance, or even all sustenances for
      LOSE_ALL. All other variations give single sustenance each:
      LOSE_STR, LOSE_INT, LOSE_WIS, LOSE_DEX, LOSE_CON, LOSE_CHR.
    SEDUCE will grant charisma sustenance.

    Monster effects (like poisoning or paralyzing) are applied to
    the player's attacks with a probability that corresponds to their
    rarity over the up to 4 monster attacks per round.
    Example for 'Ghoul' form:
    If the monster has 3 blows per round and one of them is poisoning,
    the other two are paralyzing, the mimic will have 1/3 chance to do
    a poison branded attack and 2/3 chance to do a stunning attack.

    These effects won't be applied if one of the following conditions
    is met:
    a) The player is doing a ranged attack.
       (Effects only work with melee attacks!)
    b) The player uses a weapon but the monster doesn't have an
       equipment slot for melee weapons, because it has no arms or is
       immaterial.

    Melee to-damage bonus also depends on the monster form:
    The monster damage dice for each attack are multiplied and the products
    are all added up, the result is divided by 4.
```

```
    The result is now capped against 200, the closer this graph comes towards
    200 the flatter the curve will become. Let's call the resulting monster
    damage value 'monDam':
    This value is now compared against the player's melee to-damage bonus.
    If (monDam > meleetoDam) then newToDam = 1/2 meleetoDam + 1/2 monDam.
    If (monDam < meleetoDam) then newToDam = meleetoDam.
    So, very similar to how HP are averaged, the monster damage has no
    influence if it's lower than the player's melee to-damage bonus, but it
    may provide a great boost if the monster is more powerful than the player.

F: flag list
    The flags are translated to mimic abilities as follows:
    RES_xxx      Gives the mimic the specific resistance.
    IM_xxx       Gives the mimic the specific immunity! If a form offers
                 more than 1 immunity, the immunities will be checked against
                 the preferences you set, if none match or if you set it to none
                 then one will be picked randomly. The remaining ones will turn
                 into resistances. Potions of self-knowledge are helpful here to
                 find out which one you got, or you could just suffer damage of
                 the according type on purpose to test it out.
                 You can set the desired immunity in 'm' menu ->
                 'Use innate power' -> 'Set preferred immunity'. It will be
                 picked if the form you polymorph into can provide it.
                 If you are already using a form that can provide the immunity
                 that you switch to, that immunity will become the active one
                 immediately without the need for re-polymorphing.
                 Note that two immunities are actually exempt and don't
                 translate directly:
                     IM_TELE gives teleport resistance (like RES_TELE) instead.
                     IM_PSI gives insanity reduction (like EMPTY_MIND) instead.
    PASS_WALL    Will allow the mimic to pass walls like a ghost.
                 These immaterial forms also drain the hit points of their
                 user.
    KILL_WALL    The mimic will dig *easily* through walls.
    REGENERATE   Faster hit point regeneration (same as item ability, doesn't
                 stack with regeneration obtained from item flag).
    REFLECTING   Gives 'REFLECT' passive ability to the player, see (5.8).
                 Also gives resistance to light.
                 (Side note about monster reflection in general:
                 The 'REFLECTING' flag on monsters gives them a flat 50% chance
                 to reflect physical or magical projectiles and resistance to
                 any light-based attacks.)
    CAN_SWIM     The player can swim in water, provided he isn't carrying too
                 many/heavy items.
    CAN_FLY      The player can levitate.
    STUPID       -2 intelligence.
    SMART        +2 intelligence.
    NO_CONF      Confusion resistance.
    NO_FEAR      Fear resistance.
    NO_SLEEP     Free action.
    NO_STUN      Sound resistance.
    NO_CUT       The player can't be cut and won't bleed continously from
                 wounds.
                 This will also render the player immune against cause wounds
                 ("Monster points at you and curses/incanting terribly/screaming
                 the word 'DIE'").
    DISBELIEVE   Will provide (or increase an already existing) anti-magic field
                 by ((monsterlevel / 2) + 10) percent. The range of the field
                 is set to (or increased by) ((monsterlevel / 50) + 2) fields.
                 The usual limits of the Anti-Magic skill apply, see (7.2) for
                 details.
    ARROW_1, ARROW_2, ARROW_3
```

If the monster has at least one of these (they don't stack),
                    the player will get an extra shot per round with slings or
                    bows since the monster seems to be good at shooting.
                    If the monster shoots 1_IN_3 or better (better means faster,
                    ie higher frequency, that is 1_IN_2 or 1_IN_1), the player will
                    receive an additional extra shot (with crossbows too).
        HURT_ROCK   Means that this creature has a rock-like skin and body.
                    Takes damage from Stone-To-Mud and takes more damage from
                    'disintegration' attacks, but at the same time resists shards!
        WILD_WOOD   The player (like the monster) can pass trees.
        WILD_MOUNTAIN or WILD_VOLCANO
                    The player (like the monster) can climb mountains.
        WILD_TOO without any other WILD_xxx flags:
                    Combines all WILD_xxx effects (such as WILD_WOOD and
                    WILD_MOUNTAIN)!
        INVISIBLE   The player becomes invisible (see (5.14) for details).
        AURA_FIRE or AURA_ELEC
                    The player receives an aura.
        SUSCEP_FIRE/SUSCEP_COLD/SUSCEP_ELEC/SUSCEP_ACID/SUSCEP_POIS
                    The player is susceptible against these attacks. Dangerous!
        WIERD_MIND/RES_PSI
                    Insanity attacks are reduced a little bit. See (7.6).
        EMPTY_MIND/IM_PSI
                    Insanity attacks are reduced somewhat. See (7.6).
        AQUATIC   Cuts down damage from water-based attacks against you to 1/4,
                    overriding 'normal' water resistance (if you have it).
                    Prevents your items from getting harmed by water in any way and
                    completely prevents stun and confusion effects from water-based
                    attacks.
                    Allows you to swim freely and at maximum running speed.
                    However, since you cannot breathe air in aquatic form, you will
                    suffer from Anoxia and can get stunned and even die from it if
                    you aren't in deep water, or - if your mimicked form weighs at
                    most 700 lbs - in shallow water. You are also safe from this
                    effect if your mimicked form is actually UNDEAD or while you
                    are in wraithform.
        NEVER_MOVE Using this form, the player won't be able to move (except for
                    teleportation/phasing/recalling).
        RAND_25   The player has +10% chance of moving randomly.
        RAND_50   The player has +20% chance of moving randomly.
        OPEN_DOOR   This form can open doors.
                    Note that forms can open doors even if they don't have this
                    flag, provided they have fingers and are able to wield weapons
                    (a good example are Minotaur/Maulotaur forms of druids).
        BASH_DOOR   This form can bash doors
                    (useful to forms that cannot open doors, see OPEN_DOOR flag).
        HURT_LITE   This form will take 2x damage from light attacks.
        HAS_LITE   If this monster either doesn't have a torso or can actually
                    breathe light, it will give you +1 light radius.
        POWERFUL   Gain +1 radius when using monster's ball or breath attacks.

        For all racial flags such as ANIMAL, SPIDER, EVIL, DEMON etc please see the
        list of racial abilities further below.

    S: spell list
        These spells can be cast by the monster. Most of them are available to
        the mimic too, called 'mimic powers', some of them may have slightly
        different effects when used by the mimic. For a list of all available
        mimic powers see (7.8a).
        The chance to successfully use such a monster power is affected by the
        mimic's intelligence (INT).
        Depending on how frequently the monster is able to cast spells, the player

```
        gets boni on mana and on intelligence or wisdom stat!
        This only applies if the spells are in fact magic spells, not if the
        monster cannot do anything except firing missiles, shrieking or shooting
        arrows (etc).
        If the creature is able to cast 1_IN_3, the player receives +1 stat and
        +20% Mana bonus (of base mana, same way +MANA items work).
        If the creature is able to cast 1_IN_2, the player receives +3 stat and
        +35% Mana bonus (of base mana, same way +MANA items work).
        If the creature is able to cast 1_IN_1, the player receives +4 stat and
        +50% Mana bonus (of base mana, same way +MANA items work).

        About specific spells:
        BR_xxx        (breathing) will give the according resistance to the player
                      (if that specific attack CAN be resisted at all).
        BR_PLASMA     gives fire immunity and resistance to electricity and sound.
        BR_GRAVITY    gives feather falling.
        BR_INERTIA    gives free action.
        MIND_BLAST    Insanity attacks are reduced a little bit. See (7.6).
        BRAIN_SMASH   Insanity attacks are reduced somewhat. See (7.6).
        The mana costs of mimic powers are fixed, the success chance is relatively
        fixed too although it benefits somewhat from 'Magic' skill.


    Especially interesting spells of mimics are 'Blink' (Phase Door) and
    'Teleport'. These usually cost very little mana and can be very helpful,
    so you might want to create macros for them.



    Further, certain races get additional fixed abilities
    (even if they are not explicitly mentioned in ~7):
    ----------------------------------------------------
    Bats          Feather falling.
    Elves         Resist light.
    Dark-Elves    Resist darkness.
    Hobbits       (Also sometimes called 'Halflings', same race.)
                  Dexterity bonus of +2 for not wearing shoes.
                  Suffer less often from black breath infection and consequences.
    Gnomes        Free action.
    (Dwarves      Blindness resistance, climbing at level 30.)
    (High-Elves   Resist light, see invisible.)
    Yeeks         Feather falling. Pass trees (from their ANIMAL flag).
    (Ents         Slow digestion, speed - 2, sensitive to fire, see invisible at
                  level 4, can swim easily, pass trees.)
    All animals   Able to pass trees.
    All spiders   Able to pass spider webs.
    All orcs      Resist darkness. (Half-orcs too.)
    All trolls    Sustain strength. (Half-trolls too.)
                  Extraordinary HP regeneration (2x as fast as from 'REGEN' flag,
                  doesn't stack with items. 1.5x as fast for Half-Troll form).
                  They even continue regenerating while suffering open cuts.
    All giants    Sustain strength. (Note that all Ogres also count as giants.)
    All hydras    Extraordinary HP regeneration (2x as fast as from 'REGEN' flag,
                  doesn't stack with items), as they regrow their heads!
                  They even continue regenerating while suffering open cuts.
    All monsters with stone skin (HURT_ROCK flag)
                  Shard resistance.
    All dragonriders
                  ESP_DRAGON at level 5, feather falling,
                  levitation at level 30.
    All evil creatures
                  Becomes susceptible to certain 'good' or 'holy' effects.
    All undead creatures
                  Resist darkness, blindness, poison (usually immunity, depends
```

```
                    on ~7 flags), time and nether;
                    can't bleed (no_cut), infra-vision +2, insanity attacks are
                    reduced by a little bit (see (7.6)).
                    Drowning damage taken is halved.
                    Becomes susceptible to 'life', which concerns some healing or
                    cleansing effects mostly.
                    However, at the same time they become gorged less quickly when
                    for example quaffing lots of healing potions quickly.
                    Take 2x damage from holy orbs or holy fire and suffer
                    from many 'good' effects/spells.
                    Suffer less often from black breath infection and consequences.
All ghosts          See 'All undead creatures' above, but ghosts gain +5
                    Infra-vision instead of just +2.
                    See invisible.
                    Ghosts are susceptible to light.
                    Almost all ghosts can pass solid walls.
                    NOTE: Player ghosts (aka when your character died) get somewhat
                    different boni instead, see (3.11).
All greater undead creatures
                    See 'All undead creatures' above, but greater undead gain +5
                    Infra-vision instead of just +2.
All demons          Take 2x damage from holy orbs or holy fire and suffer
                    from a couple of 'good' effects/spells (similar to undead).
                    Drowning damage is halved.
All greater demons (capital 'U')
                    See 'All demons' above, and in addition they
                    resist poison (usually immunity, depends on ~7 flags), time
                    and chaos.
All non-living creatures
                    Resist poison (usually even immune, depends on ~7 flags)
                    and fear; insanity attacks are reduced somewhat (see (7.6)).
All vampires and vampiric monsters (vampire bats and others)
                    Vampires are susceptible to light.
                    Chance to drain life on attacking in melee.
                    Vampire bats and mist have 100% chance to do a vampiric attack,
                    real vampire forms (and vampiric ixitxachitl) have 50% chance
                    (half their attacks are hits, the other half is biting).
                    For details see '(5.13) Vampirism'.
All angels          Resist light, blindness and poison (usually immunity, see ~7
                    flags), resist fear, resist confusion, free action, some
                    resistance to insanity-inducing attacks (see (7.6)), see
                    invisible.
                    Note: 'Fallen Angel' doesn't get light resistances.
Mist and fume       Feather falling.
All cold-immunes
                    Do not slip, but walk steadily on icy floor.
All instrinsically lightning creatures
                    Also resist sound and light.
All intrinsically fire creatures
                    Also resist light.


Keep in mind that by changing forms you can potentially lose abilities that
you had in player form, because they were bound to your normal form.
Example: An ent mimic won't drown in water, but if it polymorphs into an orc,
it loses the intrinsic ability to swim in water since orcs aren't made of wood.



Attributes and miscellaneous abilities can also be affected by certain aspects
of the monster form you use:
---------------------------
(Note that all bonus aspects stack, so a troll might get much more than just +1
to strength, because he's also quite heavy and therefore gets another bonus.)
```

```
STR     Melee damage: -1..+4 (-1 won't apply if creature is very heavy though)
        Earthquaking melee hits: +1 each
        Body weight: +1..+3
        Bears: +2
        Yetis and cousins: +1
        Trolls: +2
        Giants (Ogres are giants too): +2
        Dragons (mature and higher): +1
INT     Cast speed (1_IN_1 to 1_IN_3): +1..+5
        (will also give up to +50% base mana)
        STUPID creatures: -2
        SMART creatures: +2
DEX     Halfling forms when no boots are worn: +2
        Rogues: +1..+2
        Monks/Master warriors: +1
        Ninjas/Mystics: +2
        Cats: +2
CHR     Dragonriders: +1
        Small, non-nasty animals: +1
        Spiders, orcs: -1
        Trolls, giants (Ogres are giants too): -2
        Nonliving/evil creatures: -1
        Undead/demons: -2
        GOOD creatures: +2


Stealth        Body weight: -4..+3
Infra-Vision   Undead in general: +2
               Ghosts, Wraiths/Wights, Liches, Vampires : +5
```

Intrinsic abilities that aren't kept when changing forms:

Characters keep certain racial abilities even if they change form, while some
other abilities might not persist through polymorphing. The following abilities
will NOT remain active when changing shape, ie are not "polymorph-proof":

Hobbit:
    +DEX bonus from not wearing shoes.
Dwarf:
    Climbing.
Yeek:
    Pass trees.
Ent:
    Speed malus (will be reduced), swimming, pass trees.
    (Note that Ents KEEP racial water resistance and fire susceptibilitiy.)
Draconian:
    Feather falling, levitation.
    Intrinsic breath weapon - you can only use it if you're actually in dragon
    form (including dragonriders) or in any reptilian form (including Hydras).

Abilities acquired from traits (such as 'enlightened' or 'corrupted' trait for
Maiar or draconian traits) are also considered intrinsic abilities and
therefore polymorph-proof if they aren't on the list above.

(7.7a) Polymorph rings ('Ring of Polymorphing of <form>'):

There are two types of polymorph rings, those which already provide a monster
form and those which can still be forged by a mimic. Latter ones are named
'Rings of Polymorphing of Player', while the first ones are named after the
monster form.

A player can use a ring that carries a monster form, by wearing it and
activating it, which will consume the ring and store the form in the player's
memory temporarily.
Only one ring form at a time can be stored. If the player activates another
monster ring, the first form wil be forgotten and replaced with the new one.

To successfully activate a monster form ring, the following three conditions
must be met:

- The user needs a mimicry skill of at least 1/2 the level of the monster, and
must have killed enough monsters to have learned the form normally, in order to
activate the ring, or activation will fail with a message saying
"The ring flashes briefly, but nothing happens."

- Also the character must be eligible to use that form in general, for example
shamans cannot use certain forms. If the character is not eligible, activation
will fail with a message "The ring starts to glow brightly, then fades again".

- Last but not least, rings cannot be used to store level 0 forms such as Bree
townsfolk, in which case activation will fail with a message saying
"The ring starts to glow brightly, then fades again."

On successful activation the ring will disintegrate and the player will
polymorph into the according form for the number of turns the ring specified.
The turns are depending on floor speed, which means they will run out faster on
shallow levels and slower on deeper levels relative to real time, but in fact
always at same speed in character time! (See (4.14) for more information about
the in-game time system.)
As a rule of thumb, a dungeon turn lasts about 1 second on average (noticably
less in town or very shallow levels).
However, the remaining polymorph duration will stop decreasing while you are
in a town and surrounding area, so you don't have to hurry while shopping.
If a character activates a poly ring and then manually polymorphs into another
form, the remaining form duration is saved so he can turn back into the ring's
form later. Only one ring form can be saved at a time. Note that there is an
activation tax of 10 turns everytime the player polymorphs into the stored
form (except for the initial polymorphing from activating the ring).

NOTE: UN_POWER attacks can drain the remaining time a temporary form lasts!

At around 100 turns (or less if there isn't more time left) before a form runs
out the player will receive a warning message about this, and his appearance
will start to flicker between the temporary form and his normal form, to
indicate visually that it won't last very much longer.

Players can also create monster rings from "Polymorphing of Player" rings, by
mimicking the according form, then wearing the ring and activating it.
The ring will turn into a ring of polymorphing of the current monster form.
However, to create such a ring it is required that the player has already
learnt that form. All of his knowledge will be absorbed into the ring, so
the player will completely forget the form and have to re-learn it if he
wants to use it again!

The level of the ring will change depending on the form. Here are some levels:

form level	ring level
0 (townspeople)	5
1	5
15	14
30	22
60	36
80	43

```
     100 (theoretical)        50
```

Polymorph rings contain a certain amount of energy that cannot be changed,
which determined for how long the player will keep the form until he polymorphs
back to normal.
If a player forges a ring, his 'Magic Device' skill helps to obtain a higher
amount of energy in the ring.

(7.7b) Useful low-level forms for weapon-based mimicry and more
----
Mimicry users who use weapons have less choices for forms than martial artists
who do not need to rely on humanoid forms and can just utilize easy-to-get
forms such as fruit bat, wild cat, spiders, birds or hounds right away to
great effect.

To use weapons however, the form must be humanoid or very close to it, which
rules out animal forms. To make form-hunting a bit easier in the beginning here
is a list of useful low-level forms that are humanoid and allow the player to
wear/wield full equipment:

 -- Note: Forms usable by shamans are marked with an asterisk '*'. --

Forms you can already get in Bree town:

Village idiot   1 It's pretty weak and has slightly erratic movement which
                    can be a bit annoying but it gives a speed bonus which can
                    be somewhat useful when fighting.
Mean-looking mercenary
Battle-scarred veteran
                 1 They can improve your initial HP (hit points) and AC
                    (armour class) fairly well.
                    They both have slightly erratic movement though.

Further forms:

Note: Nearly all of these actually occur in packs (although some of them might
      also sometimes appear on their own) making them even easier to attain.

Small kobold   1 Actually very weak, but it has poison resistance. This way
(or normal kobold) this form may help you to kill Rotting corpses (see below)
                    which have poisonous melee attacks. ;)
                    Not really useful other than that.
*Blue yeek   2 Very weak, but has acid resistance and can actually pass
(or *brown yeek)   tree terrain, making it useful in dungeons with lots of
                    trees allowing for an easy escape from danger by simply
                    retreating into trees - except against enemies that can
                    also pass trees of course, eg any animals.
Novice mage   2 Sort of weak but has 'Blink' spell (aka Phase Door) and
                    more.
                    It occurs solo at depth 2, but in packs at depth 6!
Novice priest   2 Sort of weak but can cast fear/curse and self-heal spells.
                    It occurs solo at depth 2, but in packs at depth 6!
*Poltergeist   3 Useful only for shamans because it has no limbs!
                    This form can pass solid walls and makes you invisible!
                    Also gives fear/confusion/cold/sound/insanity/time
                    resistance, free action, poison immunity, and you won't
                    bleed from cuts.
                    However, since Poltergeister are invisible, finding them
                    might prove troublesome. An easier to spot ghost form is
                    the 'Phantom warrior' (see further below).
Novice ranger   4 Can pass trees easily. Gives an extra shot with slings or

bows. This can be pretty powerful early on if the
character has a decent 'Bows/Throw' ability or has a bow
that is well enchanted to-hit.
It occurs solo at depth 4, but in packs at depth 8!

Novice mindcrafter
4 Free action, resists confusion and slightly insanity too.
Can cast blind/slow/confuse/fear spells.
It occurs solo at depth 4, but in packs at depth 8!

Large kobold   5 As all kobolds it has poison resistance. It also has a lot
of hit points and very good AC for its level.

Bullywug   7 This doesn't have particular advantages except for being
smart (+INT bonus), but it is actually aquatic. That means
you can use it to roam deep water areas without drowning.
(Aquatic forms cannot be used outside of deep water or you
would suffocate because your body cannot breathe air.)

Rotting corpse 8 Free action, resists confusion/fear/cold, poison immunity,
brands melee attacks with poison, decent AC.
Despite its lack of physical thoughness this is a very
underrated form considering all the beneficial abilities.

*Phantom warrior 8 Useful only for shamans because it has no limbs!
This form can pass solid walls!
Also gives fear/sound/insanity resistance, free action,
poison immunity, and you won't bleed from cuts.

Shadow Creature of Fiona
10 Somewhat rare, gives free action and resistance to poison,
darkness and confusion.

Tengu   10 Moves quickly, high HP, good AC, can blink/teleport and
more, resists fear and fire, can levitate. A secret tip
for form hunters! (Does not occur in packs!)
Even if you have a better form already, you can still use
this form's teleportation (or any other) ability by making
a macro in the macro wizard that changes to Tengu,
teleports, and then changes back to your previous form.

*Master yeek   12 Although everyone knows that Yeek = weak, this particular
kind of Yeek can cast some interesting magic spells.
And as a plus it's actually immune to acid.

*Air spirit   12 Useful only for shamans because it has no limbs!
Since this is an 'E' form, shamans learn it very quickly.
An insanely powerful early shaman form, since it gives a
big speed bonus, levitation and invisibility!
It also gives free action and resists fear, confusion,
light, dark, bleeding (cannot be cut), insanity,
electricity and poison and grants immunity to either
electricity or poison.

Illusionist and Druid
13 These two have an array of spells at their disposal, one of
them being 'Haste Self' which speeds themselves up
temporarily, which can be a very powerful asset.
These two monsters appear somewhat rarely though.
(Later on, 'Mage' is a mid-level form that also provides
haste spell and is actually more common to find.)
(These two do not occur in packs.)

*Ogre   13 This strong form can cross forest and mountain terrain.
Note that Ogres also count as giants which means that
shamans can use this form too.
(This monster occurs somewhat more rarely than the others.)

Black orc   13 Good HP, good melee damage, +1 extra shot w/ slings/bows.
*Black Ogre   15 Slightly stronger than Ogre but cannot move through woods.
Lizard man   16 Good HP, can swim easily, resists water, immune to acid.
(This monster occurs somewhat more rarely than the others.)
*Ogrillon   16 Very high HP for its level, good melee damage.
Note that Ogrillons also count as giants which means that

```
                  shamans can use this form too.
                  (This monster occurs somewhat more rarely than the others.)
Uruk          16  Good HP, good melee damage, good AC, +1 extra shot w/
                  slings or bows, poison immunity.
*Umber hulk   16  Shamans can use full equipment in this form, others cannot.
                  Since this is an 'X' form, shamans learn it very quickly.
                  It's not really strong but it destroys walls just by moving
                  into them, allowing you to tunnel easily without any
                  digging tool.
                  Also it is immune to poison, paralysis and confusion, you
                  won't bleed if you get cut, and its melee attacks may have
                  a confusion effect (which makes fighting it in close combat
                  a bit dangerous).
                  (Does not occur in packs.)
*Forest troll 17  High HP, good AC, can pass trees, and like all trolls (and
                  hydras by the way) has extraordinarily fast HP regeneration
                  (2x as much as and not stacking with REGEN flag).
*Earth spirit 17  Useful only for shamans because it has no limbs!
                  Since this is an 'E' form, shamans learn it very quickly.
                  Similar to Air spirit (see further above) this form comes
                  with very useful abilities (and more hit points), even
                  though it is less speedy than Air spirits. Earth spirits
                  can pass solid walls and also fly, giving them ultimate
                  mobility. It gives free action and resists fear, confusion,
                  light, dark, bleeding (cannot be cut), shards, fire, cold,
                  electricity and poison, and gives immunity to one of
                  fire, cold, electricity and poison.
Elite uruk    20  Good HP, very high melee damage, good AC, +1 extra shot w/
                  slings or bows, poison immunity.
Dark-elven Lord 20 Good HP, resists darkness but is susceptible to light-based
                  attacks. Moves fast and even has a 'Haste Self' spell in
                  his array of spells that boosts his speed further.
                  This monster occurs somewhat rarely.
                  (Does not occur in packs.)
                  Even if you have a better form already, you can still use
                  this form's haste-self (or any other) ability by making a
                  macro in the macro wizard that changes to Dark-elven Lord,
                  hastes self, and then changes back to your previous form.
```

(The number is the monster level and therefore the amount of monsters you need
to kill to learn the form.)

Some of these forms have useful abilities, mainly teleport, haste self and heal
which you might want to use even though you already use another, better overall
form. The solution is to just create a macro (using the macro wizard is the
easiest way) that polymorphs into the form with the useful spell, then casts it
and then polymorphs you back to your previous form, all in one macro, ie in one
keypress!

Of course some of these forms might also be useful for martial arts users.
(Note that martial artists cannot make use of ranged weapons except
for boomerangs or of any melee weapons in general though, without
losing their excellent bare-handed melee skills.)

Commonly seen advanced forms: Bloodletter of Khorne, Storm Giant, Dragonriders.

(7.7c) Druid forms

The according polymorph code is given in parentheses below the creature name.
Note: Some druid forms can open doors, others may try to bash doors.
      Also, all animal forms are able to travel through woods.

You can use the /ex command in game to see which forms you can use, and what polymorph code they have.

Lore-wise all hydras have extraordinary hit point renegeration (that doesn't further stack with REGEN flag) as their heads regrow quickly when cut.

Note: If a monster can fly that means it will grant the player the 'levitation' ability.

Level 5:

Cave bear   tough; can pass mountain terrain
(Code 160)

Panther   speedy
(Code 198)

Level 10:

Grizzly bear   same as Cave bear, but tougher
(Code 191)

Yeti   can pass mountain terrain;
(Code 154)   is immune to cold but susceptible to fire

Level 15:

Griffon   can fly; can pass mountain terrain
(Code 279)

Sasquatch   speedy; can pass mountain terrain and woods;
(Code 343)   immune to cold like Yeti, but not susceptible to fire;

Level 20:

Werebear   same as Grizzly bear, but tougher
(Code 414)

Great eagle   speedy; can fly; passes most terrain types
(Code 335)

Great White shark   speedy and tough aquatic(*) form
(Code 898)   (aquatic means that it requires deep water to breathe
                       and greatly resists water-based attacks)

Aranea   a speedy greater spider;
(Code 963)   all melee attacks are poisonous;
                       resists fire, completely immune to poison;
                       susceptible to light and to 'good' (creature is evil);
                       has a small array of magic spells at its disposal

Level 25:

Wyvern   speedy; can fly; passes most terrains;
(Code 334)   25% poisonous melee attacks;
                       immune to poison; susceptible to 'good'

Multi-hued Hound   resists fire/cold/lightning/acid/poison and is immune
(Code 513)   to one of those five elements;
                       can't be confused or paralyzed;
                       can breathe the five elements mentioned above

```
Level 30:
---------
5-headed hydra          tough and speedy; can swim; extraordinary regeneration;
(Code 440)              all melee attacks are poisonous; immune to poison;
                        can cast fear and poison ball

Minotaur                tough and very speedy; susceptible to 'good'
(Code 641)

Giant squid             tough and speedy aquatic(*) creature;
(Code 482)              resists cold/acid/lightning/poison;
                        can breathe lightning, acid and poison

Level 35:
---------
7-headed hydra          tough and speedy; can swim; extraordinary regeneration;
(Code 614)              poisonous (75%) and blinding (25%) melee attacks;
                        immune to poison;
                        can cast fear, poison ball, and breathe poison

Elder aranea            speedy and smart (INT bonus) greater spider;
(Code 964)              50% of melee attacks are poisonous;
                        resists darkness, fire, poison;
                        immune to either fire or poison;
                        susceptible to 'good' and to light;
                        can't be confused or paralyzed;
                        regenerates HP quickly (same as item flag);
                        has a medium array of spells at its disposal

Plasma hound            speedy;
(Code 726)              immune to fire, resistant to lightning and sound;
                        susceptible to cold;
                        can't be stunned (by magic), cut, confused or
                        paralyzed;
                        can breathe plasma

Level 40:
---------
11-headed hydra         speedy and toughest hydra; can swim;
(Code 688)              extraordinary regeneration;
                        fiery attacks; immune to fire;
                        has a small array of fire/fear spells

Giant Roc               speedy giant bird; deals high damage;
(Code 640)              can fly; passes most terrains;
                        immune to electricity; resists sound;
                        can't be paralyzed or confused;

Lesser kraken           speedy, smart and very tough aquatic(*) creature;
(Code 740)              resists lightning, cold, darkness, poison;
                        completely immune to either water attacks or poison;
                        can't be paralyzed or confused;
                        has a medium size array of spells;

Level 45:
---------
Maulotaur               Like Minotaur very speedy and susceptible to 'good',
(Code 723)              but even tougher; stupid (INT malus);
                        immune to fire; resists teleportation attacks;
                        can cast plasma bolt and fire ball

Winged Horror           speedy winged creature; can fly;
```

```
        (Code 704)                 resists cold, poison, darkness, nether, life drain;
                                    immune to either cold or poison;
                                    susceptible to 'good';
                                    can breathe nether, darkness and poison


        Level 50:
        ---------
        Gorm                        large yet speedy armoured reptile;
        (Code 1069)                 has 67% poisoning and 33% stunning attacks;
                                    resists fire, cold, acid, lightning, nether, darkness,
                                    sound; becomes immune to one of cold/acid/poison;
                                    susceptible to 'good';
                                    can't be confused or paralyzed, can swim;
                                    can breathe darkness


        Greater kraken              speedy, smart and extremely tough aquatic(*) creature;
        (Code 775)                  resists cold, poison, lightning, acid, darkness;
                                    completely immune to one of lightning/poison/water;
                                    susceptible to 'good';
                                    can cast from a large array of spells


        Jabberwock                  fabulous very speedy and tough hybrid creature that
        (Code 778)                  deals high damage;
                                    can fly;
                                    resists teleportation attacks and chaos;
                                    can curse and breathe chaos


        Level 55:
        ---------
        Horned Serpent              speedy and tough; can swim and pass mountain terrain;
        (Code 1131)                 33% poisonous attacks;
                                    resists poison, acid, fire, water attacks,
                                    becomes immune to either poison or acid;
                                    can't be scared, confused or paralyzed;
                                    can cast fear and breathe acid and poison


        Level 60:
        ---------
        Firebird                    speedy and tough; can fly and passes most terrains;
        (Code 1127)                 fiery attacks and fire aura;
                                    immune to fire and susceptible to cold;
                                    resists poison, sound and light;
                                    regenerates HP quickly (same as item flag);
                                    can breathe fire and light

    (*) "Aquatic" means that this form requires deep water to breathe, you will get
        increasingly stunned and continuously take damage if you stay outside of
        deep water, beware.
        Aquatic forms also resist all water-based attacks *greatly*.
        For more details, see AQUATIC flag in (7.7).



    (7.8) Spells and prayers
    ------------------------
    Istari (mages), rangers, rogues, priests, paladins, druids, shamans,
    mindcrafters, runemasters, mimics and even adventurers can cast magic spells,
    use telepathic powers (which are the same as spells, technically) draw runes
    or speak prayers.
    To do so, they need the according spell scrolls (which contain exactly one
    specific spell) or books (such as Codices, Spell Books, Grimoires, Handbooks
    or Tomes, that contain several different spells) in their inventory.
```

Mindcraft uses spell crystals instead of spell scrolls, there is no real
difference in the way of spell-casting though.
Runemasters however do not use any scrolls or books. Instead they draw runes
from their memory. For certain advanced spells they might require physical
runes in their inventory. Runecraft is quite different from normal spellcasting
and is explained in chapters (7.8b) and (7.8c) instead.
Mimics use a very different type of magic too, 'innate powers' that they gain
from the very monster form they imitate, allowing them to cast most if not all
spells that the monster would be able to use. As such, Mimicry has almost
nothing to do with normal spell-casting either and is instead discussed in
chapter (7.8a).

The maximum range a spell can travel/affect is 18 (while the maximum distance
your character can see is 20, be it with normal eye sight or infra-vision).

The failure rate when attempting to successfully cast a spell is usually shown
when browsing the according spell scroll/crystal, and is determined by your
intelligence or wisdom, and the spell's level. For details see (7.8d).

Some spells have an instant effect, other spells have a lasting effect over a
certain duration, most commonly storm-type or cloud-type spells which deal
damage over time. Such spells that have lasting effects on the map grids do not
stack! For example, casting Noxious Cloud and immediately afterwards Vapor will
cause the Noxious Cloud getting replaced by Vapor on all map grids where they
would overlap.

Spell scrolls and some books can be purchased in store '9' (the 'bookstore',
usually also sells 'Beginner Cantrips' and sometimes also Codices) or in
'7' (the 'black market' - very expensive but you often find tomes here!).
Bookstores in higher-level towns on average also tend to sell higher-level
spells. You can also use the 'o' key in the bookstore to order specific
spells! Note that in the bookstore it is sufficient to just enter the spell
name when ordering, you don't need to type out the full item name of the
spell scroll/crystal.

Note that you must spend enough points into a particular magic school (or
into sorcery) for the spell turning from grey into green in your spell book,
in order to use that spell. A spell will turn green when its current level has
become at least 1.
A level 'x' spell will requires at least 'x' points in its school before you
can cast it and it turns green. You'll cast it at spell level 1 then. If you
spend more points into that school the spell will become more powerful as its
spell level increases.

Example:
Noxious Cloud is a level 3 spell of the Air school. That means if you spend at
least 3 points into Air school, the spell will become usable and be displayed
as "level 1" in your 'Spell Scroll of Noxious Cloud' you just bought from the
bookstore in Bree (symbol '9').
If you raise your Air school to 6 by spending 3 more points into it, the level
of your Noxious Cloud spell will increase by 3 and now be displayed as
"level 4" in your spell scroll. The spell now deals more damage and lasts
longer than it did on power level 1 when you just barely learned it.

Casting spells on other players:
Some spells have effect on fellow players too, this works regardless of whether
they are in the same party or not. In most cases the player needs to stand next
to the caster for it to work.
This area effect around the caster, in which a spell affects other players
standing next to him, is called spell "projection". The spells which project
onto other players are marked by an '(auto-project)' tag.
Some Mindcrafter spells require the target player to open his mind ('p' key) to

receive the spell effect.
Just for completeness: Rune magic that can affect other players does so automatically too, same as school magic.

Shared spells:

Some spells are shared between different schools, occuring possibly but not necessarily in all of the involved schools and thereby in the related tomes (as tomes are books that exactly contain all highest-tier versions of all spells of a specific school.)

When a spell is shared between schools it means that training in one of those schools will increase the spell level by only half (if shared between two) or by a third (if shared between 3) etc. of that amount.

Example - A spell that is shared between two schools:
If you want to increase this spell by say 5 points, you either have to increase both of its schools by 5 each, or one of them by 10.

However, you don't need to train all involved schools necessarily. As long as you manage to increase the spell level to at least 1, you become able to use it even if you only trained one of all involved schools.
However, some shared spells will have too high a starter level to become accessible by training only one of its schools.
Some shared spells might involve a non-school skill even, eg Necromancy skill.

Spell tiers:

Some spells have multiple tiers, usually two or three, denoted by roman numbers after the spell name.
Higher tiers usually have greater effect but also cost more mana than lower tiers. Sometimes a higher tier will have not just added effects but actually different effects, in most cases a different type of damage dealt to enemies. Especially non-elemental attack spells will often have a different area of effect in higher tiers, such as bolt -> ball -> line of sight.

Magic, holy and occult schools give certain permanent boni and abilities to the player, when trained to a certain extent. The boni are listed below each school.

When casting a spell by name (usually via macro) and omitting a tier, it will automatically try to cast the highest learned tier of that spell that is found in your inventory.

Experimental Quirk: Wielding a spell book

Depending on the server settings, an experimental quirk might be enabled:
You can 'w' (wield) a spell book (that includes any book, spell scroll, or spell crystal) like a 2-handed weapon. An equipped book (or scroll/crystal) will not count as melee weapon, so any melee combat you engage in will work exactly as if you were fighting bare-handed (and martial arts skills won't be applied).

All spells in that book will receive some boni when you cast them. Usually:
 - 20% reduced MP cost (rounded up when browsing the book, but actually has a
                        chance to cost 1 less MP depending on the fraction, so
                        on average it is actually always applied correctly!
                        Example: A spell with a base cost of 2 MP would have a
                        40% chance for 1 MP and 60% for 2 MP, on each cast.

However, the cost for a spell can never go below 1 MP.)

  - 5% reduced failure rate (cannot go below zero of course.)

  - +1 effective spell level (increasing the spell's power, much like the
      skill 'Spell-power' does - only works on spells that you already know!)

      (Note about 'Astral' spells: These often use the 'Astral level' instead
      of spell level to calculate certain spell aspects. The Astral level,
      however, is unchanged by this spell level bonus.)

If you have duplicates of a spell, both in your inventory and equipped, then
the equipped and therefore boosted version will take precedence.

This quirk might be useful for certain lower level characters, but might lose
its appeal at higher levels where you find other powerful items to wield
instead, such as highly enchanted mage staves or weapons.

As this quirk is classified as 'experimental', the effects might be subject
to change, which will probably appear as a note in the message of the day (~f).

With a somewhat recent client up to version 4.9.0c you can use this quirk just
fine except for custom books, and you won't be able to browse the equipped book
and you can only cast from it by using the macro wizard (or manually creating
macros that cast spells by their name).
If you use the latest github code or a client of version higher than 4.9.0c
these limitations will be lifted.

- Wizardry -

(Most spells are INT-based, aka use INT for determining spell failure rates.)

- Mana   [Spells are INT-based.]

  Manathrust   Casts a powerful mana bolt.
                  Required skill level for first spell level: 1.

                  Tier II: Level 20.

                  Tier III: Level 40.

  Recharge   Recharges a magic staff or wand.
                  Required skill level for first spell level: 5.

                  Tier II: Level 25.
                  Can also recharge rods. At the skill level you learn this
                  tier, the 1st tier spell can actually recharge rods too.

                  Tier III: Level 40.

  Disperse Magic Removes magical influences.
                  Required skill level for first spell level: 15.
                  Lv 1: Blindness/Confusion.
                  Lv 10: Hallucination.
                  Lv 15: Speed/Slowness/Stun.
                  This spell can be used even while confused or blind.

  Disruption Shield
                  Conjures a shield that protects you from taking damage.
                  Instead, the shield will consume your mana to absorb it.
                  Only Istari are able to really get the most out of it -

they get 1 mana point deducted for each absorbed point of
damage. All other classes will get 2 mana points deducted
for each damage point.
Note that Disruption Shield actually prevents being
intercepted by enemies, making a skill like 'Calmness'
obsolete for higher-level istari!
While disruption shield is active the player will see
himself turning from '@' into numbers depending on his MP
pool instead of HP.
However, should his HP drop far enough that without shield
he would turn into numbers, AND if his HP-based number
would be lower than his MP-based number then his symbol
alternates every 1/2 second between MP-based number and
HP-based number with the latter being displayed in yellow.
Required skill level for first spell level: 35.

BONI: Mana resistance at 40.

- Fire   [Spells are INT-based.]

Globe of Light Creates a globe of magical light.
                Required skill level for first spell level: 2.
                Lv 10: Hurts monsters that are susceptible to light and may
                       cause blindness too in that case.
                Radius and damage will further increase.

                Tier II: Level 22.
                Calls a more powerful kind of light. This light hurts all
                types of monsters (except immune ones) and may cause
                blindness too.

Fire Bolt   Fires a fire bolt at a target.
                Required skill level for first spell level: 4.

                Tier II: Level 25.

                Tier III: Level 40.

Elemental Shield
                Temporary resistance to heat and cold.   (auto-project)
                Required skill level for first spell level: 15.
                Shared spell (see above): Fire, Water.

                Tier II: Level 20.   (auto-project)
                Temporary resistance to heat, cold, lightning and acid.
                Shared spell (see above): Fire, Water, Earth, Air.

Fiery Shield   Creates a shield of flames around you that damages monsters
                that attack you in melee.
                (A reactive-shield spell, these are mutually exclusive,
                so only one at a time can be active. The only other such
                spell in Wizardry is 'Mirage Mirror'. All other spells that
                create reactive-shields are from Runecraft.)
                (This spell does not reduce damage you take from attacks.)
                Required skill level for first spell level: 16.

                Tier II: Level 36.

Firewall   Creates a fire wall to incinerate monsters that cross it.
                Required skill level for first spell level: 20.

```
                    Tier II: Level 40.

    Fire Ball       Conjures a fire ball.
                    Required skill level for first spell level: 23.

                    Tier II: Level 40.

    Fireflash       Conjures a ball of holy fire.
                    Holy fire will hit evil creatures especially hard,
                    while good creatures will take no damage from it.
                    Required skill level for first spell level: 30.
                    (As this spell's element is holy, it cannot be used by
                    characters of vampire race.)

                    Tier II: Level 42.

    BONI:           Fire resistance at 30.


- Water            [Spells are INT-based.]
  (This school cannot be trained by vampire race characters, as freely flowing
  water and natural magic in general opposes their very existence.)

    Vapor           Fills the nearby air with toxic moisture
                    (which does pure water damage, not poison).
                    Required skill level for first spell level: 2.

                    Tier II: Level 20.

                    Tier III: Level 40.

    Frost Bolt      Fires a frost bolt at a target.
                    Required skill level for first spell level: 3.

                    Tier II: Level 22.

                    Tier III: Level 40.

    Ent's Potion    Fills your stomach.
                    Lv  5: Removes fear.
                    Lv 12: Makes you heroic.
                    Required skill level for first spell level: 6.

    Water Bolt      Fires a water bolt at a target.
                    Required skill level for first spell level: 10.

                    Tier II: Level 24.

                    Tier III: Level 40.

    Elemental Shield
                    Temporary resistance to heat and cold.     (auto-project)
                    Required skill level for first spell level: 15.
                    Shared spell (see above): Fire, Water.

                    Tier II: Level 20.                          (auto-project)
                    Temporary resistance to heat, cold, lightning and acid.
                    Shared spell (see above): Fire, Water, Earth, Air.

    Tidal Wave      Summons a monstrous tidal wave.
                    Required skill level for first spell level: 16.
```

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                          Tier II: Level 36.

       Frost Barrier     Engulfs you in a storm of roaring cold that damages
                         all monsters standing next to you.
                         (It does not reduce damage you take from attacks.)
                         Required skill level for first spell level: 22.

                          Tier II: Level 37.
                         Turns into a storm of shards of ice.

       Frost Ball        Conjures a frost ball.
                         Required skill level for first spell level: 22.

                          Tier II: Level 40.

       Hailstorm         Creates a devastating hailstorm of ice shards.
                         Required skill level for first spell level: 40.
                         Shared spell (see above): Water, Air.

       BONI:             Swim in water at 30,
                         water resistance at 40.
                         Items that go bad over time due to warmth while being
                         carried will last longer depending on how high this skill
                         has been trained, with the effect beginning at 8.000.


   - Air                 [Spells are INT-based.]

       Lightning Bolt    Fires a lightning bolt at a target.
                         Required skill level for first spell level: 2.

                          Tier II: Level 21.

                          Tier III: Level 40.

       Noxious Cloud     Fires a poison cloud at a designated target.
                         Required skill level for first spell level: 3.

                          Tier II: Level 18.

                          Tier III: Level 33.
                         Unbreath cloud instead of normal poison, harder to resist
                         since it prevents living creatures from actually breathing.

       Elemental Shield
                         Tier I is only shared between Fire and Water school and
                         hence not available in the Air or Earth schools.

                          Tier II: Level 20.                        (auto-project)
                         Temporary resistance to heat, cold, lightning and acid.
                         Shared spell (see above): Fire, Water, Earth, Air.

       Thunderstorm      Throws thunder bolts at random hostile targets nearby.
                         (33% lightning, 33% sound, 33% light)
                         It will omit sleeping and charmed monsters as to not break
                         the effects.
                         Required skill level for first spell level: 15.
                         Shared spell (see above): Air, Nature.

       Wings of Winds    Grants feather falling.
                         Lv 16: Lets you levitate.
                         Required skill level for first spell level: 15.
```

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      Invisibility     Turns you invisible. (See (5.14) for details.)
                       Required skill level for first spell level: 30.

      Mirage Mirror    Grants temporary reflection, ie a high chance to reflect
                       physical and magical projectiles such as bolts or arrows,
                       same as having an item or form that grants REFLECT (item)
                       or REFLECTING (form).
                       (This is a pseudo reactive-shield spell, mutually exclusive
                       with other (pseudo) reactive-shield spells. The only
                       other Wizardry spell colliding with it is 'Fiery Shield',
                       all other reactive-shield spells are from Runecraft.)
                       Required skill level for first spell level: 35.

      Hailstorm        Creates a devastating hailstorm of ice shards.
                       Required skill level for first spell level: 40.
                       Shared spell (see above): Water, Air.

      BONI:            Feather falling at 30,
                       levitation at 45.


  – Earth              [Spells are INT-based.]

     Acid Bolt         Fires an acid bolt at a target.
                       Required skill level for first spell level: 5.

                       Tier II: Level 24.

                       Tier III: Level 40.

     Dig               Turns walls into mud.
                       Required skill level for first spell level: 12.

     Elemental Shield
                       Tier I is only shared between Fire and Water school and
                       hence not available in the Air or Earth schools.

                       Tier II: Level 20.                      (auto-project)
                       Temporary resistance to heat, cold, lightning and acid.
                       Shared spell (see above): Fire, Water, Earth, Air.

     Strike            Creates a force bolt that may stun enemies.
                       Required skill level for first spell level: 25.

                       Tier II: Level 37.
                       It's a small ball instead of a bolt.

     Stone Prison      Creates a prison of granite walls around you.
                       Required skill level for first spell level: 33.

     Rift              Causes the ground to give way, potentially trapping
                       enemies.
                       Required skill level for first spell level: 37.

     Impaling Spikes
                       Causes a batch of stone spikes to erupt from the ground,
                       impaling your enemies.
                       Required skill level for first spell level: 40.

     Shake             Creates a local earthquake.
                       Required skill level for first spell level: 44.
```

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        BONI:           Great damage reduction against earthquakes at 45.


 - Nature           [Spells are INT-based.]
   (This school cannot be trained by vampire race characters, as natural magic
   in general opposes their very existance.)

    Healing         Heals a percentage of your max hit points. (auto-project)
                    Caps at a certain maximum amount, depending on tier,
                    spell level and ultimately at 400.
                    Projecting heal on others will heal for 3/4 the amount.
                    Required skill level for first spell level: 1.

                    Tier II: Level 20.                           (auto-project)

                    Tier III: Level 40.                          (auto-project)

    Grasping Vines  Summons vines from the ground that grasp an opponent,
                    slowing it down.
                    Required skill level for first spell level: 6.

                    Tier II: Level 23.
                    Summons a wide array of vines, slowing down all opponents
                    in your field of view.

    Vermin Control  Prevents vermin from breeding any further on your
                    current floor. Doesn't work on unnatural creatures.
                    Works on all currently existing breeders and also on all
                    that may spawn in the future on this same dungeon floor.
                    (Same effect as scroll of vermin control.)
                    Required skill level for first spell level: 10.

    Recovery        Neutralizes poison, cures diseases, heals cuts,
                    cures confusion, stun and blindness.       (auto-project)
                    Required skill level for first spell level: 15.

                    Tier II: Level 28.                           (auto-project)
                    Also restores drained stats and lost experience.

    Thunderstorm    Throws thunder bolts at random monsters nearby.
                    (33% lightning, 33% sound, 33% light)
                    Thunderstorm cannot be deflected or reflected.
                    It will omit sleeping and charmed monsters as to not break
                    the effects. This safety lock can be toggled to no longer
                    ignore sleeping monsters via slash command '/tss'.
                    Required skill level for first spell level: 15.
                    Shared spell (see above): Air, Nature.

    Regeneration    Increases your hit point regeneration rate
                    and also speeds up the healing process of cuts.
                    (Stacks with other regeneration effects and item flag.)
                    Required skill level for first spell level: 20.

    Remove Curses   Removes non-heavy curses from carried/worn objects.
                    Required skill level for first spell level: 20.

                    Tier II: Level 40.
                    Removes all normal and heavy curses. Also see (5.12).

    Grow Trees      Grows trees quickly around you.
                    Required skill level for first spell level: 30.
```

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Poison Blood      Gives temporary poison resistance
                  and brands melee attacks with venom.
                  Required skill level for first spell level: 30.

BONI:             While 'Disruption Shield' is not active, Nature grants
                  a hit point bonus, that is applied on the total hit points
                  after all other HP boni and modifications (eg from 'Health'
                  skill, +LIFE items, mimic form HP or Corrupted Maia bonus)
                  have been applied, except for Heroism or Berserk HP boni.
                  These HP boni values fully apply at character level 50 or
                  higher, for lower character levels they are scaled down.
                  The final ie top-scaled (character level 50+) values are:
                  ----------------------------------------------------------
                  +4 for each 1.000 in Nature while HP is still below 800,
                  +3 for each 1.000 in Nature while HP is still below 900,
                  +2 for each 1.000 in Nature while HP is still below 1000,
                  +1 for each 1.000 in Nature while HP is still below 1100.

                  Regeneration (faster hit point regeneration, same as from
                  items that provide regeneration, so doesn't stack with
                  item flag regeneration) at 30,
                  pass trees at 30,
                  poison resistance at 40.


– Conveyance        [Spells are INT-based.]

   Phase Door       Teleports you randomly on a small scale range.
                    Required skill level for first spell level: 2.

   Disarm           Destroys traps and reveals and unlocks doors around you.
                    Required skill level for first spell level: 5.

   Teleportation    Teleports you randomly within the floor.
                    Required skill level for first spell level: 10.

   Teleport Away    Teleports a line of monsters away.
                    Targets may resist depending on their level. Creatures that
                    are unique or resist teleportation effects are unaffected.
                    Required skill level for first spell level: 23.

                    Tier II: Level 43.
                    Teleports away all monsters in sight.

   Recall           Works like Word of Recall.
                    Inscribe your spell scroll or book like you would inscribe
                    a scroll, in order to specify a destination.
                    Required skill level for first spell level: 30.
                    See "(0.3) Important inscriptions, Word of Recall" for more
                    info about Word of Recall!

   Probability Travel
                    Renders you instable, allowing to pass walls and to
                    float upwards/downwards. Floating up/down will skip floors
                    that have other players on them, except if at least one of
                    them is in your party (or if it's the world surface level).
                    If all floors in the (up or down) direction of your attempt
                    to probtravel are occupied by players you get this message:
                "There is a magical discharge in the air as probability travel fails!"
                    Travelling up and down will prevent you from landing inside
                    any vault, nest or pit.
```

Travelling around the floor however, will only prevent you
                              from landing inside a vault.
                              Required skill level for first spell level: 35.

        Telekinesis I   Inscribe your book @P<Playername>, cast it, select an
                              item that you wish to teleport to the player's inventory.
                              The target player needs to concentrate by opening her/his
                              mind, see (0.2). It's dangerous to have the mind opened,
                              since everyone can send you any items, so better close it
                              again as soon as the desired telekinesis transaction is
                              done. Example inscription: @PGandalf
                              Required skill level for first spell level: 40.
                              (Telekinesis II is a Mindcraft spell, not in Wizardry.)

        Mass Stasis   Locks monsters in stasis for a while.
                              Required skill level for first spell level: 45.
                              Shared spell (see above): Temporal, Conveyance.

        BONI: Resistance to teleportation attacks at 50.

  - Divination   [Spells are INT-based.]

    Detect Monsters Detects all non-invisible monsters nearby. (auto-project)
                              Required skill level for first spell level: 4.

    Sense Hidden   Detects traps.   (auto-project)
                              Required skill level for first spell level: 5.

                              Tier II: Level 20.
                              Lets you see invisible for a while.   (auto-project)
                              (See (5.14) for details about invisibility.)

    Reveal Ways   Detects doors/stairs/ways within a radius. (auto-project)
                              Required skill level for first spell level: 6.

    Identify   Identifies an item that you carry or have equipped.
                              Required skill level for first spell level: 8.

                              Tier II: Level 25.
                              Identifies all items that you carry or have equipped.

                              Tier III: Level 35.
                              Identifies all items that you carry or have equipped and
                              identifies all items on the floor around you.

    Vision   Detects the dungeon layout around you.
                              Required skill level for first spell level: 18.

                              Tier II: Level 40. (Also dubbed "Clairvoyance".)
                              Maps and lights the whole floor.

    Greater Identify
                              Identifies an item.
                              Required skill level for first spell level: 35.

    Sense Minds   Gives you temporary ESP.
                              Required skill level for first spell level: 40.

    BONI: At 50, know some intrinsics just by looking at an entity
                              such as monsters, players, traps or fountains.
                              If you wish to see these lines in the message log too

```
                        instead of just the main screen's top line, enable the
                        option 'target_history' in the options ('=') menu.


 - Temporal              [Spells are INT-based.]

    Magelock            Magically locks a door.
                        Required skill level for first spell level: 1.

                        Tier II: Level 41.
                        Creates a rune on the ground that monsters cannot cross
                        nor summon on. Monsters have a chance to break it on each
                        turn. Weak monsters will rarely succeed while powerful
                        monsters may break it quickly.

    Slow Monster        Slows down a monster.
                        Required skill level for first spell level: 10.

                        Tier II: Level 30.
                        Affects a zone.

    Essence of Speed
                        Hastes you for a while.                      (auto-project)
                        If you train Spell-Power, the spell can exceed the usual
                        gain of +10 speed and grant up to +14 speed when maxed out.
                        Required skill level for first spell level: 15.

    Mass Stasis         Locks monsters in stasis for a while.
                        Required skill level for first spell level: 45.
                        Shared spell (see above): Temporal, Conveyance.

    BONI:               Prolonged light source fuel at 20.
                        Time resistance at 50.


 - Udun                 [Spells are INT-based unless noted otherwise.]

    Confusion           Confuses a monsters.
                        Required skill level for first spell level: 5.

                        Tier II: Level 20.
                        Turns into a ball.

    Stun                Stuns a monster.
                        Required skill level for first spell level: 15.

                        Tier II: Level 40.
                        Turns into a ball.

    Hellfire            Conjures a ball of hellfire which is especially deadly to
                        GOOD opponents.
                        Required skill level for first spell level: 20.

                        Tier II: Level 40.

    Genocide            Genocides all monsters of a race on your dungeon level at
                        the cost of your HP, yielding no experience, kill credit
                        or loot. Monsters may resist. Doesn't work inside vaults.
                        HP drain cannot be mitigated, so use with care!
                        For details on the effect "genocide" of this spell,
                        please see (5.9) scroll of geno/oblit.
                        (This spell uses WISDOM to determine fail-rates!)
```

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                        Required skill level for first spell level: 30.

        Disenchantment Beam
                        Conjures a powerful and nearly irresistible beam.
                        Required skill level for first spell level: 40.

        Obliteration    Removes all monsters nearby (radius 20) at the cost of
                        your HP, yielding no experience, kill credit or loot.
                        Monsters may resist. Doesn't work inside vaults.
                        HP drain cannot be mitigated, so use with care!
                        For details on the effect "obliteration" of this spell,
                        please see (5.9) scroll of geno/oblit.
                        (This spell uses WISDOM to determine fail-rates!)
                        Required skill level for first spell level: 40.

        Wraithform      Temporarily turns your form immaterial.
                        Required skill level for first spell level: 43.
        Stop Wraithform Turns you back to material form immediately.

        BONI:           Hold life at 40.


    – Prayers –
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    (All spells use WIS for determining the failure rate.
    In general, holy schools are somewhat less affected by anti-magic fields.)

    – Holy Offense       [Spells are WIS-based unless noted otherwise.]

        Curse           Randomly causes confusion damage or slowness or blindness.
                        Required skill level for first spell level: 1.

                        Tier II: Level 16.
                        Turns from bolt into beam, passing through the target and
                        also hitting those behind.

                        Tier III: Level 26.
                        Affects all monsters in line of sight.

        Call Light      Creates a globe of pure light.
                        Required skill level for first spell level: 2.
                        Lv 3: Hurts monsters that are susceptible to light and may
                              cause blindness too in that case.
                        Shared spell (see above): H.Offense, H.Support.

                        Tier II: Level 20.
                        Calls a more powerful kind of light. This light hurts all
                        types of monsters (except immune ones) and may cause
                        blindness too.
                        Radius and damage will further increase.
                        Shared spell (see above): H.Offense, H.Support.

        Redemption      *Dispels undead* in your field of view.
                        Required skill level for first spell level: 10.

                        Tier II: Level 25.

                        Tier III: Level 40.

        Ray of Light    Casts a ray of powerful light that damages all monsters
                        that aren't immune to light and may cause blindness too.
                        Required skill level for first spell level: 18.
```

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    Exorcism         *Dispels demons* in your field of view.
                     Required skill level for first spell level: 20.

                     Tier II: Level 40.


Orb of Draining Summons a holy orb, devouring monsters.
                     This spell deals double damage against evil creatures
                     and no damage against good creatures.
                     Required skill level for first spell level: 20.

                     Tier II: Level 40.


    Chaos Bolt       Channels the powers of chaos into a bolt attack.
                     Required skill level for first spell level: 30.
                     Shared spell (see above): O.Shadow, H.Offense.
                     This spell cannot be found in the Holy Offense tome.
                     (Note: There is a spell of the same name in 'Hereticism'.)


Doomed Grounds  Has an annihilation effect, much weaker, but affecting
                     a whole area, draining a small percentage of an enemy's
                     hit points. Unique monsters may resist.
                     Required skill level for first spell level: 40.
                     Shared spell (see above): H.Offense, O.Shadow.
                     This spell cannot be found in the Shadow tome.


    Earthquake       Creates a local earthquake.
                     Required skill level for first spell level: 42.


    BONI:            Adds slay undead at 30, slay demon at 40, slay evil at 50
                     to all (physical) melee and ranged attacks.
                     Note that these effects will be inactive if you are using
                     an undead, demonic or evil form respectively.


– Holy Defense       [Spells are WIS-based unless noted otherwise.]

    Blessing         Same effect as scroll of Blessing.        (auto-project)
                     Required skill level for first spell level: 3.

                     Tier II: Level 15.
                     Same effect as scroll of Holy Chant.      (auto-project)

                     Tier III: Level 30.
                     Same effect as scroll of Holy Prayer.     (auto-project)

    Dispel Magic     Removes magical influences.
                     Lv  1: Blindness/Confusion.
                     Lv  7: Confusion/Hallucination.
                     Lv 13: Speed/Slowness/Stun.
                     Required skill level for first spell level: 10.
                     This spell can be used even while confused or blind.

    Protection from evil
                     Evil creatures that try to attack you in melee might get
                     repelled, thereby preventing them from actually hitting
                     you (same as the scroll effect).          (auto-project)
                     Works very well, as long as the creature isn't of a higher
                     r-level than your character level.
                     Doesn't work at all on monsters of an r-level more than 10
                     levels higher than your character level.
                     Required skill level for first spell level: 12.
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      Holy Resistance Lets you resist heat and cold.            (auto-project)
                      Required skill level for first spell level: 20.

                      Tier II: Level 30.
                      Also resist lightning and acid.           (auto-project)

                      Tier III: Level 40.
                      Also resist poison.                       (auto-project)

      Glyph of Warding
                      Creates a rune on the ground that monsters cannot cross
                      nor summon on. Monsters have a chance to break it on each
                      turn. Weak monsters will rarely succeed while powerful
                      monsters may break it quickly.  Monsters of level 98+ can
                      instantly break it.
                      Required skill level for first spell level: 35.

      Martyrdom       You burn in holy fire making you invincible for 15 seconds
                      if used by a priest, for 8 seconds if used by any other
                      class.
                      When your martyrium ends, you will be left close to death
                      with a fraction of your hit points, at least 30 HP though
                      (this amount should be sufficient to survive a hit from
                      terrain damage, such as lava or nether).
                      Note that you cannot be healed in any way during martyr.
                      Invincible here in detail means that you won't take..
                      -any hit point decreasing damage (except genocide strain),
                      -any sanity decreasing damage,
                      -any malicious effects such as disease, poisoning, cuts,
                       fear, blindness, confusion, paralysis, slowness or stun,
                      -black breath infections,
                      -nexus, polymorph and teleportation effects.
                      Martyrdom doesn't protect your inventory from harm though.
                      Also, despite the martyrium initially healing your hit
                      points completely, any existing maladies you suffer (eg
                      black breath) will not be cured by it.
                      The heavens won't accept another martyrium until 1000
                      seconds have passed.
                      Note: To check whether you can use the spell again,
                      use the /martyr (or /mar) command.
                      During martyrdom any kind of line-of-sight (ie affecting
                      all monsters at once that are in your character's field of
                      view) spell damage you inflict will only deal half damage.
                      Required skill level for first spell level: 47.
                      Shares cooldown with 'Blood Sacrifice', 'Death's Embrace'.

       BONI:          Protects the player from undead at 30, from demons at 40
                      and from evil in general at 50. Works similar to the
                      'protection from evil' spell, but has better effect on
                      monsters of higher r-level.
                      (This effect does not stack with the spell/scroll, but
                      overrides them, so there is no need to cast the spell
                      anymore once you acquire this bonus.)


   – Holy Curing       [Spells are WIS-based unless noted otherwise.]

      Curing          Slows down the effect of poison            (auto-project)
                      and cures being gorged.
                      While poison is slowed, the poison indicator will be
                      displayed in yellow colour instead of orange.
```

Required skill level for first spell level: 1.

Tier II: Level 11.   (auto-project)
Also neutralizes poison, cures blindness, cuts, confusion.
This spell can be used even while blind.

Tier III: Level 21.   (auto-project)
Also cures diseases, stun and hallucinations.
This spell can be used even while blind or confused.

Cure Wounds   Heals a fixed amount of hit points of a friendly target,
                 which is capped at 14d8, the same amount a potion of cure
                 critical wounds actually heals.
                 Required skill level for first spell level: 3.

                 (Since this is a bolt spell, use the 'target friendly' key,
                 which is '('. See command reference section (0.2) for
                 details about this key.
                 To target yourself, use a macro that clears your current
                 target via '*q' and picks direction '5' which will then be
                 your current grid.
                 The easiest way is to just use the macro wizard and choose
                 'f)' or 'g)' as targetting method when prompted.)

                 Tier II: Level 23.

Heal   Heals a percentage of your max hit points. (auto-project)
                 Caps at a certain maximum amount, depending on tier,
                 spell level and ultimately at 400.
                 Projecting heal on others will heal for 3/4 the amount.
                 Required skill level for first spell level: 3.

                 Tier II: Level 23.   (auto-project)

                 Tier III: Level 40.   (auto-project)

Break Curses   Removes non-heavy curses from carried/worn objects.
                 Required skill level for first spell level: 10.

                 Tier II: Level 35.
                 Removes all normal and heavy curses. Also see (5.12).

Cleansing Light Continuously heals every player who steps inside.
                 It also damages undead creatures.
                 Required skill level for first spell level: 18.

                 Tier II: Level 29.

                 Tier III: Level 40.

Faithful Focus   Cure hallucinations and insanity.   (auto-project)
                 Required skill level for first spell level: 21.

Soul Curing   Cures Black Breath (See (4.11a) for more information about
                 Black Breath).   (auto-project)
                 Required skill level for first spell level: 25.

Resurrection   Resurrect another player's ghost. The resurrected player
                 will lose less experience the higher the spell level is.
                 Exp loss is usually 35% if revived in the temple or via
                 life scroll.
                 Resurrection prayer exp loss goes down from 35% and caps

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                  at 30%.
                  Required skill level for first spell level: 30.

    Restoration   Restores draind stats and experience.     (auto-project)
                  Required skill level for first spell level: 31.

    BONI:         Improves HP regeneration rate extraordinarily the further
                  it is trained above 30.
                  (Stacks with other regeneration effects and item flag.)
                  Reduces duration of various bad effects on the body at
                  30 (blindness, poison, disease) / 40 (stun, cuts) / 50
                  (hallucination).
                  Less frequent suffering from black breath,
                  adds slay undead to all (physical) melee attacks (note that
                  this effect will be inactive if you use an undead form) and
                  -5% experience loss on getting revived (by whatever means,
                  but never goes below 30% total exp loss) at 50.


- Holy Support    [Spells are WIS-based unless noted otherwise.]

    Remove Fear   Keeps your heart boldened for a while.     (auto-project)
                  Required skill level for first spell level: 1.

    Call Light    Creates a globe of pure light.
                  Required skill level for first spell level: 2.
                  Lv 3: Hurts monsters that are susceptible to light and may
                        cause blindness too in that case.
                  Shared spell (see above): H.Offense, H.Support.

                  Tier II: Level 20.
                  Calls a more powerful kind of light. This light hurts all
                  types of monsters (except if immune) and may cause
                  blindness too.
                  Radius and damage will further increase.
                  Shared spell (see above): H.Offense, H.Support.

    Detect Evil   Detects nearby evil monsters.
                  Required skill level for first spell level: 4.

    Sanctuary     Puts nearby monsters to sleep.
                  Required skill level for first spell level: 6

                  Tier II: Level 23.
                  Lets all monsters in line of sight fall asleep.

    Satisfy Hunger Satisfies your hunger.                    (auto-project)
                  Required skill level for first spell level: 10.

    Sense Surroundings
                  Maps the dungeon around you.
                  Required skill level for first spell level: 20.

                  Tier II: Level 40.
                  Gives clairvoyance (full, enlightened map).

    Zeal          Gives +1 extra attack per round for a while.
                  Friendly players around the caster that are affected by the
                  spell may receive up to +2 EA depending on spell tier.
                  Note: The EA effect won't be applied to barehanded players
                  if they don't have Martial Arts skill of at least 1.000.
                  Required skill level for first spell level: 27.
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                Tier II: Level 37.                        (auto-project)
                Gives +2 EA to the caster.

                Tier III: Level 47.                       (auto-project)
                Gives +3 EA to the caster.

   Sense Monsters  Gives full temporary ESP.
                Required skill level for first spell level: 33.

   BONI:          Completely suppresses DG_CURSE and TY_CURSE at 40.
                Keeps the hunger satisfied all the time at 50
                (you also cannot become gorged anymore).


 - Occultism -
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(Regarding spell failure rates: Shadow school is INT-based, but some Shadow
spells are wisdom-based instead. In turn, Spirit and Hereticism are WIS-based,
but have some spells that are intelligence-based instead.
All Unlife spells are Wisdom-based.)

 - Shadow             [Spells are INT-based unless noted otherwise.]
   (Vampire istari can train this school along the Wizardry spell schools.)

   Cause Fear        Scares all adjacent creatures.
                (This spell uses WISDOM to determine fail-rates!)
                Required skill level for first spell level: 1.

                Tier II: Level 14.
                Scares all creatures in LoS (line of sight).

   Blindness        Blinds your target.
                Required skill level for first spell level: 3.

   Veil of Night   Causes your target to fall asleep instantly.
                (This spell uses WISDOM to determine fail-rates!)
                Required skill level for first spell level: 5.

                Tier II: Level 20.
                It expands around you.

   Shadow Bolt      Channels shadow into a bolt attack.
                Required skill level for first spell level: 6.

                Tier II: Level 25.

                Tier III: Level 40.

   Detect Invisible
                Detects all invisible creatures nearby.
                (See (5.14) for details about invisibility.)
                Required skill level for first spell level: 8.

   Retreat          Swiftly jump backwards from your current adjacent target,
                if any. Note that while this actually ignores a lot of
                anti-teleport effects, it does get cancelled by no-teleport
                floor grids, eg those inside no-teleport vaults, because
                the still air on these will prevent your shadowy moves.
                ** This spell requires at least 5.000 in 'Conveyance'! **
                Required skill level for first spell level: 8.
```

Aspect of Peril   (auto-project)
                    Temporarily brands your own and any adjacent friendly
                    players' melee weapons with poison.
                    Lv 10: Additionally grants temporary poison resistance.
                    Required skill level for first spell level: 10.

Darkness   Causes a burst of darkness around you, possibly blinding
                    nearby creatures.
                    If you are a trapper, you are probably aware that monster
                    traps on non-lit grids have a significantly reduced chance
                    to get disarmed by monsters (compare (4.7)).
                    Required skill level for first spell level: 16.

Shadow Stream   Grants feather falling.
                    At level 10 the stream is sufficient to grant levitation.
                    Required skill level for first spell level: 18.

Darkness Rift   Manifests darkness of unbearable thickness in the shape of
                    a beam, or large corridor, of unlight.
                    (This spell uses WISDOM to determine fail-rates!)
                    Required skill level for first spell level: 21.

                    Tier II: Level 39.

Shadow Gate   Teleports you to the nearest opponent in line of sight
                    within a maximum radius that increases with skill.
                    Your next melee attack against that target, if executed
                    swiftly after the teleport effect and not missing, will be
                    a guaranteed critical hit. If you dual-wield you will dual-
                    strike same as you'd usually do vs sleeping targets or from
                    within cloaked state (except there is no limit on how often
                    this works on the same target).
                    Required skill level for first spell level: 23.
                    Shared spell (see above): O.Shadow, Conveyance.
                    ** This spell requires at least 10.000 in 'Conveyance'! **
                    This spell cannot be found in the Conveyance tome.

Shadow Shroud   Grants temporary invisibility. (See (5.14) for details.)
                    Required skill level for first spell level: 30.

Chaos Bolt   Channels the powers of chaos into a bolt attack.
                    (This spell uses WISDOM to determine fail-rates!)
                    Required skill level for first spell level: 30.
                    Shared spell (see above): O.Shadow, H.Offense.
                    This spell cannot be found in the Holy Offense tome.
                    (Note: There is a spell of the same name in 'Hereticism'.)

Dispersion   Enters a shadow form, evading 100% melee attacks and bolt
                    attacks at a chance per evaded attack to deplete one point
                    of stamina. The spell will end automatically if stamina is
                    depleted, and stamina will not regenerate while the spell
                    is still active.
                    The probability for each evaded attack to cost you 1 ST
                    starts at 50% and goes down to 25% the further the spell
                    is trained.
                    Required skill level for first spell level: 33.
Stop Dispersion
                    Ends an active 'Dispersion' spell.

Drain Life   Drains life from a non-undead and non-nonliving creature
                    and returns a part of it to your hit points.
                    Unique monsters may resist, undead and nonliving monsters

are unaffected. Damage caps at 900.
(This spell uses WISDOM to determine fail-rates!)
Required skill level for first spell level: 37.
Shared spell (see above): O.Shadow, Necromancy.
(Necromancy isn't actually a school, but a normal skill.)

Doomed Grounds   Temporarily applies a weak annihilation effect to an area.
(This spell uses WISDOM to determine fail-rates!)
Required skill level for first spell level: 40.
Shared spell (see above): H.Offense, O.Shadow.
This spell cannot be found in the Shadow tome.

Darkness Storm   Conjures up a ball of darkness.
Required skill level for first spell level: 42.

BONI: If you aren't using _any_ light source (note that intrinsic
"light" of Vampire characters, aka darkvision, doesn't
count as light), the Shadow skill...
- increases the chance for monsters to miss you in melee
  combat (sort of a 'blur' effect) more often, the higher
  the skill is trained.
- at 10.000 also gives you a walking speed increase similar
  to how the 'Sprint' technique works. This 'shadow walk'
  effect increases with every 10 points. Exception: While
  cloaked (rogues), blur and shadow walk will actually work
  with a light source too.
- during night time on the world surface continuously
  increases your running speed continuously up to +30% at
  skill 25.000 and
  reduces speed impairments from terrain by up to -75% at
  skill 35.000.

At 30 grants darkvision, allowing you to read, run and see
your surroundings without a light source. The radius starts
at 1 and grows by +1 every five skill points up to 5 at 50.
At night on the world surface darkvision increases further.
This darkvision perk does not stack with intrinsic vision
that vampire race characters have, so it has no benefits or
any effect for them.

At 35 and higher it will also grant a stealth bonus that
increases by +1 every five skill points, up to +4 at 50.

At 40 grants darkness resistance.
Lose any susceptibility to light due to being enshrouded by
strong darkness. For Vampires this also means that they can
now walk in the sun without further protection.

– Spirit   [Spells are WIS-based unless noted otherwise.]

Cause Wounds   Causes wounds to open on your target, dealing instant
damage. Does not work against creatures who cannot bleed
and also not against angels.
Required skill level for first spell level: 1.

Tier II: Level 20.

Tier III: Level 40.

Tame Fear   Keeps your heart boldened for a while.   (auto-project)
Required skill level for first spell level: 1.

Starlight	Creates a globe of starlight around you. Lv 10: Damages monsters that are susceptible to light and may cause blindness too in that case. (This spell uses INTELLIGENCE to determine fail-rates!) Required skill level for first spell level: 2. Tier II: Level 22. Calls a more powerful kind of light. This light damages all types of monsters and may cause blindness too. Radius and damage will further increase.
Meditation	Cures confusion and blindness. Level 18: Also restores drained stats. Level 28: Also restores lost experience. Required skill level for first spell level: 4. This spell can be used even while blind of confused.
Trance	Causes all ghosts, spirits and elementals that see you to fall into a deep, spiritual sleep instantly. Required skill level for first spell level: 5.
Lightning	Conjures up spiritual power into a great lightning bolt. (This spell uses INTELLIGENCE to determine fail-rates!) Required skill level for first spell level: 10. Tier II: Level 25. Tier III: Level 40.
Spear of Light	Conjures up spiritual light into a powerful beam that damages all monsters and may cause blindness too. Required skill level for first spell level: 10. Tier II: Level 25. Tier III: Level 40.
Lift Curses	Removes curses from carried/worn objects. Required skill level for first spell level: 15. Tier II: Level 35. Removes all normal and heavy curses. Also see (5.12).
Possess	Makes a monster believe that you aren't an enemy, preventing it most of the time from attacking you. Monsters may resist or be immune to the initial cast. While active, the spell drains your mana. The more monsters you try to keep under control, the faster your mana is depleted. If your distance to the monsters becomes too big or your mana is depleted then the spell will break. Sleeping monsters won't be affected or woken up by Possess. Monsters which have already been hurt cannot be possessed. Psi-immune, unique, undead, empty-minded or non-living monsters cannot be possessed either. Monsters may have a chance to resist the spell, the higher their r-level is and the more of the following abilities they possess: Being smart, resisting confusion, being powerful. Required skill level for first spell level: 23. Tier II: Level 31.

Spell turns into a ball.

                              Tier III: Level 39.
                              Spell affects all monsters in sight.

            Stop Possess   Stops active possession of monster minds.

            Ethereal Eye   Detects all nearby creatures.
                              Required skill level for first spell level: 28.

            Guardian Spirit
                              Invokes your guardian spirit, guiding and protecting you.
                              Your saving throw is maximised and you are protected from
                              evil (same as scroll effect).
                              Required skill level for first spell level: 25.

                              Tier II: Level 45.
                              All physical attacks have a chance to miss you, at the cost
                              of your mana.

            Purification Rites
                              Dispels undead in your field of view.
                              Required skill level for first spell level: 30.

                              Tier II: Level 45.

            BONI: At 30 grants a firm hold on your life force.
                              Adds slay undead to all your physical attacks at 40.
                              -5% experience loss on getting revived (by whatever means,
                              but never goes below 30% total exp loss) at 50.

  – Hereticism   [Spells are WIS-based unless noted otherwise.]

       Terror   Casts fear and confusion into the hearts of others,
                         specifically your current target.
                         Required skill level for first spell level: 3.

                         Tier II: Level 13.
                         Affects all adjacent creatures.

       Ignore Fear   Temporarily removes the ignorant weakness known as fear.
                         Required skill level for first spell level: 6.

       Fire Bolt   Conjures up fire into a powerful bolt.
                         (This spell uses INTELLIGENCE to determine fail-rates!)
                         Required skill level for first spell level: 6.

                         Tier II: Level 25.

                         Tier III: Level 40.

       Wrathflame   It temporarily brands your melee weapons with fire.
                         Lv 7: Grants temporary fire resistance.
                         Lv 21: The brand is now hellfire instead of normal fire.
                         Required skill level for first spell level: 8.

       Flame Wave   Eradicates critters beneath your notice that dare trifle
                         with you, by emitting a flamewave that expands into all
                         directions.
                         (This spell uses INTELLIGENCE to determine fail-rates!)
                         Required skill level for first spell level: 20.

Tier II: Level 35.

Demonic Strength
                    Temporarily increases and sustains strength and
                    constitution. Also grants HP regeneration (same as for
                    example an amulet of regeneration, so it doesn't stack).
                    This spell cannot be used while in a form that has 'GOOD'
                    flag ie is adverse to evil, or by an enlightened Maia.
                    Required skill level for first spell level: 23.

Boundless Rage Your melee strikes are furious, granting you one
                    extra attack per round.
                    This spell has a special synergy with 'Traumaturgy' skill:
                    If you keep hitting opponents in melee that are affected by
                    Traumaturgy while under the effect of Boundless Rage, their
                    pain will continue to fuel your rage and keep prolonging
                    the spell's duration, the better the higher Traumaturgy has
                    been trained.
                    Required skill level for first spell level: 29.

                    Tier II: Level 41.
                    Gives +2 EA to the caster.

Chaos Bolt   Channels the powers of chaos into a bolt.
                    Required skill level for first spell level: 29.
                    (Note: There is a spell of the same name, which is shared
                    in 'Shadow'/'Holy Offense' schools.)

Wicked Oath   Restores drained stats and lost experience.
                    Required skill level for first spell level: 35.

Levitation   Grants the power of levitation.
                    (This spell uses INTELLIGENCE to determine fail-rates!)
                    Required skill level for first spell level: 39.

Robes of Havoc Envelops you in hellfire, burning all opponents that are
                    standing close to you to ashes.
                    (This spell uses INTELLIGENCE to determine fail-rates!)
                    Required skill level for first spell level: 44.

Blood Sacrifice
                    Inflict a mortal wound on yourself, causing the warped
                    powers of chaos to temporarily change your form into a
                    terrifying Bloodthirster.
                    It includes the effects of the 'Demonic Strength' spell.
                    The hells won't accept another blood sacrifice until 1000
                    seconds have passed.
                    The Bloodthirster's power is enough to tear even heavily
                    cursed items from its body or toss them away.
                    Note: To check whether you can use the spell again,
                    use the /sacrifice (or /sac) command.
                    --- This spell is only usable by Corrupted
                        Maia Priests and Hell Knights! ---
                    Required skill level for first spell level: 47.
                    Shares cooldown with spells 'Martyr' and 'Death's Embrace'.

                    (Its powers according to (7.7), with the exceptions that
                     this greater demon form will actually grant TWO immunities
                     at the same time and it never has less armour class than
                     in player form:
                       Speedy and tough; levitates; has intrinsic hit point

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                        regeneration; immune to fire and poison; resists fear,
                        paralysis, chaos and confusion, cold, acid, nexus, nether
                        and teleportation effects.)

        BONI:           At 30 grants resistance to fire.
                        At 45 grants resistance to chaos.
                        If both Hereticism and Traumaturgy are at least 15.000,
                        insanity-inducing effects become slightly less effective.
                        If both Hereticism and Traumaturgy are at least 30.000,
                        insanity-inducing effects become somewhat less effective.
                        If both Hereticism and Traumaturgy are at least 45.000,
                        insanity-inducing effects become less effective.


  - Unlife            [Spells are WIS-based.]
    (Vampire istari can train this school along the Wizardry spell schools.)

        Fatigue         Slows your target down, draining power from its muscles.
                        Required skill level for first spell level: 5.

                        Tier II: Level 20.
                        Affects all monsters in LoS.

        Detect Lifeforce
                        Detect all living creatures nearby.
                        Required skill level for first spell level: 11.

        Tainted Grounds Prevents any vermin from multiplying any further on your
                        current dungeon floor. Doesn't work on unnatural creatures.
                        Works on all currently existing breeders and also on all
                        that may spawn in the future on this same dungeon floor.
                        (Same effect as scroll of vermin control.)
                        Required skill level for first spell level: 13.

        Mists of Decay  Engulfs your form in mist that will inhibit intrinsic hit
                        point regeneration of any enemy that enters it.
                        Only works at 100% effectiveness on enemies whose level is
                        not greater than the spell's current power. It will still
                        work on higher enemies, but their natural regeneration will
                        not be completely suppressed anymore and the effectiveness
                        will drop off fast the higher the level discrepancy.
                        Required skill level for first spell level: 20.

                        Tier II: Level 40.

        Nether Sap      Draws from nether undercurrents to continuously replenish
                        your health at the cost of draining your mana.
                        The duration and conversion ratio of the spell depend on
                        the current spell level. The spell ends prematurely if you
                        run out of mana. The spell will continue draining MP even
                        if your Hit Points are full.
                        Required skill level for first spell level: 22.
                        --- This spell is only usable by true vampires! ---

        Subjugation     Attempt to place all undead within sight and of lesser
                        r-level than you under your control. If successful,
                        the undead creatures will enter stasis for a while.
                        The stasis is broken immediately if they take damage.
                        Required skill level for first spell level: 26.
                        Shared spell (see above): O.Unlife, Necromancy.

        Nether Bolt     Channels lingering nether into a bolt attack.
                        Required skill level for first spell level: 30.
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Permeation	Let a stream of nether force cleanse your body and mind, restoring drained stats and experience. Required skill level for first spell level: 35. --- This spell is only usable by true vampires! ---
Siphon Life	Drains life from a non-undead and non-nonliving creature and returns a part of it to your hit points. Unique monsters may resist, undead and nonliving monsters are unaffected. Damage caps at 900. Required skill level for first spell level: 37.
Touch of Hunger	Temporarily imbue your melee weapon with vampiric power, making it drain life force from your opponents which replenishes your own. (100% vampirism.) Required skill level for first spell level: 40.

Death's Embrace

Savour the shadow of the reaper looming over you, the closer it is the more intense a call to continue your journey you shall receive. The underworld will bathe you in pale moonlight, bestowing this powerful curse upon you.

This initially heals you for 700 HP, and if you are not susceptible to evil effects (because you are an enlightend Maia or mimicking a 'GOOD' monster form) grants you a temporary increase of your attributes and an even greater temporary increase of your armour class.

The dimension of the increase depends on how close you were to death when casting the spell. If you were at full HP you will not receive any temporary buffs. The maximum possible buff effect is only attained if you were at 0 (zero) HP.

The underworld's shadow will not be drawing close again until 1000 seconds have passed after casting the spell.
Required skill level for first spell level: 42.
Shares cooldown with 'Martyr' and 'Blood Sacrifice'.

Wraithstep	Renders you temporarily immaterial, allowing you to step into and pass solid walls. However, the effect will cease immediately as soon as you step from walls back into open space again. Wraithstep will trigger whenever you try to enter a grid that is impassable to you, but would be passable in wraith form. So it doesn't trigger on fixed terrain types but depends on your current abilities to pass specific terrain. Required skill level for first spell level: 46. Shared spell (see above): O.Unlife, O.Shadow. This spell cannot be found in the Shadow tome.
BONI:	At 30 it grants HP regeneration to true vampires (same as from item flag) and strong hold of your life force for other races. At 50 it grants 'nether feedback': If you take damage from nether-based attacks the damage is reduced by a flat 10% and you regain that part as mana points. If both Unlife and Necromancy are at 50.000, it grants ultimate hold on one's own life force ('Keep Life'), rendering oneself immune to experience drain, including the permanent drain effect from DRAIN_EXP items.

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- Druidism -
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(All spells use WIS for determining the failure rate.)

- Arcane Lore        [Spells are WIS-based.]

    Toxic Moisture   Creates a cloud of toxic moisture at a designated target,
                     consisting of poisonous gas.
                     Required skill level for first spell level: 3.

                     Tier II: Level 20.
                     It combines the surrounding air into the attack, turning it
                     into a water/poison mixture.

                     Tier III: Level 33.
                     It condenses the water and turns into poisonous ice shards.

    Nature's Call    Quickly grows trees around you.
                     Required skill level for first spell level: 15

    Ancient Lore     Identifies all items in your inventory.
                     Required skill level for first spell level: 20.

    Garden of the Gods
                     Transforms solid walls into green trees!
                     Required skill level for first spell level: 35.

    Call of the Forest
                     Dispels all animals from your line of sight.
                     Each one has a chance to resist, depending on its r-level.
                     (You do not get experience as they do not count as kills,
                     because this spell internally works like genocide and not
                     like actual dispel-class spells - which deal damage.)
                     Required skill level for first spell level: 40.


- Physical Lore      [Spells are WIS-based.]

    Focus            Increases your accuracy, adding a bonus     (auto-project)
                     to your melee-to-hit and ranged-to-hit, caps at +10.
                     Required skill level for first spell level: 1.

                     Tier II: Level 25.                          (auto-project)
                     Further increases your accuracy, caps at +25.

    Herbal Tea       Satisfies your hunger.                      (auto-project)
                     Lv  8: Cures poisons.                       (auto-project)
                     Lv 20: Restores your experience.            (auto-project)
                     Lv 25: Restores your attributes.            (auto-project)
                     Lv 35: Cures black breath!                  (auto-project)
                     Required skill level for first spell level: 3.

    Extra Growth     Increases your attributes temporarily and also grants HP
                     regeneration (same as for example an amulet of regeneration
                     so the effect doesn't stack).
                     Lv 1: Increases strength.
                     Lv 5: Also increases dexterity.
                     Required skill level for first spell level: 15.

                     Tier II: Level 25.
                     Also increases constitution.
```

```
                    Lv 11: Also increases intelligence.

      Quickfeet        Temporarily boosts your speed.              (auto-project)
                       Required skill level for first spell level: 16.

      Forest's Embrace
                       Creates a cloud around you which heals everyone including
                       yourself over time.                         (auto-project)
                       Required skill level for first spell level: 18.

                       Tier II: Level 29.                          (auto-project)

                       Tier III: Level 40.                         (auto-project)


   - Mindcraft -
   ------------
   (All spells except for 'Charm' use INT for determining the failure rate.
   In general, mindcraft schools are less affected by anti-magic fields.)

   - Psycho-power       [Spells are INT-based.]

      Psychic Hammer  Telekinetic power focused to bash an enemy,
                       damaging and stunning him.
                       The damage is much lower than the Psionic Blast spell
                       (from Mental Intrusion school), which is a trade-off
                       for its unconditional stun effect (provided the target
                       can be stunned at all).
                       Required skill level for first spell level: 1.

      Psychokinesis    Destroys traps and locks by psychokinetic manipulation,
                       also revealing secret doors in the process.
                       Required skill level for first spell level: 3.

      Autokinesis I    Teleports you within a small range.
                       Required skill level for first spell level: 5.

      Autokinesis II   Teleports you over a long range.
                       Required skill level for first spell level: 16.

      Autokinesis III Teleports you towards a party member with opened mind.
                       Required skill level for first spell level: 24.

      Feedback         Uses telekinetic effects to slow your fall, granting
                       feather falling.
                       Lv 15: It becomes sufficient for levitation.
                       Required skill level for first spell level: 18.

      Pyrokinesis      Causes a severe inflammation to burn your opponent.
                       Required skill level for first spell level: 20.

                       Tier II: Level 37.

      Cryokinesis      Causes a dramatic temperature drop on your opponent.
                       Required skill level for first spell level: 24.

                       Tier II: Level 39.

      Psychic Warp     Attempts to teleport away your opponent.
                       Required skill level for first spell level: 30.

      Telekinesis II   Inscribe your book @P<Playername>, cast it, select an
```

```
                    item that you wish to teleport to the player's inventory.
                    The target player needs to concentrate by opening her/his
                    mind, see (0.2). It's dangerous to have the mind opened,
                    since everyone can send you any items, so better close it
                    again as soon as the desired telekinesis transaction is
                    done. Example inscription: @PGandalf
                    Required skill level for first spell level: 35.
                    Shared spell (see above): Psycho-power / Attunement.
                    (Telekinesis I is a Wizardry spell, not in Mindcraft.)

    Kinetic Shield  Uses telekinetic force to set up a shield around you that
                    has a good chance to repel physical attacks or projectiles,
                    draining your mana each time.
                    For repelling physical attacks the mana cost depends on the
                    attacker's m-level and the damage the attack would inflict.
                    Required skill level for first spell level: 40.


 – Attunement          [Spells are INT-based.]

    Clear Mind         Removes fear, confusion and hallucination. (auto-project)
                       Required skill level for first spell level: 3.
                       This spell can be used even while confused or blind.

    Willpower          Boosts your willpower to unleash hidden potential,
                       improving both your performance and resilience.
                       Gives fear resistance, increases your saving throw and
                       gives especially increased chance to resist paralysis,
                       confusion and slowness. Also gives heroism-like +hit bonus.
                       (See (7.3) for details on Saving Throw.)
                       At level 25 gives +1 extra attack.          (auto-project)
                       Required skill level for first spell level: 3.
                       This spell can be used even while confused or blind.

    Self-Reflection Find out more about yourself.
                       Required skill level for first spell level: 15.
                       This spell can be used even while blind.

    Recognition        Identifies an item.
                       Required skill level for first spell level: 15.
                       Shared spell (see above): Attunement / Mental Intrusion.

    Telepathy          Senses the minds of creatures.
                       Required skill level for first spell level: 20.
                       This spell can be used even while blind.

    Accelerate Nerves
                       Speeds you up.
                       Required skill level for first spell level: 22.
                       This spell can be used even while blind.

    Stabilize Thoughts
                       Cures some insanity and removes effects:    (auto-project)
                       –Fear and confusion at level 5,
                       –Hallucinations at level 10.
                       Required skill level for first spell level: 25.
                       This spell can be used even while confused or blind.

    Telekinesis II  Inscribe your book @P<Playername>, cast it, select an
                       item that you wish to teleport to the player's inventory.
                       The target player needs to concentrate by opening her/his
                       mind, see (0.2). It's dangerous to have the mind opened,
```

since everyone can send you any items, so better close it
again as soon as the desired telekinesis transaction is
done. Example inscription: @PGandalf
Required skill level for first spell level: 35.
Shared spell (see above): Psycho-power / Attunement.

– Mental Intrusion [Spells are INT-based unless noted otherwise.]
 Note that 'psi' attacks don't have any effect on angels, nonliving creatures,
or empty-minded creatures, and that undead, stupid creatures and common
animals as well as weird-minded creatures may resist it. At the same time,
smart creatures might be hit especially hard (+50% damage).
Creatures that are already confused may also, depending on the amount of
their confusion, take extra damage, randomly up to the same bonus amount that
smart creatures take (randomly +0 up to +50% damage.)
Targets that might resist psi attacks, but which are already confused when
they get hit, get their chance to resist nullified by the confusion.
As a side effect, psi attacks themselves have a chance to cause confusion to
the target, thereby increasing the damage when the target is hit by more
psi attacks afterwards while still suffering from confusion.
If a monster does not resist a psi attack, it may suffer from additional
effects besides confusion, such as fear, stun or sleep.

    Psionic Blast   Blasts the target's mind with psionic energy.
                     Psi damage can potentially cause additional status effects
                     on the target, such as confusion, stun or fear.
                     Required skill level for first spell level: 1.

                     Tier II: Level 20.

                     Tier III: Level 40.

    Scare   Infuses all adjacent minds with fear.
                     Required skill level for first spell level: 1.

                     Tier II: Level 10.
                     Affects all monsters in LoS (line of sight).

    Confuse   Infuses your target's mind with confusion.
                     Required skill level for first spell level: 3.

                     Tier II: Level 14.
                     Affects all monsters in LoS.

    Hypnosis   Puts your target's mind to sleep.
                     Required skill level for first spell level: 5.

                     Tier II: Level 18.
                     Affects all monsters in LoS.

    Apathy   Slows your target down by weakening its will to act.
                     Required skill level for first spell level: 7.

                     Tier II: Level 22.
                     Affects all monsters in LoS.

    Psychic Suppression
                     Drains the target's psychic energy, impacting its ability
                     to cast spells temporarily, effectively silencing it for a
                     short period of time.
                     Chance to be successful depends on school skill vs monster
                     r-level. Also, monsters that can't cast any spells as well

as unique monsters of level 98 or above are unaffected.
Monsters that are unique or powerful have an increased
chance to resist.
The target cannot be silenced again for a short while,
until the effect runs out. Note that the target also
becomes immune to the effect for the same short amount of
time if the attempt was actually unsuccessful.
Required skill level for first spell level: 10.

Psi Storm   Psionic storm that damages and disturbs all minds within an
                 area for a while, possibly causing the random Psi-related
                 status effects on all targets like Psionic Blast does.
                 Required skill level for first spell level: 18.

                 Tier II: Level 38.

Remote Vision   Tries to forcibly enter all sentient creatures' minds
                 (including invisible monsters, but never empty-minded ones)
                 on the level, in order to use their vision to make the
                 dungeon structure known to yourself.
                 Required skill level for first spell level: 20.
                 If your proficiency in 'Attunement' school is at least 20,
                 you will automatically infuse the knowledge gained from the
                 vision to all open-minded (see (0.2)) allied players who
                 happen to be the same floor.

Recognition   Identifies an item.
                 Required skill level for first spell level: 20.
                 Shared spell (see above): Attunement / Mental Intrusion.

Charm   Makes a monster believe that you aren't an enemy,
                 preventing it most of the time from attacking you.
                 Monsters may resist or be immune to the initial cast.
                 While active, the spell drains your mana. The more monsters
                 you try to keep under control, the faster your mana is
                 depleted. If your distance to the monsters becomes too big
                 or your mana is depleted then the spell will break.
                 Sleeping monsters won't be affected or woken up by charm.
                 Monsters which have already been hurt cannot be charmed.
                 Psi-immune, unique, undead, empty-minded or non-living
                 monsters cannot be charmed either.
                 Monsters may have a chance to resist the spell, the higher
                 their r-level is and the more of the following abilities
                 they possess:
                 Being smart, resisting confusion, being powerful.
                 (This spell uses CHARISMA to determine fail-rates!)
                 Required skill level for first spell level: 33.

                 Tier II: Level 39.
                 Spell turns into a ball.

                 Tier III: Level 45.
                 Spell affects all monsters in sight.

Stop Charm   Cease currently active charming effects.

- Astral Knowledge -

The exclusive astral school for Maiar.
Most spells use INT and some use WIS for determining the failure rate. If no
stat is mentioned, INT is therefore the norm.

Various spells of this school use an 'astral level' instead of the normal spell level to determine damage or effect. This astral level consists to 1/2 of your character level and 1/4 of your Astral Knowledge school level. This means that a level 49 character with 1.250 in Astral Knowledge will have an astral level of 25.
Power Bolt, Power Ray and Power Blast damage calculations again use the average of your astral level and your actual skill, so for these spells your character level will affect the spell level by 1/4 and your skill will affect it by 3/4. For example if your character is level 49 and your astral skill is 1.250 these particular spells will deal damage and have effects as if the spell was in fact at level 13 ([([(49 + 1.250) / 2] + 1.250) / 2]). (The success chance of spells uses the normal spell level just like all other spells, NOT the astral level.)

Power Bolt	Casts a bolt of electricity/mana/dispelling depending on your alignment: Still neutral -> electricity, enlightened -> mana, corrupted -> dispel. Required skill level for first spell level: 1. Tier II: Level 20. Tier III: Level 40.
Power Ray	Casts a beam of electricity/light/darkness depending on your alignment (see Power Bolt spell above). In addition to damaging monsters, light and darkness beams may cause blindness too. Required skill level for first spell level: 5. Tier II: Level 20. Tier III: Level 40.
Power Blast	Casts a ball of electricity/mana/dispelling depending on your alignment (see Power Bolt spell above). Required skill level for first spell level: 10. Tier II: Level 25. Tier III: Level 45.
Relocation	Same as Word of Recall. You may inscribe book '@R' etc. for the usual results. Required skill level for first spell level: 22.
Vengeance	Enlightened: Summons all party members on the same floor to you (as well as all monsters in line of sight) who have their mind opened ('p'). Might summon additional monsters for each player who got teleported. Corrupted: Damages all monsters in line of sight. (This spell uses WISDOM to determine fail-rates!) Required skill level for first spell level: 30.
Empowerment	Enlightened: Incite self-fury, compare (4.11c). Corrupted: Increases own hit points temporarily. (This spell uses WISDOM to determine fail-rates!) Note that this effect is the same as and stacks with +LIFE on items and hence caps against a total of +3 with those items. So if you already have +3 LIFE from items the spell will have no effect as you already reached the max cap.

Required skill level for first spell level: 40.
                    This spell can be used even while blind.

        The Silent Force
                    Enlightened: Slows down monsters within sight
                              and grants temporary mana resistance.
                              Note: This resistance does not stack
                                    with permanent resistance.
                    Corrupted: Increases your chance to hit critically
                              (affects all melee and ranged physical
                              attacks).
                    (This spell uses WISDOM to determine fail-rates!)
                    Required skill level for first spell level: 45.

        Sphere of Destruction
                    Enlightened: Conjures up a mana storm.
                    Corrupted: Conjures up raging inferno, which deals
                              the same damage type as rockets do.
                    Required skill level for first spell level: 50.

        Gateway   Enlightened: Nigh-instantaneous Word of Recall for all
                              alive party members on your dungeon level.
                    Corrupted: Creates a pair of connected void jump gates.
                    (This spell uses WISDOM to determine fail-rates!)
                    Required skill level for first spell level: 50.
                    This spell requires a character level of at least 62.

    - Runecraft -

    Runespells all use both INT and DEX for determining the failure rate.
    In Runecraft, spell failure triggers damaging backlash instead of failing
    outright, see (7.8b) for details.
    Spell level is the lesser of one or two skills applied during the casting.
    All spell types are described here in detail, but also tabulated in (7.8c).
    Enhanced spell types have fixed parameters; other spell types may be modified.

        Bolt   Fires a single-target missile which may be deflected.
                    Some targets may also be able to block the missile.
                    Required skill level for first spell level: 5.

        Beam   Fires a penetrating ray which hits all grids in a line.
        (Enhanced)   Required skill level for first spell level: 10.

        Cloud   Engulfs an area for a few turns.
                    Required skill level for first spell level: 10.

        Wall   Engulfs a line of grids for several turns.
        (Enhanced)   Required skill level for first spell level: 15.

        Ball   Fires a large explosion that diminishes with radius.
                    Damage is divided by the distance from the epicenter.
                    Required skill level for first spell level: 15.

        Burst   Fires an explosion that deals full damage across radius.
        (Enhanced)   Required skill level for first spell level: 20.

        Storm   Engulfs a small area around youself for many turns.
                    The cloud epicenter is relocated to you every turn, but it
                    will dissipate if you leave the floor it was created on.
                    Required skill level for first spell level: 20.

```
    Nimbus          Channels explosive energy and an elemental shield.
    (Enhanced)      Grants resistance to an element, or immunity if the element
                    is fire, cold, electricity, acid, poison or water.
                    Additionally, your melee and ranged attacks that hit will
                    explode in a small ball for the duration. Monsters that hit
                    you in melee will similarly be struck by an explosion. Each
                    explosion drains your mana, possibly collapsing the shield.
                    You cannot auto-retaliate with this spell type.
                    Required skill level for first spell level: 25.

    Cone            Sweeps a beam across a narrow, contiguous arc.
                    Increasing radius will increase the size of the arc.
                    Required skill level for first spell level: 25.

    Shot            Fires three brief bolts at one or more targets in an arc.
    (Enhanced)      This arc can include up to three adjacent targets, and the
                    bolts will be divided among remaining targets as they are
                    fired, until all bolts are fired or no targets remain.
                    Required skill level for first spell level: 30.

    Surge           Engulfs a quickly expanding area around yourself.
                    This effect will hit targets up to three times per cast.
                    Required skill level for first spell level: 30.

    Glyph           Traces an explosive glyph of warding onto the floor.
    (Enhanced)      Monsters may not summon upon the glyph, however when a
                    monster moves onto it, it will break and the monster will
                    be enveloped by a damaging explosion.
                    You cannot auto-retaliate with this spell type.
                    Required skill level for first spell level: 35.

    Flare           Briefly engulfs a target for high damage, causes backlash.
                    This effect overrides existing cloud effects, but will
                    persist if cast repeatedly, hitting twice per cast.
                    This spell always triggers damaging backlash, up to double
                    if the spell is failed.
                    Required skill level for first spell level: 35.

    Nova            Channels your mana in a star-shaped cloud, causes backlash.
    (Enhanced)      The spell damage will exactly equal your current mana.
                    This spell always triggers damaging backlash, up to double
                    if the spell is failed.
                    Required skill level for first spell level: 40.
```

(7.8a) Mimic powers

The monster spells ('S:' line in r_info.txt) are mostly also usable by a player
transforming into the monster via Mimicry skill, these spells are also called
'mimic powers', since they're not always spells in a strict sense of the word.
(In general, monsters' summoning spells are never available as mimic powers.)
Note that you cannot use any mimic powers if your skill is not at least 1.000,
resulting in the failure message "You cannot control your form."

To auto-retaliate with eligible mimic powers, see '/arm' command in (0.2b).

All mimic powers use intelligence stat to determine their failure rate.
Their power usually depends on the level of the monster whose form the
character is using and on the character's own level.
As with magic spells, some mimic powers require a target, some don't.

Here is a list of all available mimic powers:

```
Shriek                   Aggravates nearby creatures and annoys nearby players.
Fire Rocket              ..
Arrow                    Fires an arrow, does not require bow or ammunition.
Shot                     Fires a shot, does not require bow or ammunition.
Bolt                     Fires a bolt, does not require bow or ammunition.
Missile                  Fires a (physical) missile.
Breathe Acid             ..
Breathe Lightning        ..
Breathe Fire             ..
Breathe Cold             ..
Breathe Poison           ..
Breathe Nether           ..
Breathe Light            ..
Breathe Darkness         ..
Breathe Confusion        ..
Breathe Sound            ..
Breathe Chaos            ..
Breathe Disenchantment   ..
Breathe Nexus            ..
Breathe Time             ..
Breathe Inertia          ..
Breathe Gravity          ..
Breathe Shards           ..
Breathe Plasma           ..
Breathe Force            ..
Breathe Mana             ..
Breathe Disintegration   ..
Breathe Toxic Waste      ..
Throw Boulder            Hurls a boulder at a target (giants do this usually).
Acid Ball                ..
Lightning Ball           ..
Fire Ball                ..
Cold Ball                ..
Poison Ball              ..
Nether Ball              ..
Water Ball               ..
Mana Storm               .. (casts a mana ball)
Darkness Storm           .. (casts a darkness ball)
Mind Blast               Psi attack, similar to Psionic Blast mindcrafter spell.
                         When used by monsters this can cause slowness, and (if
                         not resisted) bindness, confusion and paralysis.
                         When used by players this causes the usual Psi effects.
Brain Smash              Powerful psi attack, similar to Psionic Blast.
                         Same effects as Mind Blast.
Cause Wounds             The curse spell, eg used by priests and archpriests.
Toxic Waste Ball         ..
Raw Chaos                .. (casts a chaos ball)
Acid Bolt                ..
Lightning Bolt           ..
Fire Bolt                ..
Cold Bolt                ..
Poison Bolt              ..
Nether Bolt              ..
Water Bolt               ..
Mana Bolt                ..
Plasma Bolt              ..
Ice Bolt                 ..
Magic Missile            ..
Scare                    ..
Blind                    ..
Confusion                ..
```

```
Slow                   ..
Paralyze               Tries to put a monster into stasis (similar to sleep).
Haste Self             Temporarily increases your speed by 10.
Heal                   Heals yourself, amount depends on spell level.
Blink                  Short range teleport, like Phase Door.
Teleport               ..
Teleport To            Tries to teleport a monster towards you.
Teleport Away          Tries to teleport monsters away (it's a beam!).
Darkness               Unlights the area around you.
Cause Amnesia          Confuses a target.
Disenchantment Bolt    ..
Breathe Water          ..
```

(7.8b) Runes & Runemastery

Runes are magical symbols used to summon and manipulate the raw elemental
forces which sustain the world of life. They are the motivating force behind
some of the traditional systems of magic in TomeNET. Istari spell scrolls, for
example, are composed entirely of a series of complex runes. These runes both
protect the caster from immediate harm and evoke the intended effect: from
fireballs to magical satiation. Runecraft, however, is a much less methodical
approach to magic. Having learned to invoke the elements without traditional
precautions (and thus potential inefficiencies) of other schools, runemasters
trace runes directly from the pure substances of magic, drafting evocations
limited only by application of wit, strength and skill.

This approach is not necessarily a safe one. Whereas traditional spells from
other schools of magic fail outright when something goes awry, the primordial
energy incumbent to a runespell instead erupts forth, damaging the caster in
the form of an elemental backlash. Nearly all rune spells still produce the
intended effect in this case, whether or not the caster survives.

As runecraft does not rely on books or spell scrolls to guide its magic,
runespells may be cast while blinded, although at increased rate of failure.
Spell failure likewise increases while stunned, or simply when attempting a
powerful spell. While an istar is always prevented from casting outside of his
or her ability, a runemaster may continue to attempt spells until a failure
would prove fatal. Runemasters are able to cast many kinds of spells, but it is
important to note that some spells are more difficult to manage than others.

Tracing runes safely requires both intellectual and physical agility, so high
intelligence and dexterity are strongly recommended. To some extent, runecraft
practitioners must check and balance spells for their own safety. The lower of
the two associated elemental skills is applied when combining elemental runes.

Runespells:

To cast a runespell, enter the m-key menu and select 'Draw a rune'.
(Note: The ability code for drawing a rune is 12.)

Runespells are made up of three components:
    1. A single elemental rune or combination of two elemental runes.
    2. A spell mode (minimized, expanded, brief, etc).
    3. A spell type (bolt, cloud, ball, etc).

Each component has different associated parameters, summarized in the menu.
When selecting runes, enter the same rune twice or select two different runes.
The menu will prompt for a direction if required for the spell you've created.

Runespell Failure & Backlash:

Rather than failing a runespell outright, an incompentent caster is blasted
with elemental forces as they struggle to resolve the spell. If the caster
survives, the runespell is resolved normally. Thus, resisting one's own spells
can be an important factor for survival in critical situations. Aspiring
runemasters are advised to start with basic elemental spells for which they can
easily acquire the according resistance. Mana (as an element of choice) is also
viable for beginners. Although the backlash damage from mana may be high when
unresisted, it has no otherwise adverse effects which might cripple the caster.
The adverb 'incompetently' is applied (in RED) to failed runespells in the log.

Intelligence, dexterity, and skill level affect spell failure rates for
runespells. Runespell type determines the base level of a spell, which is
further modified by a runespell modifier. Highly experienced and talented
runemasters may achieve 0% spell failure rates for many spells, but should be
cautioned against casting while stunned or blind. Inattentive runemasters may
even fall victim to unexpected backlash from spells previously mastered.

Physical Runes:

Physical runes are items found occasionally from tunneling deep in the earth,
or in the collection of monsters fascinated by their magic. Certain secretive
markets are also known to trade these rare embodiments of elemental power...

Physical runes may be activated (after achieving skill level 40 with the
appropriate elements) to emblazon a non-artifact armour, shield or melee weapon
with an elemental sigil. This sigil confers a generally positive boni effect as
long as the equipment remains wielded. Sigils vanish from equipment when sold,
dropped, taken off, disarmed, etc. Applying an additional physical rune dispels
any previous sigil, consuming a new rune to power the new effect (even if the
resulting boni is identical to that which was previously conferred).

The process for determining success and which boni is applied depends on both a
pool of available effects, listed in (7.8c) Runespell Tables, Sigil Boni, and
on rules similar to artifact creation (see (9.4) Artifact creation). Existing
enchantments may synergize with or couteract some sigil boni (eg. PVAL) and are
limited in effect by the same restrictions that constrain artifact creation.
Duplicate effects are never applied, and boni only increase in potency (eg.
fire resistance will be replaced with immunity, never the other way around).
Sigil boni may always result in resistance to the element of the physical rune,
if such a resistance exists (that is, not inertia/gravity/hellfire/force).

Runemasters are limited to one sigil per element, but can maintain 7 in total.

Other Uses for Runes:

Runes may be placed in magic traps, for a damaging effect similar to glyphs.
Traps do not provide an anti-summoning effect, as do glyphs produced by magic.

Macros & Spell Construction:

Runecraft macros look like this (key translation in parenthesis):
(Note: m@12\r invokes the m-key menu command for 'Draw a rune'.)

Targetted runespells use the following format:
    \e)*tm@12\r<a-f><a-f><a-h><a-f>-   (rune, rune, mode, type, target)

Non-targetted runespells use the format:

```
      \e)m@18\r<a-f><a-f><a-h><a-f>   (rune, rune, mode, type)
```

Note that you must choose two runes, one mode, and one type.
To cast a single element runespell, simply choose the same element twice.
<a-f> and <a-h> denote the choices of a letter from a to f or a to h,
inclusive, which represents a rune or a mode or a type, respectively.
ie. There are six base runes, so <a-f> represents a choice from rune 1-6.

Examples:

Here is a single rune example, invoking the element 'light' (rune 'a'):
```
    \e)*tm@12\raaaa-  (light--light--minimized--bolt)
```

This spell launches a minimized light bolt, a targetted projection
affecting up to a single opponent, dealing light damage if it connects.

A fire ball spell might look like this (runes 'a' and 'e' for 'fire'):
```
    \e)*tm@12\raedd-  (light--chaos--moderate--ball)
```

Note the following macro produces an identical effect (runes 'e' and 'a'):
```
    \e)*tm@12\readd-  (chaos--light--moderate--ball)
```

To increase the radius of the ball, adjust the mode to something that
sounds bigger, ie. choose a spell mode that increases radius.

A maximized ball of fire:
```
    \e)*tm@12\raegd-  (light--chaos--maximized--ball)
```

Or an expanded ball of fire, to produce something even larger:
```
    \e)*tm@12\raeed-  (light--chaos--expanded--ball)
```

Note that failure rate may become an obstacle to advanced spells at low
level. Low failure types, modes, and elements are recommended.

Advanced runemasters may wish to create macro sets which construct spells
on the fly, swap macro sets containing preset runespells, or set up
combinations of macros to chain together spells quickly and efficiently.
Spells with a lowered casting time might even be combined in one macro,
creating a 'dual-cast' effect (enabled by selecting the brief mode).

Note that every mode has drawbacks associated with the benefits of using it:
higher cost, level, reduced damage, increased failure rates- check the
specifics in the m-key menu or macro wizard before using a new macro. It is
recommended to experiment with new spells in Bree or even the Training Tower.

Auto-retaliation:

Although you can set most runespells for retaliation with /arr, some make poor
choices for repeat casting. Retaliation is disabled completely for spells with
an indirect effect (nimbus and glyph). Specify both runes, then mode and type,
or '-' to disable. Prefix 't' before a runespell to retaliate in town only.

Usage: /arr [t]<a-f><a-f><a-h><a-f> (town?, rune, rune, mode, type)
Example: /arr aeda   Auto-retaliate with a moderate fire bolt.
Example: /arr taeda   Moderate fire bolt, but 'in town only'.
Example: /arr -   Disable any auto-retaliation with runes.

Tips:

You can use the mkey * display to see a list of spell failure rates, or go
through the macro wizard to display the specific attributes of any spell.
Your abilities and status are included in the calculations.

Beginners may wish to play a race with intrinsic resistance to their element
or elements of choice, or choose combinations of skills to produce a 'base'
element, and purchase rings/amulets from the magic shop to resist these.
For example, light is resisted by elves, so an elf runemaster who trains in
light runemastery may evoke runes of light relatively safely. Training chaos
runemastery as well would unlock the combination element fire, a 'base'
element, and Rings of Fire Resistance are readily available in magic shops.

Note that different elemental damage types are reduced more or less when
resisted, see (5.6) Resistances & caps, Immunities, Susceptibilities for info.
The enhanced storm effect 'nimbus' will shield you from elemental damage and
effects, as though you had any applicable resistance or immunity! Just be wary
of UNMAGIC attacks, which may suddenly dispel the effect!

Physical runes can at first seem difficult to acquire, but may be extracted
from treasure veins with a success rate proportional to runecraft skills.
This method of rune extraction synergizes well with the digging skill.

Applying sigils to equipment that already has certain boni associated with an
element will increase your chances to grant the remaining boni from that
elemental pool. That is, sigils will never grant a duplicate or invalid effect.
For example, applying a sigil of fire to a dwarven helm (which already grants
fire resistance) will have an increased chance to grant fire immunity.

(7.8c) Runespell Tables

Runecraft enables a breadth of effects, catalogued in the tables below.

Elements

A table of every projectable element accessed through one or two rune skills.
Weight is the relative base damage for an element, which is similar to the
maximum damage caps listed in section (5.6). ie. Fire damage >> Mana damage!
Artifacts and certain items may be unaffected by the various elemental effects.
See section (5.6) for more information about elemental attacks.

Rune	Rune	Element	Weight	Special Effect	Affects
Light	Light	Light	400	Blindness	
Darkness	Darkness	Darkness	550	Blindness	
Nexus	Nexus	Nexus	250	Tele/Stats	Most Items
Nether	Nether	Nether	550	EXP Drain	
Chaos	Chaos	Chaos	600	Hallucination	
Mana	Mana	Mana	600		Most Items
Light	Darkness	Confusion	400	Confusion	
Light	Nexus	Inertia	200	Slow	
Light	Nether	Electricity	1200	DEX Drain	Jewelry/Device
Light	Chaos	Fire	1200	STR Drain	Flammables
Light	Mana	Water	300	Confusion/Stun	Scrolls
Darkness	Nexus	Gravity	150	Tele/Slow/Stun	Most Items
Darkness	Nether	Cold	1200	STR Drain	Potions
Darkness	Chaos	Acid	1200	CHR Drain	Many Items
Darkness	Mana	Poison	800	Poison	
Nexus	Nether	Time	150	Drain	
Nexus	Chaos	Sound	400	Stun	Potions

```
Nexus   | Mana  | Shards        | 400 | Cuts         | Potion/Scrolls
Nether  | Chaos | Hellfire      | 400 | Slay Good    | Most Items
Nether  | Mana  | Force         | 250 | Stun         | Many Items
Chaos   | Mana  | Disenchantment| 500 | Cancellation | Magical Items
```

Spell Modes

A table of every runespell mode. Modes influence runespell parameters,
including level, cost, fail rate, damage, casting time, size, and duration.

Name	Lvl	Description
Minimized	+ 0	Best efficiency, worst damage, poor size and duration.
Extended	+ 2	Good efficiency, poor damage, best duration.
Compressed	+ 3	Good efficiency and duration, worst size.
Moderate	+ 5	Balanced spell parameters.
Enhanced	+ 5	Modifies the runespell type, see Spell Types.
Expanded	+ 7	Poor efficiency and duration, best size.
Brief	+ 8	Poor efficiency, good damage, worst duration. Half energy.
Maximized	+10	Worst efficiency, best damage, good size and duration.

Spell Types

A table of every runespell type. Types determine the effect of a runespell.

Name	Lvl	Description (+ Enhanced)
Bolt	5	Fires a single-target missile which may be deflected.
+ Beam	10	Fires a penetrating ray which hits all grids in a line.
Cloud	10	Engulfs an area for a few turns.
+ Wall	15	Engulfs a line of grids for several turns.
Ball	15	Fires a large explosion that diminishes with radius.
+ Burst	20	Fires an explosion that deals full damage across radius.
Storm	20	Engulfs a small area around youself for many turns.
+ Nimbus	25	Channels explosive energy and an elemental shield.
Cone	25	Sweeps a beam across a narrow, contiguous arc.
+ Shot	30	Fires four brief bolts at one or more targets in an arc.
Surge	30	Engulfs a quickly expanding area around yourself.
+ Glyph	35	Traces an explosive glyph of warding onto the floor.
Flare	35	Briefly engulfs a target for high damage, causes backlash.
+ Nova	40	Channels your mana in a star-shaped cloud, causes backlash.

Sigil Boni

A table cross referencing boni to element and item TVAL (type value). Boni are
restricted as with artifact creation regarding PVAL modifiers. Stat enhancing
boni have a chance to include a sustain, and boni occuring both generally and
on the item type specifically are more likely to occur. Some weapon/helm boni
are specific to staves, boomerangs, and crowns (see (9.4) Artifact creation).

All elements associated with a specific resistance may confer that resistance.

The 'Any' column indicates boni which are not restricted to a specific type of
equipment, and can thus appear on any type of item. If a boni is listed both in
this column and the column for a specific equipment type, it is more likely to
be conferred to that type of equipment (at twice the probability).

Abbreviations (in alphabetical order):
AM - Anti-magic shell (see (5.8) under NO_MAGIC)

```
Au - Aura
Bl - Blind resist
Br - Brand
A+ - Charisma bonus (PVAL Required)
C+ - Constitution bonus (PVAL Required)
Cf - Confusion resist
Ch - Chaotic (see (5.8) for details)
Cr - Critical bonus (PVAL Required)
D+ - Dexterity bonus (PVAL Required)
EA - Extra attacks (PVAL Required)
FA - Free action
Fe - Fear resist
FF - Feather falling
I+ - Intelligence bonus (PVAL Required)
Lv - Levitation
Pl - Permanent Light (+1 light radius)
HL - Hold life
I+ - Intelligence bonus (PVAL Required) [Helm -- Crowns ONLY]
If - Infra-vision (PVAL Required)
Im - Immunity (One element only!)
In - Invisibility (see (5.14) for details)
MP - Max mana increase (PVAL Required) [Helm -- Crowns ONLY]
Re - Reflection [Armor - Hard Armor and DSM ONLY]
Rh - Regen health
Rm - Regen mana
S+ - Strength bonus (PVAL Required)
SD - Slow digestion
SI - See invisible
SK - Random slay/kill flag
Sl - Stealth (PVAL required)
Sp - Speed (PVAL Required)
Su - Sustain all
Va - Vampirism (see (5.13) for details)
Vo - Vorpal (Quaking if blunt) (see (5.8) for details on 'IMPACT' and 'VORPAL')
W+ - Wisdom bonus (PVAL Required) [Helm -- Crowns ONLY]
```

Element	Any	Weap	Shield	Armor	Cloak	Crown	Glove	Boot
Light	BlSIPl	SI				BlIf		
Darkness	BlSISl	SI		Sl	InSl	BlIf		Sl
Nexus	Su	SK					SK	
Nether	HL	Va		HL	HL		Va	
Chaos	Cf	Ch						
Mana	Rm					MPRm	MP	
Confusion	W+I+		Re	Re		W+I+		
Inertia	FASD						FA	FA
Electricity	ImPlD+	Br			Au		Br	
Fire	ImPlS+	Br			Au		Br	
Water	ImSD							
Gravity	FF				FFLv			FFLv
Cold	ImSDS+	Br			Au		Br	
Acid	ImSDA+	Br					Br	
Poison	ImC+	Br		C+			Br	
Time	SpSu	EA					EA	Sp
Sound	Sl			Sl	Sl			Sl
Shards	Rh	VoCr					Cr	
Hellfire	Im					Fe		
Force	Su		Re	Re				
Disenchantment	AM							

(7.8d) Spell failure rate

The chance to not successfully cast a spell, aka the spell fail rate is shown
in percent when browsing a spell scroll/crystal.
For mimic spells, the failure rate is shown next to their spell name in the
mimic power menu (accessible with 'm').

The fail rate of a spell depends on..

Magic schools:
    Nearly all magic spells depend on the spell level and your intelligence,
    some spells however use wisdom instead of intelligence, those spells are
    designated in (7.8) in their spell description.
    Currently, the only magic spell using wisdom is 'Genocide'.
Prayer schools:
    All holy spells depend on the spell level and your wisdom.
Occult schools:
    Some shadow and most spirit and hereticism spells use wisdom, the others
    intelligence. All unlife spells use wisdom.
Druidic schools:
    All druidic spells depend on the spell level and your wisdom.
Mindcraft schools:
    All mind spells depend on the spell level and your intelligence,
    except for 'Charm' which uses charisma.
Astral school:
    Most astral spells depend on the spell level and intelligence, some on the
    spell level and wisdom, as designated in (7.8) in the spell descriptions.

Runecraft:
    Runespells use dexterity, intelligence and spell level to determine failure
    rate.

Mimic powers:
    All mimic powers use intelligence to determine fail rate.

In general, when you learn a new spell that starts at a high fail rate, you
will observe a great improvement just by further training the spell's school to
increase the spell's level. Increasing your attributes (depending on what this
particular spell uses, see list above) will also help.
At a certain point however, usually when the spell's fail chance is already
rather low, the spell fail rate might not go down further from increasing its
level. At that point the only thing you can do to further reduce the spell fail
rate is to increase the stat that the spell uses.

A spell failure rate of 0% means that you will always successfully cast the
spell. However, certain status effects can increase your failure rate
temporarily or even completely prevent spell-casting, even if your fail rate
used to be 0%:

-Blindness
 Some spells can be cast while blind (will say so in the spell description)
-Confusion
 Some spells can be cast while confused (will say so in the spell description)
-Stun
 Stun will increase your fail chance by 15%, heavy stun even by 25%.
 When you're knocked out you can of course not cast any spells (or do anything
 at all).

(7.9) Parties, Iron Teams, guilds

```
---------------------------------
Press 'P' to display the party menu.
Here you can..


Parties:
--------
-Create or rename a party
        Allows you to create a party if you aren't in one yet, or rename your
        current party, provided you are the party owner.
        In a party you will share experience points if you are within 7 character
        levels to each other and on the same dungeon/tower level respectively
        the same worldmap/wilderness sector. A slight experience bonus is applied
        for killing monsters in a party!
        The range is 11 levels instead of 7 for "winners" (queens/kings/empresses/
        emperors).
        Winners don't share experience with non-winner characters. They do share
        experience with fallen winners though, within 7 levels.
        Winners of level 80 or higher can party with each other free of any xp-
        sharing restrictions regarding their level difference.

        Monsters will usually remember the highest player they have met and not
        give experience nor kill credit to players who are more than the 8
        (exp-sharing level limit plus 1) levels away from it, 12 for winners.
        So, avoid being on the same dungeon floor as teammates whose character
        level differs by more than 8 levels (12 for winners) from yours.

        Similarly, a player who received a power-up spell from another player
        who is higher in levels than the allowed difference of 8 (12 for winners),
        may not gain any experience or kill credit until a number of turns
        (usually 200) has passed and the buff spell has worn off.
        Kings/queens/emperors/empresses are freed from this restriction.

        Note that there are two exceptions to these rules:
        -Morgoth, Lord of Darkness (Game boss)
        -The Great Pumpkin (Halloween special event monster)
        These two always give credit, no matter what level difference the players
        have.

        Special case: A player who lost levels due to death plays together with
        another player who is now just within range of his lowered level.
        Example: Player A was level 45, but lost 5 levels due to dying twice and is
        now level 40. He teams up with player B whose level is a regular 33.
        What happens depends on the server settings, there are three rules:
        a) the difference of player A's real level and his current level counts in
           50%. So he'd be treated like a 40 + (45-40)/2 = 42 (rounded down) player
           and player B wouldn't get any exp since he's not level 35 or higher.
        b) if player B is way below player A's top level (default is more than 5
           levels beyond the level limit for sharing experience) the exp he gets
           will be cut down depending on the difference between player B's current
           level and player A's top level, but he still receives exp.
        c) the server only looks at the highest reached level and compares the
           current level of all team members to it. So it would compare player B's
           33 to player A's 45 when it wants to determine if player B receives a
           share of exp from player A, which is more than 7 levels apart, so player
           B gets nothing.
        The rule effective on the official servers is b), so teaming up with
        everlasting characters that have lost a bunch of levels shouldn't be much
        of an issue.

        A party owner may set access to one or more of his houses to 'party access'
        (use 'h' key next to the door) to allow all party members to access that
```

house. Only houses of the party owner can be set to party access, houses of
normal members can not be set to party access.

If the owner dies, the whole party is disbanded. (Exception: On a server
running 'Ironman' rules the party ownership will be transferred to another
player in the party automatically. See (9.6) for more information about
Ironman settings. Within the 'Ironman Deep Dive Dungeon', party ownership
is also transferred in the same manner. See (4.13) for more information
about the persistent "Ironman Deep Dive Challenge" event.)
Be aware that his houses will be wiped too, so the party might lose quite
an amount of items that way.

'Anti-magic fields' of fellow party members have greatly reduced effect
on spell-users in the same party, to allow the party to still be a vital
combination. Usage of magic devices by party members is not hindered.

If you choose 'Create or rename a party' while already being in a party,
you will be prompted to rename the party. Only the party owner can do this.

Specialty: Everlasting and non-everlasting players can team up while
              inside the Nether Realm and trade loot, see (3.4d) and (4.5c).

-Create or rename an 'Iron Team' party
    Allows you to create an iron team if you aren't in one yet, or rename your
    current iron team, provided you are the party owner.
    An iron team is like a party with the following differences:
    - An 'Iron Team' can only be formed with newly created characters.
    - Its members will only get experience for killing monsters if ALL members
      are online and on the same dungeon level!
    - Members can only trade items and money with other members, or you will
      get the message "you cannot take items from outsiders."

    If you choose this while already being in an iron team, you will be
    prompted to rename it. Only the iron team owner can do this.

-Add a player to party / Add yourself to party
    If you are in a party you will see the option "Add a player to party",
    allowing you to add more players to your party.
    This can be done by all members of the party, not just by the owner!

    If you aren't in a party, you will see "Add yourself to party" instead!
    This will allow you to add this character to a party, provided that at
    least one of your other characters is already a member of it.
    This does not work for cross-adding to nether realm parties (see (3.4d)
    and (4.5c)).
    It only works for cross-adding to IDDC parties if your already partied
    character is currently in the IDDC.

-Delete a player from your party
    This can only be done by the party owner.
    Note that if you remove a player from an iron team and his character has
    already gained some experience he will be unable to join again.
    If the owner removes himself from his own party, the whole party is
    disbanded.

-Leave your current party
    Note that if you leave an iron team and your character has already gained
    experience you will be unable to join again.
    If the owner leaves his own party, the whole party is disbanded.

-Close your iron team
    The owner of an iron team can decide to 'close' an iron team here, which

```
        will permanently disallow addition of any further members. Use with care
        as this is irreversible.
        Note that this option allows you to create a 'no-trading-allowed' character
        by creating an iron team with your character being the only member of it,
        and then closing it immediately.

The following party-related slash commands exist, see (0.2b) for details:
        /partymembers /pbbs /pleave /pnote /ppage /pquit


Guilds:
-------
-Create a new guild
        You can create a guild with a character that is at least level 30.
        This costs 2,000,000 Au. A guild will stay, even if the owner dies.
        The guild creator will receive a 'Guild Key' which designates him as the
        guild master. The guild master doesn't need to carry the key around with
        him but can just safely deposit it in a house.
        In case the guild master dies, another guild member may fetch the key to
        become the new guild master.
        Only one character per account can be a guild master.

        A guild offers a dedicated guild chat, so players in a guild can organize
        themselves in diving parties and still have a global chat if needed.

        Guilds may have a guild hall, see (7.9a) below for more information.

        The following slash commands are available to manage your guild, only the
        guild master may use them:

        /guild_adder <name of another player>
            Allows that player permanently to add other players to the guild too.
            Use the command a second time to revoke his rights again.
            Note that this only works if you have enabled the guild flag 'adder',
            see the '/guild_cfg' command below.
        /guild_adders
            Lists all current guild adder characters.

        /guild_cfg [<flag> [<value]]
            Shows you your current guild configuration if used without any parms
            and allows you to change it by specifying a flag.

        The same functionality as provided by these two commands can simply be
        accessed by pressing SHIFT+P and then choosing 'e)'!

        NOTE: If you want to rename your guild that can be done for a fee that is
        as high as actually creating a guild, in the mayor's office in Bree.

-Add player to guild / Add yourself to guild
        Only the guild master or a designated 'adder' can do this.

        If you are in a guild you will see the option "Add a player to guild",
        which allows you to add another player to this guild. You need to be either
        the guild master or one of the designated 'adders' to do this (and the
        'adders' guild flag must be enabled).

        If you aren't in a guild, you will see "Add yourself to guild" instead!
        This will allow you to add this character to a guild, provided that at
        least one of your other characters is either the guild master or one of the
        'adders' designated by the guild master (and the 'adders' guild flag must
        be enabled).
```

If the guild flag 'autoreadd' is enabled, members that lose their character
will be automatically added to their guild again on the next character they
log in with. Also, if they were a designated 'adder', this status will be
restored too, provided there are still vacant adder slots.

-Remove player from guild
    Only the guild master can do this. If all members are removed including
    the guild master, the guild ceases to exist.
    If the guild master removes himself, it's like he leaves the guild
    (see below).

-Leave guild
    If the last member leaves, the whole guild is disbanded.
    If the guild master leaves the guild, the guild becomes leaderless.
    The next player from that guild who grabs the guild key becomes the new
    guild master.

While a guild is leaderless, three restrictions apply:
    1) No new members can be added to the guild.
    2) Items and gold cannot be picked up from the guild hall anymore.
    3) The guild will CEASE TO EXIST if it is leaderless for more than a week!

Guild keys are indestructible, they can be lost though..

The following guild-related slash commands exist, see (0.2b) for details:
    /gbbs /gleave /gnote /gpage /gquit /guild_adder /guild_adders /guild_cfg
    /guildmembers

PvP outside of the dedicated 'PvP' character mode:

This is usually disabled in standard server settings, so you won't see these
options in the party menu:

-Specify player to attack
    Now you are hostile to that player and you will hurt each other like
    when fighting a monster (this includes auto-retaliating and targetting).
    You can kill each other for real this way, so this is NOT recommended!

-Make peace
    Make peace with a player you are hostile too. Better pay attention that
    your opponent makes peace too.

(7.9a) Guild halls

A guild may have a guild hall. That is a house owned by the guild, which will
persist until the guild is disbanded or it is sold by the guild master.
Note that a guild that is leaderless for more than a week is automatically
disbanded! (See (7.9) above for more info.)

To get a guild hall, the current guild master must buy a house and transfer
ownership to the guild. He does this by standing next to the house door,
pressing 'h' key for house operations, and then choose '(2) Change house owner'
followed by '(2) Guild'.
Note that 'list' houses (store-like houses) are not allowed to become guild
halls. You need to pick the other type of house (the one with open area inide).

After the ownership has been changed to the guild, the house no longer counts
to houses owned by the guild master. So it does not affect his house limit nor
will it be wiped if the guild master dies.

The guild master is the only person who can change back ownership of the guild hall or even sell it if the guild for example wants to migrate to a bigger guild hall.

The approximate guild hall location can be viewed by all guild members by pressing SHIFT+P and then choosing 'e)'.

The door of a guild hall is displayed in violet colour to all eligible members. Note that a guild hall can, same as party-accessible houses, have restrictions put on it such as minimum level required to enter, et cetera. These can only be installed or changed by the current guild master.

(7.10) Magic devices, skill and ability

The player's "Magic Device" ability in the character overview screen is calculated from a base ability depending on race/class, your intelligence, and to the largest part from the 'Magic Device' skill in the skill screen ('G'). It determines how well a character can make use of magical devices such as wands, staves, rods and activatable items (see (5.9a)).

The Magic Device ability is not limited to a maximum value, although the player won't be able to increase it infinitely.
While a low magic device ability might be sufficient to use supportive devices during breaks from combat, you will probably want superb, heroic or even legendary magic device ability if you intend to use magic devices as weapons in combat effectively. Otherwise your failure chance might be too high and therefore your damage output lacking.

In detail, the magic device ability does this...
-makes it easier to use wands, staves and rods and to activate items.
 There's always a slim chance to succeed even if your magic device ability is
 really bad.
 Items that have higher base item level (from k_info.txt) determines how
 difficult it is to activate a magic device. This level is not the (often
 higher) level displayed on the item that you see when looking at
 it in-game (ie the level shown in curly brackets).
 Confusion reduces your chance, EASY_USE (rods of simplicity/of the istari)
 greatly increases it.

The 'Magic Device' skill does the following...
-increases the power of magic devices, this depends on the device though.
 You can usually see the damage output of magic devices when you inspect them
 (press SHIFT+i to inspect an item). For example a wand of fire bolts may read:
 "Casts a fire bolt for 7..52d23 damage." - This means the damage is 7d23 if
 you have 0.000 skill points in 'Magic device' skill and it will deal 52d23 if
 you have actually maximized the skill (50.000).
-makes rods take less time to recharge.
-helps to reduce effects of UN_POWER attacks (does not protect the remaining
 duration of a form gained from a ring of polymorphing).
-helps to increase the duration on polymorph-rings when they are forged.
-makes it easier to recharge items provided you don't use scrolls to do that,
 but a real magic device (some artifacts can be activated for recharging).

For determining the chance of successfully activating a magic device, there can be more factors such as the item type and the item type's base level. If you carry an item that has anti-magic properties, you might find it harder or impossible to activate magic devices. If you have trained the Anti-magic skill you might also not be able to activate most devices. Last but not least some items can only be activated while they are equipped.

The chance to successfully activate a magic device is shown when you inspect it
(SHIFT+i, and the item must be identified). The displayed chance does not take
any anti-magic effects in account.
It is possible to achieve 100% success rate with some devices. If you reach 99%
the success chance shown on inspection will get another digit added, so it will
for example look like: 99.3%.

Magic Device skill and ability have no effect on the damage output of traps
loaded with a magic device or on recharge time of rods that are loaded inside
trap kits.

Rods have more high level item types and hence are harder to use on average,
staves and wands have more lower level types available in comparison.
Wands are always used directional (with a target), staves are always used
without a target, rods and other activatable items have both types.

Equippable items and true artifacts may have higher levels in general, but are
actually much easier to activate than normal magic devices. (For true artifacts
their base level from a_info.txt counts, ie what is displayed at
'Found around depth:' in ~6.)

Experimental Quirk: Wielding a magic device

Depending on the server settings, an experimental quirk might be enabled:
You can 'w' (wield) a wand, staff or rod like a 2-handed weapon. Such an
equipped device will not count as melee weapon, so any melee combat you engage
in will work exactly as if you were fighting bare-handed (and martial arts
skills won't be applied).

The device will receive some boni when you use it. Usually:
 - 20% increased activation chance, flat on top of your usual, final chance.

 - 20% chance to actually retain the charge/energy of the device instead of
   spending it, but at the cost of your own MP.
   The cost depends on the item k-level, if you don't have enough MP then you
   will not retain the charge/energy (and your MP won't get drained of course).
   The MP cost solely depends on the base item level of the absorbed device,
   examples:
   - wand of magic missile, k-level 2 (lowest): 1 MP,
   - staff of perception, k-level 40: 6 MP,
   - rod of havoc, k-level 95 (highest): 42 MP.

If you have duplicates of a device, both in your inventory and equipped, then
the equipped and therefore boosted version will take precedence.

This quirk might be useful for certain lower level characters, but might lose
its appeal at higher levels where you find other powerful items to wield
instead, such as highly enchanted mage staves or weapons.

As this quirk is classified as 'experimental', the effects might be subject
to change, which will probably appear as a note in the message of the day (~f).

You might need a client of version greater than 4.9.0c to use this quirk.

If the server also has the feature of fuseable mage staves, then the quirk
for wielding a magic device will be active accordingly while wielding a mage
staff which was fused with the device.

(7.11) Parrying and blocking

There are a couple of ways to reduce damage taken. One is simply to have high
armour class (see (6.4) for details), another one is 'Dodging' skill
(see (7.2) for details).
This paragraph is about parrying/blocking only. Note that the chance values
given below do not always apply as is, but sometimes depend on the the attack
type and especially on a little bit of randomness when your character chooses
which defense method it actually uses (block or parry) - for details about this
and about all damage reduction mechanisms in general and the order/chance they
are applied, make sure you also read (6.4).

For melee fighters that use weapons or shields, these two abilities are an
important factor for damage reduction:
Parrying enemy attacks with a weapon, and blocking attacks with a shield.

Shields come with a base block chance that varies depending on the item type.
Different classes are differently proficient at parrying or blocking, modifying
the chance internally, resulting in a final, 'real' parry/block chance, which
you can check in the 'm' skills menu, provided you have a 'Combat' skill that
is greater than zero.:

Press 'm' and choose 'Check block/parry chance' to see your actual ability
to block or parry. If your 'Combat' skill is 0.000, you won't have the ability
to visually confirm your own parry/block chance, and hence not see the option
in the 'm' menu. However, your character may still parry and block attacks!

Depending on the server version you might see textual descriptions instead of
raw numbers:
"You cannot parry at the moment."   You aren't wielding a weapon,
                                             or are knocked out/paralyzed.
"You have almost no chance of parrying."   Below 5% chance.
"You have a slight chance of parrying."   Below 10% chance.
"You have a significant chance of parrying." Below 20% chance.
"You have a good chance of parrying."   Below 30% chance.
"You have a very good chance of parrying."   Below 40% chance.
"You have an excellent chance of parrying."   Below 50% chance.
"You have a superb chance of parrying."   50% chance or better.

If you try to use a weapon which is too heavy for you and get the warning:
 "You have trouble wielding such a heavy weapon"
your parry chance will be lowered to 1/3 (among other things, compare (5.1)).

Note: If you aim at maximizing your parry chance on a character that is
      proficient in combat stances, you might choose defensive stance without
      a shield equipped. Because if no shield is equipped, defensive combat
      stance which normally bolsters block chance will transfer that defensive
      advantage to the weapon instead, increasing the parry chance.
      Also your class should of course be fairly skilled at parrying,
      see class-specific parry/block proficiency in the 'class table' in (7.5).

Depending on the server version you might see textual descriptions instead of
raw numbers:
"You cannot block at the moment."   You aren't wielding a shield,
                                             or are knocked out/paralyzed.
"You have almost no chance of blocking."   Below 5% chance.
"You have a slight chance of blocking."   Below 14% chance.
"You have a significant chance of blocking." Below 23% chance
"You have a good chance of blocking."   Below 33% chance.
"You have a very good chance of blocking."   Below 43% chance.
"You have an excellent chance of blocking."   Below 48% chance.
"You have a superb chance of blocking."   48-50% chance (the highest
                                             reachable).

If you try to use a shield which is too heavy for you and get the warning:
  "You have trouble wielding such a heavy shield"
your block chance will be lowered to 1/3 (among other things, compare (5.1)).

Note: To achieve an extraordinarily high block chance you'll have to enter a
      defensive combat stance, and your shield should have a high base block
      chance, and your class should be fairly skilled at blocking,
        see class-specific parry/block proficiency in the 'class table' in (7.5).

Additional information:

Classes do differently well at parrying and blocking. To find out more, see
the class overview table at the end of section (7.5).

Parrying/blocking might get boosted/modified under certain circumstances,
such as pvp or defending from a trap you accidentally set off.

More on Parrying

The only items that allow you to parry are melee weapons. Their parry chance
only depends on their handedness – the larger a weapon, the more you can parry.
Without a weapon, you cannot parry at all (item weight will have no effect):

A weapon held with one hand will parry less often than a weapon held with both
hands.
The 'Weaponmastery' skill grants a bonus to parrying which is biggest for
2-handed weapons (MUST2H), second biggest for 1 1/2-hander (SHOULD2H), and
lowest for 1-handed weapons (including COULD2H even if wielded 2-handedly),
also compare (7.2) for skill details.
Dual-wielding weapons improves parrying too, provided that you aren't getting
a 'flexibility-encumberment' warning (compare (5.5)).

There is an exception: Depending on the server settings, some weapons give a
special bonus to parry chance. This is displayed in brackets, eg:
a Quarterstaff {+,3} (4d4) (+0,+0) [+10%]
This quarterstaff actually increases your raw base parry chance (before your
class is factored in, same way as block chance calculation is done for shields)
by an extra 10%.

More on Blocking

The only items that allow you to block are shields. They display their base
block chance in brackets, eg:
a Small Metal Shield {+,3} [17%]
This shield provides a raw base block chance of 17%, that gets modified by
your class, status effects and attack circumstances as described.

Some effects that normal armour usually doesn't protect from can actually be
blocked, for example magical breath, ball or bolt attacks.
The bigger a shield, the more you can block. Depending on server settings,
the actual block base chance will usually be displayed as a percentage in []
brackets behind the shield's name, where AC is located for other types of
armour.
This base chance in many cases applies as is to standard melee combat IF your
character tries to block instead of parrying (compare (6.4)), but is sometimes
modified depending on the type of an incoming attack: When deflecting bolts
from bolt traps or when in pvp combat blocking receives an additional bonus.

Parrying and blocking can both be affected by combat stances – see (7.2) for

"Combat Stances" skill.

(7.12) Fighting/shooting techniques

Certain special techniques can be learned that cost 'Stamina' (ST) to use:
Which fighting techniques you will learn usually just depends on your class,
except when written otherwise in the technique's description.
Ranged techniques however instead depend on training your archery skill.

All techniques are accessible via 'm' key, also see (3.7a) and can of course
be put on hotkeys, for example by using the macro wizard.

The time your character learns a certain fighting technique and which ones it
will actually learn varies, depending on your class, see the table at the
bottom of this section. The order in which they are learnt is the same for all
classes though.

The techniques are as follows:

    Fighting techniques:

    Sprint   6 stamina
        Your character will be able to move faster, so you can catch up to
        runners and other monsters that avoid you. Note: This does not affect
        your SPEED stat, nor has anything to do with 'running' (shift+dir),
        but simply means that moving one step will only cost you half a turn of
        energy, allowing you to move two steps during each of your turns
        instead of one! So the ONLY thing 'Sprint' affects is normal walking.
        (Advanced note: Certain hit & run tactics aka kiting might also become
        more effective accordingly, since half of your turn could be utilized
        by the auto-retaliator if you keep time intervals between each step.)
        Running (shift + directional keys) is not affected.
        (Starting to sprint does not cost energy.)
    Taunt   2 stamina
        Attempts to draw attention of humanoid mobs, causing them to attack
        you. Might require more than one try sometimes until they fall for it,
        depending on the monster. Some, mostly mages, won't be affected at all
        even.
        Most common targets are typically shaman and priest class monsters.
        Note that this can also be used to make scared monsters agressive,
        and -if you and an ally both stand next to the same monster- to draw
        its attention from your ally and make it attack you instead.
        (Taunting costs a quarter of a turn of energy.)
    Throw Dirt   3 stamina
        Throws dirt at the face of your current target or (if you don't have a
        target yet) at the face of a monster next to you. Only works on
        monsters standing next to you.
        If the monster is blindable, it will be temporarily blinded (which is
        effectively the same as being confused).
    Bash   6 stamina
        This shield-bash technique can also be used directly by pressing 'B'
        (normal key set) or 'f' (rogue-like key set) to perform a shield-bash
        against an enemy. This technique obviously requires wielding a shield.
        It will inflict damage depending on shield weight and your strength and
        a stun effect (modified by Combat skill) on your target. Your chance to
        successfully hit depends on your dexterity and the enemy AC.
        Calling this technique from the Fighting Techniques menu will attempt
        to use your current target, which must be within melee range.
        Calling this technique via B/f key will have you specify a target or a
        direction instead.

In the macro wizard you therefore can pick either way by selecting to
create a fighting-technique-macro (%zi) or a bashing-macro (%zt).
Distract   1 stamina
   Your character will attempt to appear wimpy and a non-worthy target to
   adjacent monsters, in hope of making them attack another player who
   must be standing next to you and also next to the monster, instead of
   you. Not all monsters can be fooled though. Some monsters might resist,
   but probably fall for it if you give it another try.
   This skill is useless if there is no team mate next to you (and the
   monster).
   (Distracting costs half a turn of energy.)
Track Animals   1 stamina   (rangers only)
   Read animal tracks, disclosing their whereabouts in your surroundings.
Spin   5 stamina
   A sweep that hits all adjacent monsters and may stun them if they don't
   resist. You might even perform more than one complete sweep circle,
   hitting some or all monsters multiple times, based on your number of
   blows/round!
   (Spinning around costs a turn of energy.)
Berserk   10 stamina
   Temporary effects: Heals you for 30 HP, increases CHP and MHP by 20,
   become fearless, -10 malus to ac and +10 to strength, compare (4.11c).
   (Entering berserk rage does not cost movement energy.)
   Does not stack with a potion of berserk strength.

Rogue-specific fighting techniques:

Apply Poison   -
(Also enabled for death knights according to 'Blackguard' DnD 3e aspect.)
   Searches your inventory for a potion or mushroom that is inscribed "!p"
   or "!p1" or "!p2" and tries to apply the potion or mushroom's essence
   to your equipped melee weapon(s).
   The "!p" inscription will apply the item's essence to BOTH weapons if
   you dual-wield, while the "!p1" inscription will only apply it to a
   main-hand weapon (equipment slot 'a') and "!p2" only to the off-hand
   weapon (equipment slot 'b').
   This is a temporary weapon brand that will run out after some time.
   The potion or mushroom will be used up in the process. Items that
   are inscribed '!k' will always be skipped.
   If it's a potion of poison or mushroom of poison or of unhealth, the
   weapons will receive a poison brand that deals increased damage to
   enemies who don't resist poison.
   For any other types of potions or mushrooms, the brand effect may vary,
   some might have no effect at all.
   This technique does not work without a weapon. If you take off a weapon
   or equip another weapon, the brand will fade away immediately.
   Since the brand is only temporary it is a good idea to apply it right
   before engaging in a fight.
   Learning this technique also causes you to occasionally harvest potions
   of poison from larger poison breathing monsters, as long as you wield
   a weapon when killing them.
   If you do not wish to find these extra potions you can toggle it with
   the "/ing" slash command ("/ingredients").
Perceive Noise   1 stamina
   Listen carefully to every sound in your surroundings, thereby locating
   creatures. Some entities are so quiet that they cannot be detected this
   way though.
Flash Bomb   4 stamina
   You throw down a flash bomb that causes a flash of light, blinding
   your opponents for a short time, giving you opportunity to escape or
   kill them off while they are running around in confused state.
   See (4.12) for which monsters are (not) affected by blindness.

```
        (Throwing a flash bomb costs a turn of energy.)
Shadow Run          10 stamina, kings/queens only!
    You will move at blinding speed, your silhouette turning shadowy.
    Ranged attacks will hardly be able to pin you down, you will act at
    increased speed and you cannot be intercepted.
    You can even perform a backstab opening attack out of this state.
    Performing actions that require calm movements or anything that
    distracts or disrupts your attention from focusing on keeping up your
    movement, or attacking someone/something will break shadow running –
    it will not wear off on its own but last indefinitely until broken.
    Taking damage doesn't break it, but taking sanity damage can break it.
    Suffering from status effects such as confusion/blindness/stun breaks
    it too.
    Note that stamina does not regenerate while shadow running.
    Shadow running includes sprinting, ie moving at half energy cost.
    (Starting to shadow-run does not cost energy.)


Other fighting techniques:
--------------------------
Steam Blast          –
    Learnt by skilling 'Trapping' or (alternatively, if the Demolitionist
    perk is enabled) 'Digging' to at least 10.000.
    Requires either a fumes trap kit or a blast charge and in any case a
    potion of any sort (does not matter which one), both inscribed '!B'.
    They will be consumed and a steam blast charge is planted on the lock
    of the next door the player bumps into or the lock of a chest the
    player is currently standing on.
    The player must not move before bumping into the target door to 'set'
    the trap, or the skill will be cancelled. If the charge is planted on
    a chest, the chest must not be moved before it detonates or it will
    get cancelled.
    The steam blast charge will detonate after several seconds and will
    break the door or chest open. For chests there is a chance, depending
    on your Trapping (if you used a fumes trap) or Digging (if you used
    a blast charge) skill, that it may or may not trigger the chest's trap
    (which could potentially destroy the chest depending on the trap type).
    You can add a number to the !B inscription on either item, which will
    set the fuse duration in seconds from 0 to 15 (similar as !F does for
    blast charges), eg: !B10 . The default value is 8 seconds.


Shooting techniques:
--------------------
Flare Missile       2 stamina      (4.000 Archery)
    Prepares an oil-drenched shot for the next time you shoot, which will
    burn brightly, lighting up the area where it lands or hits a wall.
    If that spot is inside a room, the whole room will be lit up.
    If it hits a monster, instead of lighting up an area the monster will
    absorb it and suffer extra fire damage.
    This technique consumes 1 flask of oil and your shot/arrow/bolt.
    Note that this destroys magic ammunition too.
    (Preparing a flare missile costs a turn of energy.)
Precision Shot      7 stamina      (8.000 Archery)
    You aim your next shot carefully, costing you a turn. The next shot
    you fire however will receive a great damage bonus, even more so
    against fleeing opponents. Useful opener against sleeping monsters.
    Aiming will be interrupted by most actions, including walking.
    (Aiming precisely costs a turn of energy.)
Craft Ammunition    –              (10.000 Archery)
    Craft ammunition for your currently equipped ranged weapon from
    bones, skeletons or broken sticks in your inventory or from a pile of
    rubble (':') next to your character.
    If you wield a bow or crossbow, you'll need to have bones, skeletons or
```

broken sticks and it'll create arrows if you wield a bow or bolts if
you wield a crossbow.
If you wield a sling, you'll need to stand next to rubble and it'll
create sling ammunition from it.
The quality mainly depends on your archery skill and somewhat on your
ranged mastery skill for that type of ammunition, but is still somewhat
random. If your archery skill is at least 20 you have a chance to
create ego items (for example branded or ethereal ammo). This chance
for crafting good or great ammo will continue to increase if you
further train your archery and particular ranged mastery skills.
It is not possible to craft any artifact ammunition.
If your archery and particular ranged mastery skills for the type of
ammunition are high enough you will instantly *identify* the result.
If you want to create larger stacks of the same type of ammunition,
collect a large stack of materials and use the skill on that stack
(the total weight of that inventory slot determines the stack size).
The level of the raw materials has no effect on the outcome.
(Creating ammunition costs a turn of energy.)

Double Shot   1 stamina*   (16.000 Archery)
(*: 20% chance per turn of actively using it to drain 1 stamina.)
Toggle, making you enter or leave double shot mode. While active, you
will fire 2 projectiles at once on each shot, dealing way less damage
than a single shot though. Useful to eradicate masses of weak critters.
Note: If your stamina drops below 1 you will continue to fire
      normally, but not leave double shot mode. That means as soon as
      you get stamina back you'll start firing double shots again.
      To permanently leave double shot mode, you have to toggle it
      explicitely in the 'm' menu.
(Double-shooting does not cost more energy than shooting normally.)

Barrage   9 stamina   (25.000 Archery)
Prepares to fire a powerful multi-shot which will cost you half a
turn. All the ammo is fired at the same target, so it doesn't hit
multiple monsters, rather it is just one attack in itself.
Also, it does not deal especially high damage. Instead, its main effect
is that it stuns the target (if the target doesn't resist stunning
attacks).
Because 6 shots are fired at once you will need at least as many
projectiles in your quiver in order to use it.
(Firing a barrage costs half a turn of energy.)

Note: The ability 'fire-till-kill' is available to any class and not
considered to be a special shooting technique. It appears directly in the
'm' key menu. See (5.2a) for details.

Stamina regenerates slowly over time, faster while resting. Your CONstitution
stat and 'Health' skill will further improve regeneration speed.

Technique levels

Different classes learn fighting techniques at the following levels, if at all:

	Spri	Taunt	Dirt	Bash	Dist	Pois	Percv.N. Track A.	Flash	Spin	Bers	S.Run
Warrior	2	4		5					6	20	
Istar											
Priest											
Corr.Priest											
Rogue	2	3	3		4	5	8 (PN)	11			50
Mimic	4	7		13					20		
Archer											
Paladin	5	7		9					20		
Death Knight	5	9		10					20		

```
Hell Knight  |  5   9        11                              20   35
Ranger       |  3   8        13          7 (TA)              17
Adventurer   |  3   5    9   13
Druid        |  5
Shaman       |
Runemaster   |  4   6    8
Mindcrafter  |      8        13   12
```

(7.13) PvP mode

PvP stands for "Player vs player". This describes the act of player characters
fighting each other, usually to the death.
In that regard, it is quite different to the 'blood bond' duel, which always
ends without anyone getting hurt for real.

If you want to fight other players to death in a real pvp match, create a
'PvP mode' character. It's an option during the character creation process,
much like 'everlasting mode' or 'normal mode'.

PvP mode characters can use the /pvp command to enter/leave the pvp arena.
This arena also releases monsters from time to time. The entry point of a
player is random, because he gets teleported on arrival.

Note that you don't HAVE to use the pvp arena. PvP characters are always
automatically hostile to all other PvP characters everywhere, for example you
could surprise an opponent in a normal dungeon while he tries to kill a unique
monster for items. The only safe zones are towns.

Before you go and fight others to the death, look at your inventory. You will
see a parchment "Gladiator's Entrance". When you turn this in at the mayor's
office in Bree, you will get a semi-random excellent item for free, to start
your career with. Semi-random because it partially depends on your skill point
distribution, so before turning in your parchment for an item at the office,
make sure you hit SHIFT+G and distribute your skill points to your liking.
For details about how this item is generated, see (9.5) Reward item creation,
it actually uses the same mechanics.

PvP mode characters are called 'Gladiators' and use special rulesets that make
it easier to rise in levels and less of a hassle when you get actually killed
by an opponent! The special rules that apply are as follows:

-PvP chars have only one life and no ghost, ie are erased on death same as
 no-ghost chars. However, they play more fast-paced and are quickly brought up
 again. The purpose of PvP chars is to fight other players to the death
 without remorse, which would otherwise be an unacceptable loss if done with
 regular characters (who can at least use Blood Bond scrolls for friendly duels
 though).
-PvP mode characters do not gain certain safety effects like in Training Tower
 or in the Arena Monster Challenge: They will just die for real there.
-yellow name in chat, yellow * marker in @-list, completely yellow entry
 in @-list if viewed by another PvP mode char.
-start at level 20 and with about 10000 Au.
-reach level 30 at most.
-cannot team up or exchange goods with non-PVP chars.
-will automatically be hostile to all other PVP chars, except for towns which
 are safe zones!
-will always ESP all other PvP chars as well as see their location in @-list.
-get no credit for killing uniques (hence cannot become king/queen), cannot use
 static artifacts, can gain loot and money from killing monsters but no exp.
-gain no exp from any other source except killing other PvP characters.

Lower level PvP opponents will give less exp than equal/higher.
    -if a pvp char dies to a monster or trap, all nearby pvp chars may receive a
     kill credited depending on the number of kills that character had.
    -walk faster by default, similar to 'sprint' fighting technique.
    -cannot chase PvP chars _much_ lower then himself by entering their dungeon
     level, because he will get auto-recalled then (anti-chicken).
    -will get rewards (similar to highlander tournament) for reaching high/top
     level or killing an amount of opposing gladiators (other PVP chars).
    -when killed at high level, the player will get a deed on his next PvP
     character he logs on with, which can be exchanged for an extra item.
     The highest level deed (obtained when dying at level 30) can be received on a
     non-pvp char too.
    -mimicry users gain one free transformation of their choice on (multiple)
     levelup, and also learn forms 3x as fast as regular characters.
    -diminishing effect on healing: if you spam heal pots, the effect will lessen
     more and more. over time, it returns to normal. entering a town will reset it
     too.
    -temporary speed buffs (potions, mimic powers, spells) have no effect.
    -HP and melee damage gain from Mimicry transformations is reduced.
    -Any speed gain is reduced, except for speed gain from Sneakiness skill.
    -teleportation will be suppressed during combat, phase door is allowed though.
    -while in a fight with another pvp-char, you cannot teleport away easily
     (takes about 30 seconds to wear off, or just enter a town to reset).
    -PvP characters are unaffected by certain effects caused by other players:
     Hallucination, Life force drain (exp drain), Stat drain, Nexus scrambling.
    -They may not own more than one house.

Note: Item rewards depend on your character, see (9.5) for more information
      about item rewards.

(7.14) Miscellaneous character properties

Characters also have the following miscellaneous properties:

-Sex
-Age
-Height
-Weight
-Social Class

These currently have no effect in the game, and modifiying them has no effect
either: Traps of aging, shrinking or growing may change these values but will
not affect the gameplay in any way.

(7.15) Character sheet boni page

This page of the character overview displays equipment and intrinsic boni.
The four tables list resistances, miscellaneous flags, numeric boni, and
slays/brands/esp, complete with a header/footer to identify each column. Each
worn item has a header based on equipment slot, notated [a-n]. Class/race/form
boni use the @ header. A representation of any equipment worn and current form
occupy the footer. The columns between each header/footer pair display boni,
which correlate to the row title, shown to the left of each table.

A dark grey row title or column header indicates no relevant modifications to
that particular boni, or an empty equipment slot. An equipped column is
highlighted grey by default, unless the item has hidden properties, in which
case both the column header and unknown boni will be highlighted yellow. A

column representing a cursed item will have a red header. When a particular
boni is applied to your character, the row title will highlight white, unless
the boni is detrimental, in which case the title may appear yellow or red. A
gold row title indicates an improved boni, such as immunity, sustained stats or
lite source, or a maximum value, such as for stealth, luck, or AM Field.

Here is an explanation of the common glyphs which may occupy a row/column grid:
- (red)   Susceptibility, HP/MP Drain, Random Teleportation
+ (red)   Aggravation
+ (white)   Resistance, Miscellaneous Flags, Slay+ESP, Brand+Aura
* (gold)   Immunity, Anti-Teleportation (yellow), Kill/ESP (white)
# (green)   A number, dark green adds 10, gold indicates sustenance.
# (red)   A number, red subtracts 10.
s (gold)   A sustained ability without numerical modification.
s (white)   Slay (2x)
k (white)   Kill (3x)
e (white)   ESP, Full ESP applies one to all the ESPs in that item's column
a (white)   Aura
b (white)   Brand

Some row specific glyphs:
s (gold)   Immunity to Cuts (shards row)
~ (blue)   Swimming (levitation row)
# (green)   Pass Forests (levitation row)

(7.16) Food consumption

Almost all characters constantly burn food and need to replenish it or suffer
from the effects of starvation, see (4.11) for details about this weakening and
eventually deadly status effect: "Hunger".

The only time you don't have to worry about food is when you are within a town
area or while you are AFK (use "/afk" command to toggle your AFK state).
However, AFK'ing to pause food consumption only works if you were not already
hungry when you went AFK, beware.
Also, if you die and turn into a ghost you won't require food. Last but not
least, if you are in a safe area (special event sector/Arena Monster Challenge)
you also don't burn food.

Some characters, such as Vampires and Ents, have specific ways of feeding, see
their race information in (7.4) for details.

Maiar who have been initiated ie reached level 20 will not require any food at
all, neither will any character who has trained Holy Support school to 50.000.

If you eat too much, you will eventually become 'gorged', a status effect that
reduces your speed by 10. While 'gorged', characters burn food especially fast,
so you will return to normal quickly.
Some characters cannot get gorged:
- Dead player ghosts,
- true Vampires (ie the character class),
- Ents,
- initiated Maiar,
- Characters who have trained Holy Support school to 50.000.

For all characters which do require food:

The amount of nutrition that your character consumes over time, which means how
fast your character will get hungry again, roughly depends on:

- Your speed and your weight. These are main factors that determine your base
  amount of required food over time. Especially high speed can be 'expensive'.
  If you use mimicry, heavy forms can put a great toll on your metabolism.

- Some races such as draconians or young vampires require especially much food.
  High level vampires return to normal rate. Vampire royalties even require
  almost no food at all, no matter which or how many nutrition-consuming
  effects act on their body (ie everything else listed in this chapter)!

- Gaining adrenaline effect (from firestones) will increase food consumption
  enormously.

- Gaining biofeedback (from firestones), fast metabolism regeneration, troll
  or hydra regeneration, wraithform or invulnerability will each add greatly
  to your food consumption.
  (So any kind of half-trolls (including the character class) and trolls always
  require a large amount of food, even more than draconians and young vampires,
  as they have intrinsic troll regeneration.)

- Gaining regeneration, temporary stat-boosting effects, invisibility,
  or +LIFE (from item or spell) will each significantly increase your food
  consumption.

- Having 'slow digestion' will cut your total food consumption rate to 3/4.
  This will have no effect on true vampire royalties (race), as they already
  consume the minimum possible amount of food over time.

Aside from obvious food items and saturation spells, some potions can also feed
the player, depending on the character's race, for example potions of healing.
The 'nutrition value' of a potion is specified as it's 'pval' in k_info.txt,
you can review it in the spoiler files menu ie ~ l k.
However, potion nutrition works differently on some characters:
- Vampires only get fed from potions of blood.
- Ents do get fed more from potions of water than other races.
- Mimicry users using undead forms receive reduced feeding effect from potions
  in general.

(7.16a) Nutrition details

This should probably go to the 'Items' chapter, but I prefer it here as
subchapter following food consumption explanation.

List of nutrients, weight, and nutrients per lb weight for various food types.
Food types can be either 'food', 'potion' or 'firestone' class items.

Food	Weight (lb)	Nutrients	Nutrients/0.1lb
Mushrooms	0.1	500	500
Mushroom of Restoring	0.1	1000	1000
Ration	1.0	5000	500
Biscuit	0.2	1500	750
Venison	0.3	2000	~667
Lembas	0.3	=14999	~5000
Slime Mold	0.5	3000	600
Ale	0.5	500	100
Wine	1.0	1000	100
Fortune Cookie	0.2	500	250
Sprig of Athelas	0.2	0	0
Potato	0.2	1250	750

```
Cabbage                               0.3          1650          550
Carrot                                0.1           750          750
Beet                                  0.1          1000         1000
Squash                                0.3          1000          ~333
Corn                                  0.2          2000         1000

Firestones (small/normal)         1.0/2.0            0            0

Potion (0.4lb)          Nutrients  |  Potion (0.4lb)           Nutrients
-----------------------------------+------------------------------------
Salt Water                   0     |  Curing                     100*
Fresh Water (Ents)        1500     |  Invulnerability           -2500
           (Other)           0     |  Cure Light Wounds           50*
Blood (True Vampires)     5000     |  Cure Serious Wounds        100*
      (Suscept-Life)      1250     |  Cure Critical Wounds       100*
      (Other)                0     |  Healing                    225*
Apple Juice                250*    |  *Healing*                  400*
Slime Mold Juice           400*    |  Life                      1000*
Slowness                    50*    |  Resistance                 100*
Sleep                      100*    |  Booze                       50*

    (*) Double this amount for Ents

  - All potions weigh 0.4 lbs. Drinking from a fountain is the same as quaffing
    a potion of the same type or drinking directly from open water sources,
    except for salt water: When drinking a potion or from a fountain this can
    have adverse effects, poisoning Ents and make other races vomit.
    But when sipping from the open sea, these negative effects will not happen,
    assuming the character is more careful. Fresh water nourishment is the same.

  - A 'Scroll of Satisfy Hunger' (weighs 0.5 lb) and Lembas set the food state
    of the character to the maximum "full" state right before "bloated" state,
    ie to 14999. Scroll and Lembas do not work for Ents or true Vampires.

  - Ents gain double nourishment from fountains and potions and specifically 1500
    if it's (fresh) water. Salt water gives no nourishment even to Ents.

  - Vampire race characters gain no nourishment from any food, potions or
    fountains except for fountains/potions of blood. Other characters gain no
    nourishment from blood.

  - Susceptible-to-life characters gain 2/3 nourishment from fountains and
    potions, and 1/3 nourishmnt from other food.

Alternative means of feeding
----------------------------
Ents can also feed by rooting into the ground, depending on the ground type.
Vampires usually feed simply by killing an enemy that is on an grid adjacent
to them.
The amount of nutrition they get out of these methods is as follows:

Ent rooting (initiated by 'Resting' mode via Shift+R) will provide nutrients
in intervals of 5/6 of a player's "dungeon turn" which corresponds roughly to
half a second on the world surface, and ticks slower the deeper the level:
- On water (except tainted water) or mud: 200 nutrients.
- On grass or dirt: 100 nutrients.
- On bush or tree grids: 70 nutrients.

Vampire victim feeding (by killing anything adjacent to them, by any means):
- Depending on the victim's original HP (ie max HP, when it was not hurt yet)
  the vampire drinks 300...600 nutrients,
- demons only give half as many nutrients,
```

- angels only give a third as many nutrients.
- if the killing blow was a backstab, the amount of nutrients is doubled.
- it's impossible to feed from undead, non-living and some other creatures.

(8) Tactics & strategy
=======================

(8.1) Preparing the inventory for diving into the dungeon

Depending on your character level you will always want to stock up on certain
items before entering the dungeon. Here are some guidelines for your
inventory:

Beginners (level 1)

+ Some Rations of Food, one or more Flask of Oil
  Know that there are traps that can empty your stomach or drain the fuel of
  your light. If you don't have supplies then you might be doomed.
+ Potion of Heroism
  because it can approximately double the hitpoints of level 1 characters
  (depending on race/class) for a short period of time as well as greatly
  improve the chance to hit the opponent, which will raise the fighting
  potential for example against enemies like Farmer Maggot's dogs. Even if
  your character has a decent amount of Hit Points, these potions raise your
  fighting abilities a good deal, compare (4.11c).
+ Potion of Cure Light Wounds
  They become useless quickly while you gain some character levels since they
  don't heal very many HP (Hit Points). At the beginning they are very helpful
  however.
+ Scroll of Phase Door
  This one does a short range teleportation, allowing you to escape if you are
  surrounded or get some distance between an enemy and yourself, allowing you
  to shoot him on distance using a ranged weapon. Since Phase Door teleports
  randomly, you might have to read several of them quickly after each other
  until you come out in a good position.
+ Maybe a scroll of Word of Recall
  If read in the dungeon it will far-distance teleport you back to the town.
  This allows you to quickly "dive" deep and gain levels and find items that
  can be sold for good cash, then read Word of Recall to quickly get back home
  with all the loot without having to start an annoying search for the
  staircases leading upwards back to town.

Low level character (up to 15)

+ Several Rations of Food or Scrolls of Satisfy Hunger, some Flasks of Oil
+ Some Potions of Heroism
+ Some Potions of Cure Serious Wounds / Critical Wounds
  Note that Potions of Cure Wounds also remove certain effects like blindness
  and confusion, depending on the exact potion type (light/serious/critical).
+ Several Scrolls of Phase Door
+ Some Scrolls of Word of Recall
+ Some Scrolls of Identify
  These will allow you to identify unknown items that you may find!
+ Archers might find rods/wands/staves of light useful to create LoS
  (line-of-sight) opportunities for killing monsters from afar down hallways.

Medium level character (up to 25)

```
--------------------------------
+ Some Flasks of Oil. Replace rations of food with "Scrolls of Satisfy Hunger"
  These will always fully satisfy your hunger and they are not eaten by rot
  jellys ;) Lembas (elvish waybread) are also nice but very rare.
+ Many Potions of Cure Critical Wounds, maybe some Potions of Healing.
+ Some Potions of Berserk Strength (mainly for fighter classes).
  These potions work similar to heroism, but they rise your strength instead
  of your hit chance, allowing you to deal greatly increased damage,
  compare (4.11c).
  Unfortunately they are quite rare. If they are used together with potions
  of speed the result can be devastating.
+ Several Scrolls of Word of Recall
+ Several scrolls of Identify
  Since you will encounter the more nice (or more dangerous..) loot the deeper
  you descend, you will need a bunch of identification scrolls to find out
  what is worth being kept and which items should be thrown away.
+ A potion of Restore Life Levels. It can be very annoying if a monster drains
  your experience (its colour will turn from light green to yellow to indicate
  that it's been drained) and all the monsters you subsequently kill yield
  almost nothing in experience since it's all pouring into refilling the
  drained amount. These potions instantly restore all drained experience!
  (Note that scrolls of Life also restore experience, same as this potion.)
  Most monsters that drain experience are undead and the first ones you will
  probably encounter are liches and vampires. Bloodletter demons drain too.
  A notable low-level monster is the grape jelly. But then again you shouldn't
  fight stationary melee-specialist monsters in melee in the first place..
+ Some Potions of Speed
  These will temporarily boost your global speed (movement/attack/cast) by
  +10. In case you are moving at normal speed this means that your speed is
  doubled, effectively doubling your combat power as well since you can shoot
  and hit twice as fast now. These potions also allow to quickly retreat...
+ a Staff of Teleportation
  This neat baby is your ticket out of most hazard situations where Phase Door
  wouldn't help at all. However keep in mind that staves can be destroyed. So
  if you consider a situation very dangerous and your staff of teleportation
  is suddenly burned to ashes, you should think about reading Word of Recall!
  Unfortunately staves of teleportation are very expensive. Staves can be
  used even while blind or confused!
  It's not a good idea to use staves if your character isn't quite good at
  'Magic Device', press 'C' to check your character screen.
  It's a good idea to try the staff a few times in town before relying on it.
  If needed you could increase your 'Magic Device' skill, see (7.2).
+ You should have found some "Rods of Trap location"
  Keep 2 or 3 of those with you. If you encounter a pit or vault you can
  easily detect all the nasty traps inside. Rods of Door/Stair Location can
  also be helpful.
+ Especially for clearing vaults you might find a staff of light, a wand of
  trap/door destruction and maybe a wand of teleport other useful. However,
  that would be 3 more inventory slots less to pick up loot :)
+ Potions of curing insanity (all types). If you find these, pick them up and
  store them in your house! If you encounter a sanity-blasting monster you will
  want to have these to restore your sanity after the fight.


Higher characters (up to 35)
--------------------------
(If you came this far, good work!)
+ Some Scrolls of Satisfy Hunger or some Lembas if you can find enough. Some
  flasks of oil if your light source needs those.
+ Lots of Potions of Cure Critical Wounds (20..40 for example), if possible
  Potions of Healing instead of cure crits.
+ Some Potions of Berserk Strength (mainly for fighter classes)
```

+ Several Scrolls of Phase Door
+ Some potions of Restore Life Levels, probably, depending on how often you
  get annoyed by experience drain. If you're fighting a lot of undead, for
  example in the "Paths of the Dead" dungeon, you probably want a bunch of
  these potions.
+ a Rod of Recall
  A rod cannot be destroyed by fire or acid, and you won't have to buy new
  scrolls of WOR since the rod never runs out.
  A rod of recall is especially useful to travel between towns, so you won't
  burn through a lot of scrolls just for visiting all the town stores.
+ Lots of Scrolls of Identify (up to 99!). If you're great at handling magic
  devices, maybe get a Rod of Perception. It does the same thing as a scroll of
  Identify, but you might want one 'of charging' or 'of the istari'.
+ Several Potions of Speed
+ Some Potions of Resistance, since they stack with resistance from items.
  Always quaff these when fighting dragons, demons or hounds.
+ Potions of Healing
  These potions heal you way more than pots of cure critical wounds. However,
  they are more expensive.
+ Maybe rods for support: Trap location, disarming, detection.
+ Some Scrolls of Teleportation.
+ a "Sprig of Athelas"
  This one cures "Black Breath", which you can get infected with if you fight a
  Nazgul (ring wraith)! Normal high undead monsters have a very slim chance too
  to give you Black Breath.
  You can leave the sprig in your house since Black Breath saps your soul very
  slowly, so there should be enough time to finish business in the dungeon and
  recall to town afterwards to eat a sprig. (See (4.11a) for more information
  about Black Breath.)
+ Scrolls of *Remove Curse*. These are expensive in the black market, but are
  sometimes sold in the temple cheaply, so always check the temple when you
  come by. You will want these for getting rid of heavily cursed items, such as
  Nazgul rings of power that you don't use.
+ Potions of curing insanity. If you find these, pick them up and store them in
  your house! If you encounter a sanity-blasting monster you will want to have
  these to restore your sanity after the fight.

Very high characters (36 and above)

+ Satisfy Hunger scrolls or Lembas
+ Potions of Healing
+ Potions of Speed, if you don't have magic providing this
+ Potions of Resistance, if you don't have magic providing this
+ Scrolls of Teleportation
+ a Rod of Recall (mainly for travelling between towns).
+ Support rods, such as Trap Location, Detection or Disarming (especially
  useful for clearing vaults).
+ Sprigs of Athelas, scrolls of *Remove Curse*, potions for curing insanity
  (these supplies can be stored in your house, no need to carry them with you).

(8.2) Preparing the equipment for diving into the dungeon

Depending on your character level you will need to equip certain items before
entering the dungeon. Here are some guidelines for your equipment:

Beginners (level 1)

+ Lantern

because it provides light within a radius of 2 fields instead of 1 field of
    a torch.
+ A ranged weapon as soon as possible (a boomerang if you use martial arts).
  Don't forget the ammunition ;)
  Try to get a sling or even better a long bow as soon as possible,
  especially if you are weak at hand-to-hand combat.
  At the beginning a ranged weapon can make all the difference and help you to
  proceed quickly. Enchant the bow to (+hit,+dam) where +dam helps a lot to
  increase the total damage you inflict on enemies, since it's multiplied by
  the bow's power factor.
  Note that martial arts users can only use boomerangs, other ranged weapons
  will nullify their Martial Arts skills.
+ An appropriate melee weapon (except if using martial arts, eg Druids!)
  Check out how many blows per round you get with a light dagger, whip,
  cleaver or spear, depending on your favourite weapon class. If you get more
  BpR than with your starter weapon, switch!
  If your character has only one blow per round even with light weapons, choose
  a heavy weapon that can deal more damage in one blow. If your character is
  low on strength, pay attention that you don't buy a weapon that is too heavy
  to use at all. You can press 'x' in shops to examine weapons (and all other
  items), to check if you can benefit from buying it or not.
  If you have only 1 BpR, make sure to dual-wield if your character can do that
  because that will give you a bonus BpR. Don't forget that you cannot dual-
  wield with heavy armour. Rogues should always be dual-wielding.

Low level character (up to 15)

+ Enchant the damage of your melee and/or ranged weapon a bit using "Scrolls
  of Enchant Weapon To-Dam"
+ Get some armor. Note that certain armor can decrease your dexterity or
  spellcasting abilities, partially because it is too heavy. Also some weapons
  will become less powerful if used together with a shield, and some weapons
  cannot be used at all in conjunction with a shield. A fighter should have
  approx. 30..45 AC or more.
  Before buying a piece of armour in a shop, press 'x' to examine it. This will
  tell you if you'd get encumbered wearing it.
+ Buy a fire resistance ring as soon as possible because many monsters can use
  fire spells early on. Also get an acid resistance amulet maybe, since acid
  damage is especially nasty to your inventory and equipment.
  If you're an Ent, early on fire resistance is absolutely mandatory.

Medium level character (up to 25)

+ Enchant your melee and ranged weapons to at least +8 to damage! Best would
  be (+9,+9) or maybe even (+10,+10). Going over +10 is not feasible with
  normal enchant scrolls, you can use *enchant* scrolls later on.
  You could also ask a high level character if he/she helps you by taking your
  weapons, armour and ammunition to one of the shops that offer an enchantment
  service. Those shops can enchant the items quite high, depending on the level
  of the customer. It's costly though..
  Don't sell scrolls of *enchant weapon* or *enchant armour* if you find those,
  but use them to enchant your items above +9 and up to +15!
+ A fighter should have approx. 40..70 AC or more.
+ Get "Fear Resistance" also know as "Boldness".
+ Get Free Action. You should have this before going much deeper than 1000 ft.
  It prevents you from being paralyzed by traps or monsters.
+ Get the 4 basic resistances, which are: Lightning/Electricity, Acid,
  Frost/Cold, Fire/Heat.
+ Consider buying a small house to store backup equipment or special items
  instead of carrying them around with you.

+ If you manage to find an item that lets you telepathically sense trolls, keep
  it. Use it to locate troll pits, those tend to give a lot of experience!
  Typical items that provide troll-ESP are dwarven helmets or weapons of
  slay troll. (ESP = extrasensory perception, ie the ability to sense a
  presence telepathically without a direct line of sight).

Higher characters (up to 35)

+ A fighter should have approx. 65..100 AC or more.
+ Try to get a lantern of Brightness or even *Brightness*, a Dwarven Lantern
  or a Feanorian Lamp. These provide more light and/or don't need to be fueled
  and cannot be extinguished. They may also have some special abilities like
  preventing you from getting overwhelmed by fear!
+ Get "See Invisible" if possible. Some very nasty monsters are invisible and
  "cold-blooded", that means they cannot be seen by infra-vision.
+ Get Poison Resistance! For example Boots of Mirkwood provide poison
  resistance. Also Elven armour often provide it. If you are trained in the
  art of mimicry, you could try to use the form of a monster which has poison
  resistance intrinsically. Drolems and other monsters might insta-kill you
  without poison resistance.
  Elven armour also provides base resistance and has a chance to provide an
  additional 'high' resistance, so it's really useful to get your resistances
  covered. Elven armour is not that expensive and not that rare. If you can't
  find any, ask other players or check the player stores (there tend to be a
  lot of player stores around the town of Gondolin) for offers!
+ Try to Get Confusion Resistance, so you can always read teleport scrolls!
  Note that chaos resistance also provides confusion resistance.
+ Get Nexus Resistance. Nexus attacks can scramble your body, swapping your
  stats, which can mess up your character. (See (5.6).)
+ Try to get Blindness Resistance, so you can always read teleport scrolls!
  Helmets or Caps of seeing give this!
+ Before venturing into Mordor you should have basic (fire/cold/lightning/acid)
  and poison resistance and 'free action' (paralysis resistance).
  Confusion resistance and nexus resistance are a plus.
+ Try to get Hold Life.
  This prevents your life force from being drained, making you lose experience
  and going back in character level. Cloaks of Teleri Hold Life and provide
  Free Action too.
+ Try to get items that provide ESP.

Very high characters (36 and above)

+ A fighter should have at least 90 AC. He might also have already AC as hhigh
  as about 130 at level 36 if he is lucky.
+ Get as many high resistances as you can.. You will want Nether, Nexus,
  Disenchantment, Chaos, Sound for example. Note that Saruman and many high
  undead monsters (L and W) have disenchanting melee attacks that waste your
  equipment pretty badly if you don't resist disenchantment.
  Sound resistance will prevent stun effects, which if they accumulate can even
  knock you out completely, leaving you unable to do anything at all!
  Also, your damage and spell casting chance are reduced while stunned.
  Notorious for k.o. are Water Hounds, Impact Hounds, to some extent Gravity
  Hounds, and *especially* Plasma Hounds.
  Note that "Feather Falling" provides resistance to gravity damage.
  ('Levitation' automatically includes feather falling, by the way.)
  Nether and Chaos drain your experience if not resisted (can be cured with a
  potion of restore life levels or according magic). The great thing about
  chaos resistance is that it includes confusion resistance! So if you were
  wearing a ring of confusion resistance, just replace it with a ring of chaos
  resistance and you are set.

+ Get "See Invisible", various nasty monsters are invisible.
+ Get items that sustain your stats, for example a Robe of Permanence if you
  wear light armour, or a kolla (it's a cloak) if you're a fighter class.
+ Get full ESP: Crowns of telepathy typically provide these.
  Some classes have an ESP spell available so they don't need ESP items.
+ Get Randarts (randomly generated artifacts) or Artifacts (predefined
  artifacts / static artifacts) for melee weapon:
  You will have to fight ring wraiths. Normal weapons, even those from
  Gondolin or the most powerful *Defenders* will quickly shatter if they come
  in contact with those corrupted creatures of terror and hate.
  Your only way to fight them is to equip an artifact since these resist ring
  wraiths greatly - their chance of getting destroyed when striking a Nazgul is
  1 in 1000, compared to a few hits for non-artifact weapons.
  (Note that the 'Stormbringer' counts as an artifact in this regard.)
+ You will want items that permanently increase your speed!
  +10 speed or +20 speed will make you approximately twice or three times as
  fast as you usually are. Note that the curve will become flatter the higher
  your speed is, so at some point, increasing your speed any further might be
  less beneficial to you than boosting your attack speed (items that give extra
  attacks) or your critical hit chance (items that give critical hits).
  Use the target dummy in town to test your actual damage output and compare,
  the /tym (test your might) command may prove useful.

(8.3) Surviving critical situations

Not getting into a critical situation:

Best thing is to not get into a critical situation at all.
To help you estimate the threat of a particular dungeon floor, there are
'feelings' your character may get when you enter the floor:
When you've spend some time in town or on a dungeon floor, your depth number in
the bottom right corner will turn light-blue. This means that you will get a
special feeling on the next dungeon floor you enter, displayed in yellow.
That feeling will tell you about the threat of that particular floor, so you
may consider leaving it again if it sounds too nasty. See (4.8) for details.

Map structures:

There are certain situations and constellations that will occur often in a
very similar manner. Here are some of them, together with some advice how
to manage it.

-A pack of approaching monsters (here orcs), often orcs or trolls:

```
#########   #  #
#  ooooo#   #  #
#  ooooo#####@ # <- stand there to intercept the incoming orcish horde.
#   ooooo oo  #    As soon as three or four of them stand on adjacent fields
#        o    #    move up one field to limit the attackers to 3 at a time.
############  #    Sometimes the AI is very smart and monsters will try to
           #  #    surround you anyways. Phase door scrolls will help you out
                   then.
```

-Usually, animal packs will retreat if you chase them in hallways, and will
 only attack if you enter a room or if your hit points are around 50% or worse.
 You might want to just take them out with a bow or another ranged weapon
 instead of chasing them.
 If you decide to chase them to the next room make sure you have enough phase

door scrolls and healing pots to win a fight where you are attacked from all
sides at once.
If you try to chase them through corridors, use the 'Sprint' fighting
technique in case your character has learned it (see (7.12)).

-If you prefer close combat over ranged and your character can use fighting
techniques, make sure to use the 'Sprint' or 'Taunt' technique to catch
annoying monsters like shamans or priests that otherwise try to keep a
distance.

-The range of your missile weapon (slings, bows, crossbows, boomerangs) is
often greater than your own range of sight when it comes to dark hallways.
Just by shooting into the dark you can take out monsters, if you know they're
there.

-If you open a door, especially doors to pits with unknown content, be very
careful and open the door diagonally to have as little creatures as possible
see you from inside the pit. If you open the door to a so-called "jelly pit"
(contains icky-things, jellies, mold, mushroom patches) you might be
insta-killed otherwise. Here is how to open the door:

```
#######
#jm$,m#
#$m,jj#
#ijmm,#
#,mjjj#@ <- stand here and open the door diagonally
#j$m,i+ <- don't stand here or more monsters will see and immediately
#######    target you from inside
```

Prepare to close the door again as quickly as possible, it might be needed
(or just teleport away). In general you should leave jelly pits alone.
Coin pits (lots of '$' inside) can also contain very powerful mimics!

-If you fight monsters that can cast ball spells or breathe on you, be aware
that they might target a field adjacent to you and hence still hit you (thanks
to the radius of the spell around the actually targetted grid) even if they
cannot target you directly!
Similar goes for monsters who can cast summoning spells.

-Pack monsters can be very nasty if those farther away from you can still
shoot or cast spells over the heads of their comrades in the front line, from
behind, novice paladin packs come to mind at low levels.
In that case you should make sure that only very few of them can see you at a
time. If your health suddenly drops, teleport away at once, or at least
retreat behind a corner.

-Sometimes it might be a good idea to use a "Stone-to-mud" or "Trap/Door
destruction" spell to open a door from a distance.

-For weaker characters it might be a good idea to stay around 1000..1500 ft
and try to get enough stat potions (potions that raise your six primary
stats, STR INT WIS DEX CON CHR) until they have a considerably high amount
of hit points and/or combat potential before they dive deeper!

-If you fight a monster that is capable of casting powerful summoning spells,
teleport at once if any summoned monsters appear around you!
Don't hesitate for a split second, just to "check whether that was actually
a dangerous summon or whether you might just take on all of them on".
Hesitating in order to do so may well be your death sentence.

Some monsters that people often get killed by are:

–At very low levels there are especially 2 death causes:
 a) Pack monsters that have ranged attacks and fire at you all at once. See
    the map structures section above.
 b) Monsters that are simply a little bit faster than you so you can't run
    away if you decide that you can't beat them.
    Don't forget to use your 'Sprint' or 'Flash Bomb' fighting technique if
    you have learned it, might be useful to get away, or even to kill your
    opponents instead.
    See (8.1) and (8.2) how to equip yourself to minimize risks.

–Sometimes you will encounter a 'Spectral' ego monsters very early. These are
 very rare, so you are just a bit unlucky in that case.
 They can paralyze you if you lack free action, which makes them deadly for low
 level players, as those usually don't have FA yet (except for gnomes).
 Your best bet is to dps it down as fast as possible with strong ranged attacks
 or to teleport out on sight if you already have a means of teleportation.

 If you are in a team and have ranged attacks, these should pose no problem
 though, as long as the player with ranged attacks isn't the one getting
 paralyzed. Just don't let them touch you, or they will drain your experience
 big time.

–If you recognize that you cannot win a fight and it will likely end deadly
 it might be a good idea to read a scroll of Word of Recall as early as
 possible and then try to survive until it kicks in and carries you to safety.

–Druid ego monsters, for example druid snotlings or druid kobolds. They can
 appear at very low level and they are able to cast firebolts that insta-kill
 you (instantly kill you).
 Again you should try to utilize fighting techniques if you can.

–Runemaster ego monsters, basically same as Druid ego monsters mentioned above
 but can use a wider variety of elemental spells of high damage potential.

–Elite Uruks, they fire extremely sharp arrows, always posing a high threat.

–Chieftain/Warrior/Monk/Unbeliever monsters of any kind. You will often see
 someone being killed by a hill troll monk or forest troll chieftain for
 example.. Prepare to hit your phase door macro if you spot a shimmering
 extraordinarily fast moving monster within a potentially dangerous mob.
 Especially dangerous are such ego versions of a base monster type that has
 elementally branded melee attacks. You should quaff a potion of resistance
 when fighting those to reduce the elemental damage part of their melee
 attacks.

–Veteran archer/Master archer monsters of any kind can pose a very high
 threat. Better get reflection ability if you are planning to fight these in
 a ranged duel.

–Hounds with breaths that need a high resistance or that cannot be resisted at
 all. For example..
 At lower levels: Air hounds, Nexus hounds, Vibration hounds, Impact hounds,
                  Inertia hounds, Aquatic & Water hounds (avoid aquatic &
                  water hounds especially; the others still give very good
                  experience at a reasonable danger exposure.)
 At higher levels: Plasma hounds, Gravity hounds, Time hounds, Aether hounds,
                   Hounds of Tindalos (beware of Gravity & Time hounds
                   especially, Aether hounds can also give you some surprise).

–Dark-Elven Warlocks. These belong to the few monsters that can cast mana
 bolts, which inflict very high damage. Even worse, DEW (Dark-Elven Warlocks)

appear in packs. Beware!

−Will o' the wisps are very hard to spot and catch, their curses are
 devastating.

−The Glass Golem drives everyone insane whom it manages to hit, high AC helps.

−Drolems. A constructed dragon that will breathe poison for high damage and
 takes a lot of hits before ceasing to function.

−The Stormbringer, an animated blade that bears mad wrath within. It swings
 so powerful that it can knockout its enemies with ease. Defeating it,
 however, will make it usable to its vanquisher (unless you are royalty, in
 which case it will not drop)!
 If you dare wielding this weapon be prepared that it will defy you and even
 attack your own allies, possibly killing them! Only towns are safe zones.

−Ulik the Troll. He is so strong that his hits cause earthquakes and he cannot
 be stopped by (non−permanent) walls. Beware his prowess in melee combat!
 Also he moves surprisingly swiftly!

−Dracolichs and Spectral Tyrannosaurs. They have high hit points and are able
 to breathe nether, which means their damage will be maxed out.
 A dark/light green blinking D is actually a Death Drake, and although it can
 also breathe nether it is much less dangeours than a Dracolich because of its
 low hit points. Dracolichs and especially Spectral Tyrannosaurs can occur on
 fairly low levels (usually 55 and 46) which makes them a very nasty surprise.

−Wyrms. The base element variations of these (hell, ice, storm, bile and swamp)
 as well as the multi−hued one do look exactly like ancient dragons, but are a
 magnitude stronger. So make sure to 'l'ook at that "dragon" before waking it
 up or it might be too late. In particular you *need* potions of resistance,
 of speed and of healing to take on a wyrm.

The most powerful representant of each class:
−Ranger chieftains are tough opponents who can nail you on the spot and
 use magic attacks as well as summon.
−Knight Templars, powerful paladins who are immune to holy attacks and
 are even able to call an angel for support.
−Patriarchs, these unfaltering priestlords can summon and curse rapidly.
−Master Mindcrafters, their ability to summon mighty support and to smash
 your brain by psi attacks is feared.
−Old sorcerers are able to summon ancient dragonkind and wyrms, beware!
−(Grand) Swordsmasters, most skilled swordsmen that will disarm you easily.
−(Grand) Master mystics, most powerful martial artists. With their special
 moves they can manage to stun you easily. Best remedy is high AC so
 they won't hit you in the first place. Alternatively you can quaff potions
 to remove any stun effect.
−(Grand) Master thieves, very fast and stealthy they steal your possessions!

−Unique enemies. If you see a monster blinking in different colours, before
 trying to kill it you should consult other players or 'l'ook at the monster,
 to find out whether it is an unique monster. If so, then you should examine
 it by pressing ˜ 7 in game to look up its abilities and make sure you are
 prepared to fight him. If possible, consult fellow players for their opinions.
 (You can also check r_info.txt, see (8.4) for more info about spoiler files.)

−If you see an enemy that you don't know anything about and that could pose a
 threat (especially if it's inside a vault!), STAY AWAY and consult either an
 experienced player or look it up by pressing ˜ 7 to find out what the
 opponent is capable of.
 The safest (and most boring and least rewarding) way to play is to avoid

vaults! Vaults can contain an enemy against whom you don't have the slightest
chance of winning. Vaults however can also contain great treasure!
 (See (4.6) for more information about vaults.)

-The most powerful monsters of the demon realm, the dragonkind and the
 heavenly planes, namely Star-spawns of Cthulu, Great Wyrms of Power,
 balance keepers of the skies, sun and stars (Blades), Nether Realm guards.

-Blinking 'A' (unique angels) or 'U' (powerful or unique demons) as well as
 bright coloured 'U' (greater demons) and blinking 'W' (zephyr lords or
 Nazgul) always pose a high threat. While Zephyr lords aren't that strong on
 their own they are able to summon packs of hounds which can mean a swift doom
 if those have dangerous breathing attacks.
 Some other dangerous demons are..
 Servitors of the outer gods, Lords of Change, Greater Balrogs,
 Bloodthirsters, Pit Fiends, Great Unclean Ones, Keepers of Secrets.

-High undead can also pose a high threat and are responsible for many a death,
 those are Nightwalkers, Nightcrawlers, Nightwings and their likes.

-Nazgul have quite some chance to destroy your melee weapon if you hit them!
 In case your melee weapon isn't your main way of fighting you could inscribe
 it @Ox before fighting a Nazgul to avoid auto-retaliation and then use
 spells or whatever to destroy it. If you rely on melee weapons get an
 artifact since these resist Nazgul greatly!
 However, you probably still don't want to risk your best artifact weapon,
 so try to get a worse artifact which you can solely (ab)use for fighting
 Nazgul. Some people are rumoured to defeat Nazgul with nothing but their
 ability to read, although they aren't even remotely magically talented..
 (Compare (1.3a).)

-Unique 'P's are often very dangerous, some say the most dangerous next to
 Morgoth himself is Nodens, Lord of the Great Abyss.
 He has the TPORT (teleport) spell and is therefore able to teleport WITH YOU
 when you try to teleport away from him, provided you are within melee range
 of him when you teleport.

   Mistakes / Carelessness:

-Further, players are often killed if they lack resistances and/or free action
  (against paralysis) but nevertheless dive down into the dungeon very
  quickly.

-Teleport out of trouble
  If you are not an anti-magic-user, you should buy a staff of teleportation as
  soon as possible since it can take you out of dangerous situations.
  However, the staff is no guarantee :)
  After you bought it, try if you can actually use it well or if you keep
  failing! If you're not good at magic devices you might have to spend points
  into your 'Magic Device' skill.
  I recommend to always have at least 3 charges in the staff before diving into
  the dungeon.
  Another possibility is to use a Scroll of Remove Curse (buy it in the temple
  ie the green '4') on a Ring or Amulet of Teleportation. Try to activate one
  of them.

-Quaff potions of cure critical wounds or healing if you get (heavily) stunned
  to prevent a lethal knockout in the next round! Further you can't use martial
  arts special moves while stunned, cutting your damage a lot.
  Get sound resistance to not waste potions to cure stun effects from
  water/sound/gravity/ice/plasma attacks.

-Don't wait till you are a '1' or '0' before you try to teleport out.
 If you want to be on the safe side, teleport out when you are a '4' or '3'.
 Remember that your teleport staff may fail sometimes.

-Before AND after a larger fight, check your inventory if you can carry on
 or if you have to return to town to stock up. A common problem is that some
 monsters can drain charges from or burn up your teleport items, which you
 might overlook.

-If you are surrounded by huge piles of loot from dead monsters you might be
 tempted to drop cheaper items like phase door scrolls to make room for the
 precious loot, and go /afk to wait for pseudo-ID. However, know that you
 can all of a sudden be ambushed during that time by enemies. By enemies
 that _require_ you to use phase door..

-I do not recommend to drop food nor oil in exchange for loot if you're not
 planning to recall instantly after you picked up the loot.

-If you team up, make sure that you stick closely together all the time.
 Wandering off usually greatly increases both players' risk of death!

-Learn from your mistakes. If you die, think about if you were taking too high
 a risk, and check if you overlooked anything, maybe you were missing
 essential items (cure critical wound potions to get rid of confusion and
 blindness).
 Next time, be more careful. Playing TomeNET means learning a lot about the
 monsters/items.

Teamplay:

-Team up with fellow players that are approximately at your character level.
 This means more fun and less danger. Your teammates can save your life and
 support you with helpful spells, items and knowledge.
 A player in a party gets a share of experience points from the kills of other
 party members if they are within 7 levels to the player.
 A character cannot gain any exp from a monster which has previously
 encountered a player more than 8 levels higher than this character himself.
 (So there is 1 level tolerance towards sharing experience.)
 For winners (queens/kings/empresses/emperors) the range in which they share
 experience is as far as 11 levels.
 Winners don't share experience with non-winner characters.
 If a party member gets reduced experience because his level is too high
 for the dungeon floor, this penalty will affect all of his team mates on this
 floor too, even if their level is lower. This means the party should always
 dive at the optimum depth for its highest member.
 See (7.9) for details about partying!

-Good combinations are the classical meat shields / damage dealers /
 supporters. Mages usually make a great team with whomever they team up.
 Keep your teammates in mind and don't teleport out if it meant
 certain death to them while you could still take some hits.

-Make sure you stick together with your team mates. If you wander off instead
 of staying close you will greatly increase your risk of dying to something.

Manage your spells and items:

It can happen often that you die in a specific situation that you could have
survived had you actually used everything at your disposal, that you forgot

about, either because..

-you panicked. It happens often that you do have all sorts of consumables or
 devices on you to handle a situation, but you forgot to actually use them and
 now you are dead. A good way to improve here is to make macros for these
 consumables, such as cure poison mushrooms, or potions or scrolls, or even a
 staff of slow monsters or whatever else you got.
 I have often seen players getting killed in situations they could have EASILY
 handled just because of the 5 different items they could've used they actually
 used none.
 Another true classic are warriors who die to some orc pack and still had their
 starter potion of berserk strength when they died.
 At the very least buy a scroll or staff of teleportation when you can afford
 one and macro it as a get-out-of-jail-free card.

-you expected a new, strong opponent to perform just as weakly as the other
 hundred monsters you slew before even though it gives away that it is special
 by its blinking colour or by being represented by a symbol/letter that you are
 not familiar with and haven't seen before in that dungeon.

-you didn't prepare properly before going into the dungeon:
 Of course you should buy some means of phase door and healing, but also
 some basic resistance rings or amulet.
 Don't forget to enchant your armour when you can afford it.
 And what I see especially often are players making their own lives harder by
 not buying a spell they could already use. If you train some holy/magic skill,
 you should verify if you can use a new spell now and buy it in the book store.
 It seems that some players vastly underestimate the benefits of some spells,
 so just give it a try when you learn it, maybe on some 'safe' monsters.

Some examples:

-Forgetting to apply a buff, such as a berserk strength potion or resist heat
 against strong fire breathers (which are rather early threats in the game).

-Neglecting to use a protective/defensive spell before engaging in a fight.

-Not casting 'damage-add' spells, ie spells that don't deal high damage but
 that deal _additional_ damage to your main damage spells, which is a welcome
 bonus that can make a difference. Examples are mainly storm-type spells but
 can also be cloud spells, ie all spells that continue to deal damage over time
 after being initially cast, allowing you to cast direct damage spells in
 addition to them being active, increasing your total overall damage output.

-Not using items because you weren't aware of their beneficial uses. Such as
 throwing a potion of salt water at a pack of monsters that is trying to
 surround you, to temporarily blind them (which has the same result as applying
 confusion state to them), allowing you to either escape or kill them while
 they're groping around blindly, even though it only lasts for a moment.

(8.3a) When you are stuck

If you ever get stuck in a problematic situation such as..

- you just died, oops! And you aren't sure how to go on or you'd like some help
- you can't kill a certain monster you just met that you'd really love to slay
- you've been trying to kill a boss monster for some time, already wasted a
   fortunate on consumables (potions or scrolls) and still can't scratch it
- you're having trouble advancing your character the way you'd like, experience
   points seem to come in at a crawl while everything out there seems lethal!

then it's time to.. talk to your fellow players in chat, looking for advice!
More often than not there are a lot of possibilities to overcome your hardship,
of which many might be simple but totally not obvious until pointed out!

So just press that : key and write in public chat what's on your mind. Be aware
though that often people are either AFK or busy in the dungeon. It is often
lethal to chat while being in the dungeon, so if nobody seems to reply just be
patient and wait. People are usually not impolite but just don't notice it
because they're caught up in some fighting or just AFK for a prolonged period
of time, such as a few hours even, but more often than not are very willing to
help when they return and see your request!

In very urgent situations such as when you died and have suspicions that nasty
wall-passing monsters are still around and could get your ghost too any moment,
aside from screaming for help in chat you could also use the /page command to
try and page another player who isn't paying attention to the screen.
The /page command will (if he has turned on sound) cause his client to beep, to
catch his attention. Since this can be a bit annoying you should reserve it for
emergencies :).

There have been many, many cases where people thought they hit a wall
unsurmountable just to realize a little hint was all they needed to spot what
was going wrong! So don't hesitate to communicate.

A word of warning - if you brought a newbie friend of yours to the game, do not
try to 'give him an easier time' by stuffing him with powerful items in the
beginning (also dubbed 'cheezing').
This will only cause him to not get any grip of the very fundamentals of the
game and get helplessly lost and frustrated when he hits a wall at later levels
such as 30..40. You will do more damage than good, promised.

(8.4) Spoiler files

In the folder tomenet/lib/game you find several data files containing
various information about all monsters, items and other features of TomeNET.
These files are named X_info.txt and can be read via a normal text editor.
The most important files are:
a_info.txt contains all artifacts.
            (You can also access this information in-game by pressing ˜6 .)
r_info.txt contains all monsters.
            (You can also access this information in-game by pressing ˜7 .)
            Alternatively, visit Mikael's monster search website via ˜R .
k_info.txt contains all base item types.
e_info.txt contains all ego item types.
All files contain a block of information, either at the beginning or at the
very end, which explains the meaning of each discrete info-line.

(8.5) Monster tactics

Monsters may follow certain schemes regarding their movement, target selection
and spell-casting.

Movement:

Rather mindless monsters might just try to get to the player straight away
while more clever monsters might try to avoid being kited, depending on their
hit points or if there are buddies around. Also, some pack animals might avoid
to encounter you in hallways but jump you all at once when you enter a room or

when your hit points drop to around 50% or worse.

Target selection:

When a monster has multiple players next to it it might choose its target depending on its cleverness, power and health state. For example it might go for the target it perceives as most squishy.
Players may counter this by using techniques such as Taunt or Distract.

Spell-casting:

Despite appearing random sometimes monsters prefer certain spells over others.
If a player is close a monster might especially try to blink away to continue to throw attack or summon spells at the player from afar.
If a monster is low on HP or scared it might try to use escape spells and if it's low on HP or stunned it might emphasize heal spells (the chance to successfully cast those is also negatively affected by stun same as all other spells - compare (4.12)).

(8.6) Town/dungeon related tips

-Before going as deep as 1000 ft (ie dungeon level 20) or deeper, make sure
 that you have 'free action' because many monsters will be able to try and
 paralyze you.

-For Mordor make sure you have the four base resistances and also free action.
 You might also want to get nexus resistance as soon as possible because nexus
 attacks can swap your six character attributes randomly.

-For Paths of the Dead you should also have nether resistance and 'hold life'
 because many undead monsters have nether-based attacks or can drain your
 experience points.

-When going even deeper the next resistance you want is probably chaos, since
 it can deal excessive damage and potentially deadly side effects (experience
 drain, hallucination and confusion) all at once. After that maybe comes
 disenchantment resistance to protect your equipment, or sound resistance to
 avoid getting knocked out by certain attacks such as sound, and especially
 water and plasma (hound packs of those types can knock you out quickly).

-In Gondolin mindcrafters and archers may spawn. You should enter the local
 inn if you want to go AFK so you don't get killed by their ranged attacks.

-Minas Anor, Lothlorien and especially Khazad-dum can spawn swordmasters or
 even grand swordmasters, which can disarm you and deal heavy damage. Beware.

-Before challenging a dungeon boss, look it up in the monster lore (press ~7)
 because dungeon bosses sometimes have extraordinary abilities or stats that
 you want to be aware of. They do give extraordinary amounts of experience
 points and sometimes special item drops too.

(9) Miscellanous
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(9.1) 'The Art Not To Die'

You died. Hm, very annoying indeed. If you are a "No-ghost" or "Hellish"
character, then you are wiped out now. Otherwise you became a ghost on the

same dungeon level as you died on. Your items are scattered on the floor, now
what to do? The items will disappear forever if you leave that dungeon level
and noone remains down there to "keep the level static" or "hold the level",
as the technical terms are. If you think you really need the items, ask
someone to get down to your dungeon level and either revive you there using a
'Scroll of Life' or pick up your items and give them back to you in town after
you revived in the town's temple (green '4').
If your character level is still very low, you can just decide to suicide and
start over. That is sometimes easier.
In TomeNET you will often encounter new situations that can lead to death. The
most important thing here is that you keep in mind your mistakes of the past
to prevent them from happening again. A key to winning is a firm knowledge of
the monsters that you encounter, so you will be able to decide if you should
attack or flee.
In my opinion playing TomeNET can be called "the art not to die".

Notes:
 - As an everlasting character you can somewhat cheat death by activating
   "Instant Resurrection" in any temple, see (4.5a) for details and drawbacks.
 - You can use the /page command to get someone's attention if he seems afk
   and you need his help. This command will make his game client beep 3 times.

(9.1a) The worst kind of help

If you play with a newbie friend, don't spoil him by giving him powerful items
or have him stand back in safety while you clear all monsters.

This will prevent him from learning anything about the game, deprive him of any
adrenaline-pumping challenges that make us addicted, and you will kill his fun
very quickly.

When he finally dies at medium level, he will have no idea what is actually
happening and also have no feeling about why is is actually playing this game
at all or what's so fun about it.

You are destroying your friend's gaming experience by babysitting him,
it's the worst kind of "help" you could give.

Instead, create a new level 1 character to team up with him, do not take any
pre-existing items or gold with you, as if it was your first day of TomeNET.

(9.2) Character Dumps

You should send in character dumps, if you have reached an intermediate level,
to http://angband.oook.cz/ or if it died an interesting death or if something
unusual happened to your character, or if you just want to show off your
special way of distributing skill points. Character dumps are always nice to
view. :)

You can create a character dump by invoking the character screen by pressing
'C' and then pressing 'f' (as it states at the bottom).

Character dumps are automatically created in your /TomeNET/lib/user folder
(or C:\Users\<yourname>\TomeNET-user on Windows) if your character dies.
The filename is charactername-death.txt, for example Gandalf-death.txt.
(no overwrite-check is performed, but date and time are added to the name.)

Clients of version greater than plain 4.4.2 will also generate an automatic
dump when you win the game by defeating Morgoth. Following above's example,

it will be named Gandalf-victory.txt accordingly.

Also, newer clients will automatically take an xhtml screenshot too when a
char dump is made, of same name but with .xhtml ending. Those can be viewed
in most webbrowsers. To manually take an xhtml-Screenshot at any time, press
CTRL+T. To take a PNG screenshot press CTRL+SHIFT+T.

(9.2a) High Score

The high score is just for bragging and has no further purpose in-game.
Everlasting and PvP mode characters cannot enter the high score.

During gameplay you can invoke the high score table with '#' key or ~ c.
If your currently calculated score would he high enough to enter the high score
in case you died now, you will be able to see your own entry in the high score
table, so you can always check where you stand. Note that you can see yourself
in the high score even if you aren't eligible to really enter it because of
your character mode, so even everlasting players could check where they "would"
stand, in theory.

The high score is based on the character's experience (XP), its level and its
expfact (that is the internal name for race/class-dependant experience penalty,
eg lowest for yeek, highest for maia, and similarly for the classes).

Further boni are applied for being unworldly, hellish or playing a dedicated
IDDC-slot character. These stack, so the highest score bonus is achieved by
playing a hellish IDDC-exlusive mode character.

(9.3) Golem creation

Players can create golems, mindless animated humanoids that will fight for
them. As long as the golem is not in their way of moving, monsters won't
attack golems, but instead the controlling player.

Although golems can kill monsters, you don't get credit for it and they are
more of a fun feature than a serious enhancement to your character, so don't
be too hell-bent on creating a golem or you will be disappointed.

To create a golem, you will need these parts - note that except for the scroll
of Golem Creation, which belongs into the 'magic' treasure class, all other
golem items, including the command scrolls, belong the 'junk' treasure class:
(For more information about treasure classes see (6.3).)

  -A 'scroll of Golem Creation'
  -A massive piece of a specific material
  -Arms, up to 4. (Arms are optional, but without arms it cannot attack!)
  -Legs, must be exactly 2.
  -Command scrolls (see below). If a command scroll is not in your inventory
   when you create the golem, it will not understand that command later on even
   if you acquire that type of scroll afterwards! So make sure you carry all 3
   command scrolls before creating it.
   (Command scrolls are not consumed upon golem creation.)
  -Optionally, further items can be provided to add extra properties to the
   golem, see a bit further down in this paragraph about '@G' inscription.

After the golem has been created it will start out passively, not following any
particular command. It will just sit there doing nothing. To actually control
it and make it do something you will need 3 command scrolls. These aren't read
but activated, meaning you don't use 'r' key but 'Shift+a' to toggle them.

On activation they toggle the golem's behaviour. They are infinitely reusable.
If you toggle a scroll a second time, the golem will return to sitting around
idly, doing nothing.
The scrolls are:

-A 'Golem Scroll of Attack'
 When activated, the golem will move towards your current target (provided it
 is actually hostile) to attack it.
-A 'Golem Scroll of Guard'
 When activated, the golem will automatically attack any hostile creature
 that moves up next to it.
-A 'Golem Scroll of Following'
 When activated, the golem will follow you around as long as it has nothing
 else to do (no guard/attack command being executed), see below:

These three command stack. For example you can activate both 'attack' and
'following' command, in which case the golem will follow you around, but as
soon as you target any hostile creature it will go to attack it!

If you have gathered all these items in your inventory, read the scroll of
golem creation!

Each arm will inflict (x)d(arm value) damage on a target.
The arm value is displayed in brackets, part of the item name.
The 'x' are listed in the materials table below.
Example: A 'Golem Arm (+8)' of an 'Iron Golem' will do 6d8 damage which means
that each hit will inflict between 6 and 48 damage (27 on average).
Each leg will increase the golem's speed by the number displayed on the leg.

The material determines armour class, hit points and the damage dice count of
the golem. Materials are:
    Wood   20 AC, 10d10 hit dice, 2 damage dice.
    Copper   40 AC, 10d20 hit dice, 4 damage dice.
    Iron   70 AC, 10d40 hit dice, 6 damage dice.
    Aluminium   90 AC, 10d60 hit dice, 8 damage dice.
    Silver   100 AC, 10d70 hit dice, 10 damage dice.
    Gold   130 AC, 10d80 hit dice, 12 damage dice.
    Mithril   160 AC, 10d100 hit dice, 14 damage dice.
    Adamantite   210 AC, 10d150 hit dice, 16 damage dice.
Some rumours say that the highest materials can only be found on even deeper
dungeons than where Morgoth, Lord of Darkness resides.

If the creator inscribes items in his inventory with '@G' and then creates a
golem, those items will be transferred to the golem (careful, they cannot be
retrieved!) and fuse with it, bestowing it with their abilities.
The following rules are applied:
-An item 'of life (+x)' increases the hit dice number by x, by up to +3 in
 total (so the golem gets 13dXXX hit points).
-An item that improves the player's tunneling ability bestows the KILL_WALL
 ability upon the golem.
-An item that gives fire or acid resistance will make the golem immune(!) to
 fire or acid.
-An item that gives nether or nexus or disenchantment resistance will give
 the according resistance to the golem.
-Appropriate runes can be used for the resistances/immunities listed above,
 which may be cheaper than using items.
All other items/abilities have no effect.

Golems can't be detected by ESP, they regenerate quickly, they are powerful
and can push past weaker monsters, they can bash doors. They can dig through
rock, they are immune to cold, electricity and poison, they don't know fear
and can neither be confused nor paralyzed. They are immune to teleportation

attacks. Golems have always the maximum possible hit dice. Further, golems
count as '100 %clones', hence giving no experience, items or form credit (for
mimicry users) if someone kills them.
Golems always attack by hitting with their arms for raw physical damage.
A golem has the same level as its owner had at the time of creation.
Golem owners don't get experience for monsters killed by the golem.

*If the scroll of attack is toggled, the golem will attack its master's current
 target.
*If the scroll of guard is toggled, the golem will start attacking monsters
 nearby. If there aren't any, it just waits.
*If the scroll of following is toggled, the golem will just follow its master.
 If a scroll is activated although the according state is already active, the
 golem will stop doing that.

Last but not least, the golem is..
-following you on staircases up/downwards.
-transported with you by word of recall.
-not transported by normal teleportation.
-saved if you exit the game.
-the golem will never attack other players unless you set them to hostile via
 the party menu ('P'). If they are hostile, the same rules as for monsters
 apply (see the description of the 3 command scrolls above).
-never attacked in melee by other players except if hostile.
 Spells cast by other players will always hurt it though.

(9.4) Artifact creation

(Also see (5.9b) for details about artifacts in general.)
"Scrolls of Artifact Creation" count to the most wanted items in the game
because of their power to turn a normal piece of equipment into a powerful
random artifact. Often kings and queens look out for these since they are
unable to use static artifacts, so they depend on rand-arts.
The scrolls are very rarely found; occasions to buy one are fair in the
expensive black market, but also the normal BM may sometimes offer some.

It doesn't matter where you are, what level you are, or whether your character
has 'luck' or not when you read the scroll, the resulting artifact's power is
always determined randomly and cannot be influenced by the player,
except for hit point bonus available for characters that have 'winner' status
(defeated Morgoth), which can be suppressed by inscribing the artifact creation
scroll '!L' (also see 'type-dependant mods' list further below).

Note that randarts created by scrolls of artifact creation do not differ in any
way from randarts that are found instead of created. (With the only difference
that scrolls offer you the '!L' option.) The artifacts' power, price, stats,
abilities and curses are generated exactly the same way, by the same program
code, using the same probabilities.

Here is some advice how to use these most valuable scrolls wisely:

DOESN'T ENCHANT WHOLE STACKS:

-Don't use scrolls of artifact creation on item stacks, it would
 reduce the stack to 1.

ONLY WORKS ON STANDARD EQUIPMENT:

-Artifact creation only works on items that can be equipped - with

the exception of tool items like diggers, picklocks, flints, climbing sets,
backpack safety locks, tarpaulins, mummy wrappings.
These won't work!
Also, it does not work on rings of polymorphing or amulets of telepathy!

DOESN'T WORK ON EGOS / ARTS:

-Don't use them on ego items or artifacts, or you will lose the scroll!

Watch out: 'Indestructible' and 'Cursed' rings are ego items too, so are
'Amulets of Telepathy' and Dragon Scale Mails 'of Defense', so you cannot
art these!
Also you cannot art 'Rings of Polymorphing'!

-Ammo that is '(exploding)' is actually not an ego item! Contrary to intuition,
it is technically just a pval. This means that you can artify basic ammo that
is '(exploding)'.
Note that using exploding ammo instead of non-exploding ammo for artifact
creation does not affect whether or not the resulting randart will actually be
exploding or not, so it does not matter.

THE BASE ITEM MATTERS, ENCHANTMENTS DO NOT (except for jewelry, see below):

-You will want to use the cheapest base item version you can find, because
it will get rerolled randomly anyway. This means that you can even use cursed
items, it doesn't matter (just make sure it's not a ring named 'A Cursed Ring
of...' because that kind of curse is an ego-power!).
For example there is no difference between "arting" a ring of extra attacks
(+3) and a ring of extra attacks (-1) {cursed}. In fact, you should art the
cursed one, because you can still get money out of the (+3) one by selling it
to a store.
However, jewelry that has +hit, +dam or +AC mods is a special case, read on:

HOW IT WORKS ON JEWELRY:

-In general, it's not a good idea to try to turn a ring or amulet that
has high bonus numbers into an artifact, like for example a ring of speed
(+9) because these numbers will get erased and randomly re-rolled. Your great
speed ring will not get more than +7 speed as a randart, much likely less, so
speed rings in particular are very poor targets for artifact creation.
So if you want to use the scroll on say a ring of extra attacks, you should
actually use the cheapest one you can find, like (+1), or even a cursed one.
It doesn't matter, because it will get rerolled randomly anyway, and your
cursed version could just as likely end up as an awesome (+3) high end randart
ring of extra attacks.
However... read on:

-On jewelry (+to-hit,+to-dam) and [+AC] will stay the same, for example a ring
of slaying (+10,+15) will keep the (+10,+15) and an Amulet of Reflection [+13]
will keep the [+13] to AC when turned into a randart, even when it gets cursed.
(Any dice (xdy) as well as _base_ AC [x,+0] on jewelry will always become 0,
but there is currently no jewelry in the game that has damage dice or base AC.)

-When arting jewelry, keep in mind that it does NOT work on
amulets of telepathy, rings of polymorphing or on rings that are named
'a Cursed Ring of..' (because that's not a normal curse but an ego-power)!

HOW IT WORKS ON NON-JEWELRY:

-All boni, to-hit/to-dam/to-ac and the pval/bpval (those (+x) bonus) are
randomly rerolled. So it won't matter what stats the item has, only its
base type is important.

ITEMS THAT ALREADY HAVE ONE OR MORE ABILITIES:

-Some items already possess certain abilities even without ego powers.
For example dragon scale mails or jewelry. Important: The abilities of these
items will be added to the randart abilities when it comes to determining the
total power of that random artifact. That means that you're less likely to see
many additonal abilities on an item which already has several abilities in
it's basic form.
For example it's hard to get extra mods on a Multi-hued Dragon Scale Mail, and
in fact impossible to get any extra mod on a Power Dragon Scale Mail, so don't
waste a scroll on this one.

-However, IGNORE_ flags on items are an exception and do not count into this.
Also, when selecting randart mods, the game will not check if that mod already
existed on the base item (example: 'everburning' mod being added to a feanorian
lamp, which already has that by default ie needs no fuel), so if unlucky it
might seem as if an item did not gain any mods, but in fact it just did not
gain any NEW mods it didn't already possess.

-'Activation' does not tax the base power either. It's a free property same as
ignore-flags mentioned above. (Prominent example: Dragon scale mails.)

-Any mod the base item type already possesses will definitely also be on the
final randart.
Examples: Shadow Blades and Witan Boots will modify stealth, Demon Hammers
will always have SLAY_DEMON mod.
However, there are certain exceptions:
1) if an item gains AGGRAVATE flag in the artifying process, it will lose any
   stealth or invisibility.
2) Slay flags can be upgraded to kill flags. So a Demon Hammer will lose its
   granted SLAY_DEMON flag if it gets KILL_DEMON instead.
3) -Resistances can be upgraded to immunities. So a Serpent Scale Mail will
    lose its acid resistance if it gets acid immunity.
   -Confusion resistance is overwritten by chaos resistance.
4) Minor ESP base flags can be removed from the item in these ways:
   -Dragons replaces Dragonriders
   -Evil replaces Orc/Troll/Giant/Undead/Demon
   -Full ESP removes all other ESP flags
5) If the item ends up cursed, certain granted base flags can be removed too:
   -Curse removes blessing
   -Experience drain removes hold-life
   -attribute mali remove the according sustenance (STR/INT/WIS/DEX/CON/CHR)

-Mods provided by the base item, unless they are removed by these exceptions
may limit the final randart mods:
For example the base stealth bonus that all Shadow Blades come with will limit
their bonus powers to the stealth cap of +5. So in order to gain for example a
bonus of +10 to critical hits on a Shadow Blade it'd have to roll AGGRAVATE
in order to remove the stealth bonus.
There is one notable exception: Witan Boots. These have their fixed -2 stealth
malus detached from their actual powers and can hence roll for example a speed
bonus just as high as any other boots.

MULTI-HUED DRAGON SCALE MAIL IMMUNITIES:

-As a specialty, the immunities on MHDSM are actually *retained*! They are not
rerolled randomly but survive the artifying process. So you can pick a MHDSM
with two immunities of your choice and attempt to use an artifact creation
scroll on it to make it acquire additional powers (it cannot gain any further
immunities though, since 2 are the maximum for any type of item).
Note that MHDSM are poor targets for artifact creation though, because their

immunities and resistances already account for a high amount of 'item power', meaning that it will be very hard to get good additional powers on them from the artifact creation process.

POWER DRAGON SCALE MAIL:

As mentioned above, it is impossible to gain any additional powers on PDSM, so don't waste your artifact creation scroll on it!

DISCOUNTED ITEMS:

-Items will lose any discount tag when they are artified.

Also note that randarts cannot get more than two immunities in total.

Mods on the final randart:

The item will gain a random number of random properties. The more powerful it becomes, the higher a chance of also becoming 'aggravating' will be.
(See (5.8) for more information about AGGRAVATE flag.)

There is always a 10% chance that the resulting randart will be 'cursed'. Cursed randarts cannot be sold to shops even if the curse is broken. They gain only very few abilities, which are accompanied by different types of curses.

All armour-type randarts will have at least +10 to AC bonus (except if they happen to be cursed), usually much more, dragon scale mails especially.
Also, the higher level the base type of an armour, the more +AC it can expect as a randart, because armour gets baselevel/15 added to its AC.
Base item types that come with +AC (Mithril Helmet always comes with +10 AC pre-enchanted for example, see k_info.txt) get half of that added to their AC too. These +AC boni from base item level and base item pre-enchantment do not factor into the artifact's power, ie they do not "count" in the flag cost calculation, except when the +AC exceeds +30, which is always costly.
So basically for armour, you want to use the base item type with the highest pre-enchantment and with the highest base level. Usually you won't need to pay attention to this though, because the higher level items are automatically the better items anyway and hence you will pick them without much thinking. :-p

The base item's weight, price or rarity (not to be confused with the item's base level, which however only matters for armour pieces as explained above) do not have any influence on the randart creation process.

Possible mods that randarts may get depend on its base type.
Further, there are general mods that may appear on all items regardless of its type. For each applied mod there is a chance of 50% to be picked from either type-dependant mods or general mods.
- Ammunition (shots/pebbles, arrows, bolts) will never get general mods but only type-dependant ones.
- Boomerangs, bows, crossbows and slings will somewhat less often receive type-dependant mods than general mods.
- Dragon Scale Mails will more often receive type-dependant mods than general mods.
All types not listed under 'Type-dependant mods' will only gain general mods (for example all jewelry, ie rings and amulets).

Last but not least certain mods will limit or even cancel certain other mods, sometimes following general rules, sometimes item-type specific rules:

For example an item that provides critical strike and strength bonus might at

444

first randomly obtain a +8 bonus for its critical strike mod, but then the strength mod will cut down the final randart bonus to a +5, because items aren't allowed to give more than +5 to any character stat (str, int, etc).

On boots, +speed mod takes precedence over most other limiting mods, which means that speed-limiting mods will be erased from the boots in most cases if they threaten to cut down the final pval.

Type-dependant mods:

(Note: The probability of each mod varies, depending on the item type)

Bows, crossbows, slings
        Extra shots
        Extra might
        +hit bonus
        +dam bonus
Weapons
        Blessed (usable for priests without penalty)
        Hit point bonus (+LIFE)   (*)
Weapons, boomerangs
        Elemental (acid/elec/fire/cold/poison) brands
        Increased damage dice/dice sides
        All SLAY mods (also have a chance to add the corresponding ESP)
        All KILL (*SLAY*) mods (will also add the corresponding ESP)
        Critical hit bonus
        Vorpal mod (only swords, see (5.8) for details, and razor boomerangs)
        Extra attacks
        Extra +hit and +dam bonus
        Extra +AC bonus
        Vampiric life leech
        Chaotic (same as ego power)
        Reduced weight
Mage staves
        Sustain wisdom
        Sustain intelligence
        See invisible
        All possible ESP mods (including ESP_ALL)
        Extra +mana capacity bonus
Boomerangs (also see 'Weapons' above)
        Extra shots
Dark swords (also see 'Weapons' above)
        Increased anti-magic (not over 30% in total, see (5.9)).
Ammunition
        All elemental brands (acid/elec/fire/cold/poison)
        All SLAY mods
        All KILL (*SLAY*) mods
        Vampiric life leech
        Exploding property. The type of explosion damage is randomly picked
                        from this list:
                        Acid, electricity, fire, cold, poison,
                        light, dark, confusion, plasma, sound, shards,
                        force, inertia, mana, meteor, ice, chaos, nether,
                        nexus, time, gravity, stone-to-mud, teleport away,
                        scare monster, nuke, disintegration, hellfire.
        Extra +hit and +dam bonus, this caps at +12 hit and +6 dam.
        Either +1 extra damage die sides or +1 extra damage dice.
Boots
        Feather falling
        Levitation
        Climbing

```
                Extra +AC bonus
                Stealth
                Speed
                Reduced weight
        Gloves
                Free action
                Mana capacity bonus
                Auto-ID
                Strength bonus
                Dexterity bonus
                Extra attacks (+1 or +2)
                Critical hit bonus
                One of the elemental brands (acid/elec/fire/cold/poison) or SLAY mods
                Vampiric life leech
                Hit point bonus (+LIFE)    (*)
                Extra +AC bonus (less common than on other items)
                +hit and +dam bonus
        Caps and helmets
                Resist blindness
                Auto-ID
                All possible ESP mods (including ESP_ALL)
                See invisible
                Intelligence bonus
                Wisdom bonus (less common than on crowns)
                Extra +AC bonus (somewhat more common than on other items)
                Infra-vision
                Resist confusion
                Resist fear
                Hit point bonus (+LIFE)    (*)
        Crowns
                Resist blindness
                Auto-ID
                All possible ESP mods (including ESP_ALL)
                See invisible
                Intelligence bonus
                Wisdom bonus
                Extra +AC bonus
                Mana capacity bonus
                Infra-vision
                Faster mana regeneration
                Resist confusion
                Resist fear
                Hit point bonus (+LIFE)    (*)
        Shields
                All basic resistances (acid/elec/fire/cold)
                Reflection
                Reduced weight
        Cloaks
                Stealth
                Feather falling
                Levitation
                Fire/cold/acid/lightning resistances
                Chance for either lightning or fire aura and corresponding resistance
                Chance for shard resistance
                Hold life
                Invisibility (see (5.14) for details.)
                Extra +AC bonus (somewhat more common than on other items)
        Body Armour (except for Dragon Scale Mails)
                Stealth
                Hold life
                Constitution bonus (has a chance to include constitution sustenance)
                All basic resistances (acid/elec/fire/cold)
```

```
        Hit point bonus (+LIFE)    (*)
        Reduced weight
        Extra +AC bonus
   Royal Armour (Heavy mithril/adamantite armour only usable by winners):
   (these mods may spawn additionally to body armour specific mods above)
        Reflection
        Mana resistance
        somewhat increased chance to spawn base immunities or +LIFE.
Dragon Scale Mails
        Hold life
        Strength bonus (has a chance to include strength sustenance)
        Constitution bonus (has a chance to include constitution sustenance)
        Hit point bonus (+LIFE)    (*)
        Extra +AC bonus
Rings/Amulets
        Rather basic (up to 12000 Au value in k_info.txt) rings and amulets
        that already come with one of the four base resistances (fire, cold,
        lightning, acid) or poison resistance in their base (non-artifact)
        version will have an especially high chance to obtain the according
        immunity when turning into a random artifact.
        Higher-value jewelry is not affected by this rule and does not obtain
        an immunity easier than any other generic item would (which means, it
        can obtain immunity only via 'General Mods', see further below, same
        as any other item - which actually rules out poison immunity as that
        one is not among the generic immunity mods).
Light sources
        Increased light radius
        Everburning (no fuel needed; applies only if item usually needs fuel)


(*): This mod (+LIFE) may only spawn on a randart (no matter how it is created,
     be it via scroll or via killing of monsters) if either
     a) the player is a winner (Queen/King/Empress/Emperor) or
     b) the server has the 'Fallen Kings Etiquette' enabled, meaning that
        players who won once but then died cannot use static artifacts either
        (press '~' followed by 'i' to check the server settings), and the
        player is actually a fallen winner who lost his title due to death,
        AND his level is at least 50.
     If a player actually wears/wields a +LIFE randart, the +LIFE mod will only
     have an effect on winners (Queens/Kings/Empresses/Emperors).

     If you don't want to create a randart that has a chance for +LIFE, you can
     inscribe your scroll of artifact creation:  !L


General mods:
-------------
(Note: The probability isn't equal for each mod)

        Bonus on any stats
            (has chance to include sustenance for that stat;
            wisdom might also include 'Blessed' flag)
        Sustenances on any stats
            (has chance to include bonus for that stat)
        Stealth
        Searching
        Speed
            (cannot spawn on shields or boomerangs)
        Any base immunities:
            Acid, Electricity, Fire, Cold.
            (A randart cannot have more than two immunities at once.)
        Free action
        Hold life
```

```
            Any base resistances
                Acid, Electricity, Fire, Cold.
            Any of these medium and high resistances:
                Poison, Light, Dark, Blindness, Confusion, Sound,
                Shards, Nether, Nexus, Chaos, Disenchantment
            Feather falling
            Glowing
                (+1 light radius)
            See invisible
            All possible ESP mods
                (including ESP_ALL aka full 'telepathy')
            Slow digestion
            Faster mana regeneration
            Faster HP regeneration
            Anti-magic shell
                (Legendary saving throw is raised to 95% cap,
                 also see 'NO_MAGIC' in (5.8) for more details.)


    Mods that appear only on cursed randarts:
    ----------------------------------------
            Drain HP
            Drain mana
            Drain experience
            Teleport randomly


    Item Mod Limits:
    ----------------
    Certain power limits are applied on items, depending on mod-combinations or the
    item's base type.

    Items cannot give more than 2 immunities.
    Items cannot give more than +11 to speed, crit or mana.
    Items that give two of speed, crit or mana cannot give more than +6.
    Items that give speed, crit and mana cannot give more than +4.
    Items that give +speed via base-item enforced mod (eg Rings of Speed) cannot
     get more than +7 speed (which is already *extremely* rare).
    Items cannot give more than +6 luck.
    Items cannot have more than +5 stealth, except for cloaks which can have +6.
    Items cannot give more than +5 to stats (STR/INT/WIS/DEX/CON/CHR).
    Items cannot have more than +4 searching.
    Items cannot give more than +3 extra attacks. Gloves can only give up to +2.
    Items cannot give more than +3 life (+30% base hit points).
    Items that give both extra attacks and life are capped at +1.
    Items that add mana, give mana regeneration or are blessed will never have an
     anti-magic shell.

    Headgear cannot give more than +6 infra-vision.
    Headgear cannot give more than +3 speed.
    Headgear cannot give more than +3 mana.

    On items other than boots you cannot get more than +7 speed and getting that
    high a value is already *extremely rare*. Realistically think of +5 as superb.

    Gloves cannot get more than +6 to-hit or to-dam bonus, so (+6,+6) is max.
    Gloves cannot give more than +2 extra attacks.

    Amulets cannot give more than +3 to stats.

    1-handed weapons and shields cannot give more than +3 speed.
    1-handed weapons cannot give more than +1 life (+10% base hit points).
```

```
1.5- and 2-handed weapons cannot give more than +2 life (+20% base hit points).
2-handed weapons cannot give more than +6 speed.

Shields cannot gain +speed mod.
Boomerangs cannot gain +speed mod.

+Hit points mod (LIFE) caps at +3 and can only spawn on..
 melee weapons (caps at +1 if the weapon is one-handed, +2 on 1.5-/2-handed),
 hats, gloves and body armour (up to +3 is possible on any of these).

Reduced weight mod can stack up to a maximum of three times (which results in
0.9 * 0.9 * 0.9 = 72.9% weight or a 27.1% reduction).


Technical internals
-------------------
More details about how randart creation works internally:
First, a 'target power' is chosen randomly, usually in the range from 40..120.
Then, TomeNET tries several times to generate a randart that approximately
fits into that target power. To do this, after a randart is randomly created,
all its abilities are checked and calculated into a single number, the
'artifact_power'. If this approximately matches the 'target power', the
randart is finally created. If the numbers differ a lot, the randart is erased
and randomly recreated until its powers are fitting. The higher the target
power is, the more likely the randart will be 'aggravating nearby creatures'.
(See (5.8) for more information about AGGRAVATE flag.)



(9.5) Reward item creation
--------------------------
PvP mode characters may obtain item rewards by killing a lot of opponents
(see (7.13) for details on PvP mode), and events such as Highlander Tournament
and Dungeon Keeper will give parchments to the winners that can be turned in at
the mayor's office for reward items.

Reward items are different from all other items (those obtained from
extermination orders, monsters, chests, acquirement scrolls or even
artifact creation scrolls) in the way that they are specifically tailored
to fit your character relatively well.
There is still some randomness playing a part in it though, so the outcome will
always vary and not necessarily be exactly what you wished for.

Since the resulting item will be affected by your character and skill chart,
what you must actively do BEFORE turning in a deed for a reward item is:

- Spend skill points! Never get a reward item without having spent any skill
  points. Make sure that you have at least 3.000 in your vital skill(s) so the
  reward-creating algorithm notices it.
  If you have increased your 'Magic' skill even just a little bit (note that
  increasing Mimicry will also increase Magic skill slightly!) you will have a
  chance to receive caster items (eg some hat of intelligence).
  Especially important: Magic skills, weapon skills, Martial Arts skill. These
  determine weapon (or mage staff) reward probabilities and armour weight if
  you happen to get an armour piece. Magic classes also have a somewhat higher
  chance to get a crown instead of helmet/cap.
  Note: Critical-strike skill will aim at sword-type weapons, same as if you
  skilled Sword-mastery skill.
  If you train multiple melee-weapon or ranged-weapon skills, one will get
  picked randomly. (You usually shouldn'd do this as it wastes skill points.)
  If you have Sword-mastery and Anti-magic skill, you will get a Dark Sword in
  case you receive a (sword-type) weapon as reward.
```

- Wear roughly the appropriate type of armour (ie light vs heavy) and..
   - Wield the type of weapon (dual, 1-handed or 2-handed) that you prefer.
     This might affect three factors randomly: An actual weapon reward, whether or
     not you might gain a shield for reward, whether you might get light or heavy
     armour for reward. Keep in mind that there is still a random factor in what
     item you will actually get, so for example there is no guarantee to receive a
     weapon, it could still randomly turn out as a piece of armour instead.
     If you wield a sword or blunt weapon, you have a decent chance to receive a
     shield instead of a weapon for reward. Somewhat less chance when you wield an
     axe and the least chance to receive a shield if you wield a polearm wepaon.
     If you receive a weapon (and don't have Anti-magic skill) it will be a 2-h
     weapon if you are currently wielding a 2-h weapon.
     Note that you will not receive a shield if you're dual-wielding or if your
     class is rogue.
     Regarding weapon weight, note that a weapon reward will usually not give you
     less attacks per round than the weapon you are already wielding (if any). If
     you don't wield one, it aims for 3 attacks per round as default.
     An exception are dark swords, which will always replace a rolled sword-type
     reward if you have any points in Anti-magic skill even if it lowers your BpR.
   - Runemasters who receive a piece of armour will usually (as long as it's
     reasonably possible regarding ego-power type and value) get one that provides
     resistance to one of the elements they can conjure up with their runecraft
     skills. For this special feature any skill greater than zero in a particular
     rune element is sufficient, instead of the usual 3.000 threshold.
   - Resistances your character already possesses are potentially avoided on the
     item, so it won't end up too redundant with Draconian lineage etc.
   - Druids will never receive a mage staff even if they haven't trained their
     Martial Arts skill above the starting value yet.

It does not matter if a skill is trained further above 3.000 or what your
character level is. Skills are used to 'unlock' item classes such as
'mage staff' or 'specific melee weapon' but for example you won't have a higher
chance to get a sword if you increase Sword-mastery to 5.000 than if you only
had it at the minimum threshold value of 3.000.

If you qualify for multiple reward classes, which are 'specific melee weapon',
'specific ranged weapon', 'mage staff', 'trap', the following priorities apply:
-A melee weapon chance will nullify a mage staff chance.
-A melee weapon vs ranged weapon will have about equal chance to get picked.
-A mage staff will have somewhat better chances vs a ranged weapon.
-Traps have about 75% chance to override any other reward class.
-Aside from the reward class picked, there is still about a 50% chance to
 receive an armour piece instead (even true for trap class).
-Shields don't count as 'armour' but are a sub-choice that has a certain chance
 (depending on weapon class) to randomly replace a 'weapon' reward.

Aside from these, randomness is always a factor so the result may vary.
The final quality of the item is therefore pretty random, except that certain
bad or very cheap item types or unfitting ego powers (depending on your
character) are banned.

(9.6) Alternative ruleset 'Ironman Server'

A server might be configured with a special ruleset called 'Ironman Server'
rules. (The Ironman server was also called 'RPG Server' in the past.)
Such a server will be listed on the meta server under
  "TomeNET Ironman ..."
instead of just
  "TomeNET ..."
and when you connect to it and enter the character overview

screen, at the bottom there will be a line reading
  "The server is running 'IRONMAN_SERVER' settings".

In general, Ironman rules are stricter than normal server configurations.

The differences between Ironman ruleset and normal servers are as follows:
  -Only one character is allowed per account.
  -All characters are no-ghost mode, so they have only 1 life (ie 'unworldly').
  -Usually, accounts expire slower (183 days instead of 62 days).
  -The Training Tower is empty, no monsters or items spawn in there
   (except for the Arena Monster Challenge event).
  -Certain extra stores may spawn in the dungeons
   ('Seasoned Tradesman', or specialized stores similar to town stores).
  -All dungeons are ironman (see (4.3)):
   -Bree's dungeon 'Barrow-Downs' is normal ironman,
   -other town dungeons allow recalling every 500 ft (10 floors),
   -non-town dungeons allow random recalling at a 20% chance per floor,
   -on dungeon levels shallower than level 20 (eg easier than -1000 ft Bree),
    recalling is impossible, overriding the above rules.
  -Players may recall INTO town dungeons to 50 ft + every 1000 ft, eg to 50 ft,
   1050 ft, 2050 ft, ...
  -Players start with more gold (class-dependant) to buy supplies.
  -Players additionally start with a few cure wounds potions.
  -Players get a message in chat when party members take a staircase.
  -If a party owner dies, someone else from the party is automatically promoted
   to party owner, so parties won't get disbanded easily, making party-diving
   more effective.
  -Mimicry users have a very slim chance of insta-learning a form,
   of 1 in monster's level - kill count so far!
  -Item level restrictions are disabled and have no effect.
  -Extermination orders can be acquired as early as at level 3 instead of level
   5 and the amount of monsters that needs to be slain is even somewhat lower.
  -Temporary luck bonus from deeds is somewhat longer.
  -Usually, scheduled artifact resets happen less frequently (if at all).
   (See (5.9b) for more information about artifact resets.)
  -Halloween event allows players up to 40 instead of 35,
   and the Great Pumpkin spawns on floors up to level 49 instead of 39.
  -Stealing from stores is possible right away instead of requiring a certain
   character level (usually 5 on normal servers).
  -Server settings that would usually turn items dropped/thrown by very low
   level characters to level 0 will be ignored, ie item level is kept.

(9.6a) Special server type 'Arcade Server'

*** Under very sporadic development -
    features might be incomplete/not working.
    To check the sourc code, look for ARCADE_SERVER definitions.
    The arcade server might not be running at all times but
    you could ask for it to be started when an admin is online. ***

Like 'Ironman Server' mentioned in the paragraph above, 'Arcade Server' is an
alternate ruleset, which is however *very* different from normal gameplay:

The Arcade Server was originally created and developed by Moltor. Later on
Kurzel also joined the project. It has nothing to do with normal dungeon
dwelling but instead features some hot action games that (ab)use the TomeNET
'engine' for excellent entertainment. :)

Note: After logging in you may press '?' key for a help screen.
      The descriptions below are partially taken from that help file.

```
****************************************************************************
 If you log on to an Arcade Server, your client will automatically attempt to
 load the required macro file to play, which is
  - 'arcade-win.prf' on Windows OS
  - 'arcade-x11.prf' on X11 (Linux / Mac OS X)

 If your client is older than 4.5.3 you probably don't have these macros.
 In that case you can download them at the bottom of the downloads page on
 www.tomenet.eu and extract them to folder TomeNET/lib/user.
 But of course you should actually just update your whole client instead.
****************************************************************************
```

On the Arcade server, you can play..

Smash'em

Smash TV was a kickass arcade game from 1990, similar to Robotron. The player
is attacked from all sides by mostly-unarmed goons. The arcade version uses two
joysticks to allow you to run and fire in different directions. Unfortunately
tomenet doesn't support joystick input. Here you must use special macros to
shoot. For details press '?' in the game.

The Smash'em macros provide the following controls:

    F1   display help
    F2   starts the game.
    F3   starts the game at level 4, skipping the early
                    levels if you feel that those are too easy.
    F4   quit the game.

    q,w,e   makes your character auto-fire in the according
    a, ,d   direction (y key works same as z key).
    z,x,c

    s   stops firing/bandages.

    ,   same as '<' key (ie go up one level).

    numpad   movement.

    SHIFT+F12   switch macro set to other games (cyclic, keep tapping).

Tron

Like in the movie "Tron", a light cycle racing game where you leave a trail of
energy behind you forming a wall in which you and other competitors can crash
which results in their elimination.
Power-ups will randomly spawn and increase the trail length.
Up to four players can participate at once. For details press '?' in the game.

The Tron macros provide the following controls:

    F1   display help
    F2   enter arena.
    F3   start game.
    F4   quit the game.

    F5   walls.

```
    F6              gates.
    F7              midgate.
    F8              rings.
    F9              moveups(+float).
    F10             centerups.
    F11             dark.
    F1              snakes.

    SHIFT+F1        options
    SHIFT+F2        maxwins (reach tail size to win).
    SHIFT+F3        race.
    SHIFT+F4        ai opponents, filling in for players.

    SHIFT+F5        reduce game speed.
    SHIFT+F6        increase game speed.
    SHIFT+F7        reduce snake max length.
    SHIFT+F8        increase snake max length.
    SHIFT+F9        less walls.
    SHIFT+F10       more walls.

    Arrow keys or   movement.
    numpad 2,4,6,8

    SHIFT+F11       reset tron.
    SHIFT+F12       switch macro set to other games (cyclic, keep tapping).
```

Hit F3 as soon as at least two players have joined the areana via F2 key to
start the actual match.

To toggle an option, type "option" or "option on"/"option off" in chat.
Speed can be changed via "moar speed"/"less speed",
length can be changed via "moar length"/"less length",
walls can be changed via "moar walls"/"less walls".

Food Fight

<to come>

Boat Arena

<to come>

(9.7) Game engine limits

The TomeNET server, aka the "game engine", runs at 60 frames per second.
This imposes certain limits that can clash when your character exceeds certain
speed and attack numbers, if you are not on a relatively deep dungeon floor:

The deeper you go, the slower time passes (compare (4.14)). On the world
surface time passes the fastest: A turn for your character takes around 0.7
seconds in real time. (Vice versa, 1 second equals ~1.4 game turns there).

A character moving at the maximum possible speed of +90 (actually you can get
more speed, but it will only help to counter the slowdown your character might
experience from carrying a heavy backpack, it will not increase your speed any
further) is able to perform 8 actions per character turn. That means in Bree
(or in general on the world surface, it's all the same) that character could
perform 8 actions in 0.7 seconds. That is roughly 0.088 seconds per action.

This means that the game engine (running at 60 fps) has approximately 5.3
frames for performing each action.

Usually this is fine, because an action only takes one frame. With two notable
exceptions! Shooting with ranged weapons and the auto-retaliator for melee
weapons.
Those split up the single attacks (each strike/each shot) so that each of them
takes one frame, instead of all of them being performed in a single frame.
Since the aforementioned character at +90 speed in Bree only has 5 frames
available, that means he can only utilise 5 blows or shots at best. So if he
attacks a target dummy in Bree to measure his damage, he will get no further
damage increase for more blows/round than 5.

If he moves at +70 speed, he can already benefit from a 6th attack, at +50
speed from a 7th. Remember however, this limit is so "low" only because he is
at dungeon level 0 (Bree/world surface).

However, this problem is not that bad when you consider that time passes much
slower at deeper dungeon levels, giving the game engine more room to fit in all
the actions:

At floor level 85 or deeper (aka 4250ft), the slowdown caps (although there is
a special further slowdown for the Nether Realm). At level 84 (4200ft) time has
already been slowed down so much that a character at max speed ('Fast +90')
will benefit from 14 blows or shots per round, which is the maximum you can
benefit from at max speed.

This limit can only be reached by a dual-wielding warrior, other warriors will
only reach 13 BpR, which is reached at dungeon level 77 aka -3850ft.

If boosted by friendly spells mindboost, zeal and by berserk magic (or ability)
a dual-wielding warrior could reach 14 + 1 + 2 + 1 = 18 BpR. The maximum speed
for which this high BpR still makes sense (on dungeon level 4200ft and deeper)
is +55 speed. If you regularly get boosted by party members in this crazy way,
consider using accuracy/damage or critical-hits equipment instead of
extra-attacks items so you can increase your speed above 55 and still get full
benefit of the EA boosts.

Even at floor level 67 (the first Angband floor) a character of speed +90 (or
higher) could already utilise up to 11 attacks per round without dps loss, and
a character of speed +71 can even utilise up to 13 attacks per round! Again a
feat that hardly any character will be surpassing.

This means that although the game engine limits get exceeded when testing dps
on the target dummies in Bree with a character that moves at extreme speed and
uses either melee auto-retaliator or slings/bows/crossbows, there is basically
no problem at all when fighting monsters in the deeper dungeons.

If you want to compare dps of different weapons or the effect of extra-attack
equipment vs critical-hit equipment in Bree, first remove all items that give
+speed (and apply to both scenarios) to make sure you get accurate numbers.
The limits in Bree (and hence on the world surface) are:
 +90 speed -> max 5 attacks or shots
 +72 speed -> max 6 attacks or shots
 +53 speed -> max 7 attacks or shots
 +43 speed -> max 8 attacks or shots (maximum attainable shots per round)
 +37 speed -> max 9 attacks
 +32 speed -> max 10 attacks
 +28 speed -> max 11 attacks
 +25 speed -> max 12 attacks

```
 +22 speed -> max 13 attacks
 +20 speed -> max 14 attacks
 +18 speed -> max 15 attacks
 +11 speed -> max 20 attacks (the cap for blows per round, actually!)
In case you test this and find rounding errors, let me know! :-p
```

Likewise, if you want to compare speed vs critical hits, first remove all items
that give extra attacks and would apply to both scenarios.

(9.8) Troubleshooting

Note: Some of these problems are deprecated and don't exist in this form or at
all anymore. Some messages might also vary slightly.
For trouble with lagging out or freezing up, see PROBLEM 26 and 29.

PROBLEM 1:   I am behind a firewall. What ports do I need to open in order to
             play TomeNET?
Solution: If you want to connect directly to a specific server by specifying
             its address via command-line or config file, you only need to allow
             an outgoing TCP/IP connection to remote port 18348, that's the
             standard port servers run on. (If you'd like to play on the Ironman
             server, it's port 19348 instead of 18348. See (9.6) for more
             information about Ironman settings. For the Arcade server it's port
             20348, see (9.6a) for more information about Arcade server.)
             If you want to make use of the server list that appears when you
             don't specify a particular server, you additionally have to allow
             the game to connect to the meta server which provides the server
             list. For this, remote port 8801 TCP must also be opened.
             If you don't have access to the firewall, for example in school or
             at work, you can still try to set up an SSH tunnel or a socks
             proxy server (on either the firewall machine or your PC at home or
             any other PC outside. Ask google for info about how to do that).

PROBLEM 2:   I don't get to see a server list when I start TomeNET.
             Instead, I am immediately asked for account and password.
Solution: This is a typical problem on Windows XP. There are 3
             possible fixes:
             -Use 'Win98 Compatibility Mode' (Create a link from TomeNET.exe,
              right-click it, choose 'properties', choose 'Compatibility'.
              This option is available natively on Windows XP systems; for
              Windows 2000 systems first try the other two points mentioned
              below, if they don't help, get the compatibility mode update
              from www.microsoft.com or from www.c-blue.de/appupd.exe).
             -Move the 'TomeNET' directory to your drive's root. For
              example C:\TomeNET\.. .
             -Make sure the path name does not contain any spaces!
             -to edit your "TomeNET.ini" file and specify a host directly by
              specifying "HOST=europe.tomenet.eu".
              Or you can even give the IP address "HOST=37.187.75.24".

PROBLEM 3:   I get to a server list, but it doesn't show any servers. It just
             says 'Press Q to enter a server manually' and that's it.
Solution: There are 2 possible solutions.
             -There is currently no public TomeNET server running. That can
              happen if a server update is currently being applied or if for
              some reason the server just crashed. Try again after a minute.
             -There are some DNS problems. These can happen for various reasons
              although they aren't very likely. DNS problems can last for a
              longer period of time though, being very annoying.
              That the server isn't listed doesn't mean that it's down though.

You should try to connect manually (press 'Q') to either:
                    europe.tomenet.eu
                    or (if that doesn't work either) directly to its IP adress:
                    37.187.75.24

PROBLEM 4:   When I start TomeNET I don't see anything except a small hollow
                    yellow rectangle (the cursor). All windows stay black. It seems
                    that the cursor reacts to my inputs by printing out some black
                    hence invisible text.
Solution: A rare problem that is not caused by TomeNET really, but usually
                    happens on Windows XP and older:
                    MS Windows sometimes keeps the TomeNET font file opened although
                    the client has already been terminated. Next time you start TomeNET
                    it will be unable to open its font files for that reason, resulting
                    in the lack of any text on the screen.
                    What to do is restart your MS Windows system and the text should be
                    visible again. Instead of restarting you can also try just logging
                    your Windows user account out and then back in right away.
                    (This usually only happens once, after updating the client.)

PROBLEM 5:   All windows _except for the main window_ stay empty / stay blank.
Solution: First make sure it's really a bug and not just missing window
                    settings: Press '=' key and 'w' key and configure your windows
                    appropriately. It is vital to set one of the windows to display
                    game and/or chat messages, so you can actually read what other
                    players write, and also keep track of combat messages!
                    When you're done setting up the windows, go to 'save options'
                    (key 's').
                    If all the windows are still blank, read on:
                    Exact reasons are unknown but seem to only happen on MS Windows
                    machines. Sometimes a simple reboot helps. If it doesn't, open
                    TomeNET.ini file with a text editor, look for the window sections,
                    change the fonts to the same settings (8x13) as in the
                    [Main window] section: FontFile=8X13.FON , Font=8X13.FON .
                    Also, you could adjust the width/height of the windows (to 80x24
                    for example). Try other fonts too, maybe they work for you.

PROBLEM 6:   I cannot browse (some) spell books, I see some LUA error messages
                    if I try or when I connect to the server.
Solution: Your LUA script files are outdated. Those files are responsible
                    for any spell-casting and some other things.
                    To update them, you have 2 possibilities:
                    -Automatic update: Join the server, you should see a message in
                     the chat window, saying that (some of) your LUA files are being
                     updated.
                    -If for some reason auto-update doesn't work for you,
                     download the latest client again.
                    Note: There was a bug in client 4.4.8, preventing it from auto-
                    updating LUA files, which was fixed in 4.4.8a and higher again.

PROBLEM 7:   TomeNET seems to freeze up while playing. (Also see PROBLEM 26 and
                    29, which offer different solutions for similar issues!)
Solution: This can happen if your latency is relatively high and many
                    messages are transported between the server and your client.
                    In fact it's just your display that freezes up. In that state
                    you can for example type a chat message and other players
                    will read it.
                    Quit the game and join again to continue playing.
                    Or just start another instance of the game and log in, that will
                    override the old connection, making your client quit with
                    "resume connection" message.

```
PROBLEM 8:   I am disconnected during gameplay. (Note: If it seems to be a
             lag-out or freeze problem, also see PROBLEM 26 and 29!)
Solution:    This can have several reasons. On disconnection a message box will
             appear, telling you about the problem. The following messages
             might occur:
             "client quit"
                     This just shows up if you regularly quit your client.
             "Committed suicide"
                     You just committed suicide..
             "resume connection"
                     This happens if you try to log in the same character with
                     two TomeNET clients at once, the older client will quit
                     and the client that just logged in will take over.
             "Killed by..."
                     Your character was finally killed/destroyed.
             "Starving auto-kick"
                     Your character was starving due to lack of food, and you
                     were not moving or performing any action for some time, so
                     the game assumed you were AFK and kicked your character out
                     to prevent it from starving to death without you noticing.
                     What you need to do: Log back in and eat something as soon
                     as possible.
             "Starving to death"
                     You died to starvation.
             "Panic save failed"
                     This means the server just crashed and even failed to save
                     the characters :(. It will usually be back online after a
                     minute or earlier.
             "Panic save succeded"
                     This means the server just crashed :(. It will usually
                     be back online after a minute or earlier.
             "Server shutdown (save succeeded)"
                     The server was shut down regularly. It will usually be
                     back online after a minute or earlier.
             "Server shutdown (save failed!)"
                     The server was shut down regularly but saving the
                     characters failed for some reason (insufficient disk
                     space). It will usually be back online after a minute or
                     earlier.
             "banned for ..."
                     You were banned temporarily from the server (includes
                     being kicked out).
             "kicked out"
                     You were kicked out of the server.


             Network related errors:
             -----------------------

             "Timeout 08"
                     This happens if you 'lag out' on a slow connection or if
                     the server or your computer is under very heavy load.
             "read error"
                     Can happen if you lag out or if packet loss occurs.
             "write error"
                     Can happen if you lag out or if packet loss occurs.
             "flush error"
                     Can happen if you lag out or if packet loss occurs.
             "receive error in play"
                     Can happen if you lag out or if packet loss occurs.
             "can't read on socket"
                     Can happen if your connection gets disrupted or overloaded.
                     May especially happen on not-so-great connections if you
```

die and the server tries to send a large bunch of death
dump information to your client. Note that in that case you
didn't die _because_ of this error, but the error occurred
because you already died.

"Server closed the connection"
        Maybe a firewall or bad network problem.
"No login reply received"
        The login process couldn't be completed. Probably a network
        problem, or really bad lag/timeout.

If you are living in a place with ISPs that have bad network
infrastructure/routing, for example Australia or New Zealand, you
could try a VPN service such as 'NordVPN' (not affiliated, random
example) who offer their 'Meshnet' service aimed specifically at
gaming, or the also gaming-specific service 'Exitlag' (again not
affiliated).
These are services that gamers from Australia apparently use to
improve their gaming experience.
At the time of writing, these provide free trial periods.
(A ping improvement of 70ms was reported by one player from NZ.)

To check how your ISP routes your network traffic, you can use the
'traceroute' command on your PC (eg 'traceroute europe.tomenet.eu')
and then visualize it by using a website that provides (free)
visualization service such as:

  https://stefansundin.github.io/traceroute-mapper/

which allows you to just copy-paste your local 'traceroute' command
output into the website and it will show you whether your traffic
goes to the destination (eg the TomeNET server of your choice) in a
more or less direct way or is routed to Narnia first by a sucky ISP
in which case you should call it and complain :-p.

PROBLEM 9: I am disconnected from the server with an error message, this
            happens before I can even start playing.
Solution: Read the error message displayed in a message box on quitting.
            Here is a list of possible errors and solutions:
            "Your name is too long!"
                    Don't use names longer than 15 characters.
            "Your name contains control chars!"
                    Don't use control chars in your name.
            "No such character"
                    Your client tried to log in with a
                    non-existant character (shouldn't happen).
            "You are temporarily banned from connecting to this server!"
                    Self-explaining.
            "disconnect in login"
                    Don't take too long for your character
                    creation or you might time out.
            "login failure" or "can't read on socket"+"net input error" in the
            character overview screen:
                    A wrong account or password was entered.
            "Name already owned"
                    Account name already exists.
            "Your client is outdated. Please get the latest one from
            https://www.tomenet.eu/"
                    Download the latest client, see (0.1).
            "Server responds 'Unknown client version'. Server might
            be outdated or client is invalid. Latest client is at
            https://www.tomenet.eu/"
                    The server might be running an older

version than your client is.
"Sorry, the game is full. Try again later."
         Wow the game is really full!
"Your accountname, username or hostname contains invalid characters"
 (or just "Net input error")
         Player characters are identified by 4 names:
         -Character name
         -Account name
         -Username (The name they are logged on with on their PC)
         -Hostname (The hostname of the connecting computer)
         The hostname is not really important. However, make sure
         that all of these names may only consist of letters,
         numbers, spaces, and all other characters with an ASCII
         code between 32 (SPACE) and 122 ('z').
         The username and hostname must not be empty. The character
         name needs to start with a letter ('A'..'Z' or 'a'..'z').
"There is already another character from this user/machine on the
server."
         You tried to login with two characters from the same
         account or machine simultaneously, which is usually
         forbidden.
"Sorry, the server is for members only. Please retry with name
'guest'."
         Log in with 'guest'. You need to get an account for this
         private server in order to play. Check the server's intro
         screen for information about how to obtain an account.
"That nick name is already in use. If it is your nickname, wait 30
seconds and try again."
         Happens if you get disconnected and then try to reconnect
         from a different IP adress before your character timed out
         (which takes approximately 20-30 seconds).
("Connection failed with status xx" (xx is an error code)
         This message should never appear.)
"That server either isn't up, or you mistyped the hostname."
         The client was unable to connect to the server you
         specified. If you are sure that you have entered the
         correct IP adress or hostname, check your firewall (see
         PROBLEM 1 for more information).
         NOTE: Servers might be down temporarily when they are
         updated. So make sure to try again after a few minutes.
         If the server really seems to be down for a longer period
         of time, us admins are probably not at home and you'll
         have to wait for a bit, sorry. Such downtimes basically
         never happen though.
"Server didn't respond!"
         The server is up, but something is awry. Wait for a few
         minutes, there might be admins working on it at the
         moment. Otherwise, visit the forum (see above).
"Network verify failed!"
         May happen if you specify a wrong password or try to
         create an account which already exists.
         Also happens (following a "No Verify Response") if your
         connection to the server is *really* bad.
If you get kicked out with an error message on the character
overview screen (which seems to be empty), also see PROBLEM 15.

PROBLEM 10: I can't connect to the meta-server (the server that displays you
         a list of online TomeNET servers) or a specific TomeNET server.
         Instead my connection seems to time-out.
Solution: If you are behind a firewall make sure that the TCP ports
         8801 for metaserver and 18348 for the actual TomeNET server aren't
         blocked. (Well, the metaserver isn't needed to play - specify the

game server via command-line or when asked for it after starting
up the game then.)
The meta server's hostname is "meta.tomenet.eu" and its IP is
actually the same as the official game servers (37.187.75.24);
In case there is a DNS problem somewhere in the internet you could
just edit TomeNET.ini and replace the hostname by its actual IP.

PROBLEM 11: I'm not blocked by a firewall, but I still don't see the
metaserver when I run Tomenet. Instead after waiting for a short
period of time I'm asked to enter a server manually.
Solution: The meta-server might be down or a DNS problem might be occuring
right now. This can happen from time to time. You don't need the
meta-server to play TomeNET though.
Either run one of the 'TomeNET-direct-...' scripts in your TomeNET
program folder which connect directly to an official server, or
just type in the hostname of the server you'd like to connect to,
for official main server: europe.tomenet.eu
If the hostname doesn't work you can also try entering its IP
address 37.187.75.24.
If you get better latency to the APAC region, you can alternatively
pick the asia-pacific server: apac.tomenet.eu
or via its IP address 92.38.178.77.
If you get better latency to the NA region, you can alternatively
pick the north american server: na.tomenet.eu
or via its IP address 68.71.132.101.
Make sure your TomeNET.ini file contains the correct server port,
usually 18348! This port isn't needed if you use the meta-list to
choose a server to connect to, but it's important if you connect
directly! (For Linux the file is ".tomenetrc".)
You can connect directly to a TomeNET server and skip the meta
server list by running your Tomenet directly from the command-line
(DOS window) within its folder, adding the server IP as a
parameter. (In Windows 2000 choose START/Run... and type 'cmd'
without quotation marks to open a command-line window.
Alternatively you can create a shortcut from your TomeNET.exe by
right-clicking, dragging, releasing it. Edit this shortcut's
properties and add the server IP to the command-line.)
For official main server it would look like this:
TomeNET.exe europe.tomenet.eu
If the hostname doesn't work for whatever reason you may try the
IP adress of the european server:
TomeNET.exe 37.187.75.24
If you get better latency to the APAC region, you can alternatively
pick the asia-pacific server:
TomeNET.exe apac.tomenet.eu
or via its IP address:
TomeNET.exe 92.38.178.77
If you get better latency to the NA region, you can alternatively
pick the north american server:
TomeNET.exe na.tomenet.eu
or via its IP address:
TomeNET.exe 68.71.132.101
PROBLEM 12: The main window doesn't display the floor dots in town and in
certain dungeons, like the Training Tower and Angband. Further,
fields are sometimes not redrawn correctly, resulting in fake
'trails'.
Solution: Seems to happen on MS Windows machines sometimes.
Workaround (will slightly change the game's look, ie those dots):
Edit /lib/user/font-win.prf and comment out the lines which end on
the string '\31' (should be 2 lines at the beginning of the file,
those labelled 'Floors' and 'Invis Traps').
'Commenting out' means that you simply put a '#' symbol at the

beginning of a line.

PROBLEM 13: Every time I connect to the server it will automatically download
            LUA script files. However, they will have a size of 0 Bytes.
Solution: Possibly write-protection on existing files or the folder.
            Workaround: Make sure you really have the latest LUA files in
            TomeNET's /lib/scpt folder (you can download them from
            https://www.tomenet.eu/ or our personal pages). Then set all LUA
            files in that directory to write-protected. This will prevent
            TomeNET from overwriting them with 0 Byte files.

PROBLEM 14: I seem to be able to login, create a new character or select a
            character, and see the message of the day (login screen).
            But right before the actual game starts I get a broken pipe / no
            packet reply error.
Solution: This might be caused by a misconfigured router (some D-Link models
            for example). Try to establish an SSH-tunnel from your PC behind
            the router to a machine outside of your LAN for port 18348 (TCP).
            (This might even reduce lag under certain circumstances.)
            Please also see PROBLEM 8 for network routing problems.

PROBLEM 15: I get kicked out with an error message after entering an account
            name and password.
Solution: It's most likely because that account name is already in use by
            someone else so your password was recognized as 'incorrect' since
            it was most likely different from that user's password. Just try a
            different account name.
            Likewise, if that account indeed belongs to you, you have probably
            made a typo while entering your password.

PROBLEM 16: The level completely changed while I was on it.
Solution: No real solution at this time, sorry. See (0.5) for more
            information about that problem. ('types of crashes')
            IMPORTANT: You should restart the client immediately and recall
            right after you logged back in, to avoid getting killed.

PROBLEM 17: I cannot see monster x although I can 'See Invisible'.
Solution: Some monsters have no appeareance and cannot be seen at all.

PROBLEM 18: After my character appears in the actual game, I receive an orange
            message saying "Receiving updated file ....", followed by a red
            message saying "No access to lib directory!".
Solution: The first message means, that one or more magic spells or prayers
            have been changed, and your client tries to automatically update
            its spell scripts to the latest version (LUA scripts in lib/scpt).
            Since this update didn't always work for everyone, and sometimes
            the scripts would be deleted instead of updated due to a bug, all
            spell scripts (LUA files) were set to be write-protected. This
            prevents accidental deletion, but also prevents auto-updating,
            which is indicated by the red error message!
            To solve this, you will have to delete the files within your
            /lib/scpt directory and replace them with the latest versions
            manually.
            If auto-download fails, download the latest client manually again.

PROBLEM 19: When I try to unpack the latest TomeNET ZIP file, I get strange
            messages telling of 'write-protected', 'read-only' or 'password-
            protected'. Afterwards, the client won't function properly.
Solution: Make sure that TomeNET is NOT running while you try to install the
            new version. If TomeNET is running, the unpacking will fail to
            overwrite the existing files! Shut down TomeNET, then extract the
            ZIP (overwriting everything), then start TomeNET again.

PROBLEM 20: On GNU/Linux OS, When someone uses the /page command to page me,
            I don't hear the three beeps.
Solution A: You are probably using OSS. If your soundcard or soundchip doesn't
            support mixing of multiple sources, that means only one program at
            a time can output sound. In that case, do the following:
            Make sure all your programs, like media players, instant
            messengers, system setting tools, etc. are set to use 'ALSA' for
            sound, not OSS. Now that all programs use ALSA, make Tomenet use
            ALSA too. You can do that by using an "ALSA wrapper" which takes
            the OSS sound output of any application that doesn't support ALSA
            natively, and wraps it to ALSA. The ALSA wrapper is called 'aoss'.
            After installing 'aoss', just use call it with the OSS application
            as parameter. Example: $> aoss ./tomenet
            Another example (to start the Opera webbrowser): $> aoss opera
Solution B: If you are using X11, this problem may occur depending on your
            terminal configuration. You can try to change your configuration,
            or you can press '=' key to go to Audio Options and enable
            'Use audio system for paging sounds'. This will result in paging
            sounds being played via your sound card, instead of the operating
            system's beep (requires TomeNET v4.4.5 or higher).
            (See (2.2) for more information about the audio system.)

PROBLEM 21: Are 'ToME' and 'TomeNET' similar?
Solution: Despite similar name, the only thing these two games have in common
            is that they are both middle-earth themed, and some visuals might
            also be similar.
            Other than that, the two games are quite different in most aspects!
            In other words: TomeNET is definitely not 'multi-player ToME'.
            Also, the two games are maintained and developed by completely
            different persons and teams.

PROBLEM 22: My (mixer) settings or window positions aren't saved automatically
            as they should be, when I quit the game.
Solution: Don't use ALT+F4 or the 'x' button in the title bar of the game
            window to quit the game. It will result in skipping the normal exit
            routine, which asks you to save chat and which also saves certain
            settings. Instead, use CTRL+Q for 'save & quit' (compare (0.2)).
            Alternatively, depending on your window manager causing trouble,
            you can also try devilspie to save window locations. Devilspie can
            also undecorate windows (removes the title bar) which can be useful
            to maximize screen estate.

PROBLEM 23: When I try to login, I get a 'security violation'.
Solution: Either your host name (that's your PC's network name you can set in
            the Windows network settings) or network user name (usually same
            you use to login with, UNIX-style) is empty, or your TomeNET
            account name starts with an invalid character (must be A..Z).
            Another possibility is that you are already logged in, and are now
            trying to log in again from a different IP address. Resuming a
            connection is possible, but must be done from the same IP address.

PROBLEM 24: I just quit the game, and tried to log in again with another
            character of mine, but I get an error message saying
            "Multiple logins on the same account aren't allowed".
Solution: When you quit the game while you are still inside a dungeon or a
            tower or on the world surface but not within a town or housing area
            around a town, your character will stay in the game for around
            20..30 more seconds.
            This prevents cheating by just quitting when a dangerous situation
            occurs in gameplay.
            During this time, if you try to login again, you can only use the

same character that is now sitting out the timeout, thereby
resuming your gameplay.
You cannot log in with any other character until the timeout of
20..30 seconds is over and your old character has finally been
taken offline by the server.
In general, you should avoid quitting the game outside of towns,
since it can put you in danger. Not only because your character
will stay in the game for a little while after you quit, but also
because you can't be sure what the situation around you will be
the next time you log on again!

PROBLEM 25: When trying to macro F-keys, they don't seem to work properly.
            Especially, when hitting F1, a window about MS Windows Help/Support
            pops up instead.
Solution: When playing on a notebook, check the state of the 'Fn' special
            shift key, and toggle it accordingly.
            You might be able to switch the Fn-key handling in the BIOS of the
            notebook, a typical issue with some notebooks. If your BIOS doesn't
            offer an option to switch the Fn key behaviour you should really
            complain to your notebook manufacturer and try to get a BIOS update
            that enables it.

PROBLEM 26: The connection is surprisingly laggy. (Also see PROBLEM 29!)
Solution: -If you're on Wifi (WLAN) plug in an ethernet cable instead!
            Wireless LAN connections can be pretty unreliable and cause
            periodic lag from trying to re-scan for available networks.
            Alternatively you can try to configure your WLAN not to do that,
            however, WLAN can still be pretty prone to lag sometimes.
            -Test it on another PC on the same internet connection.
            -Test it on a friend's internet connection or use your mobile phone
             to provide a wifi hot spot and check if the problem persists.
            -Check if it only happens on certain in-game actions you perform.
            -Check if it only happens at a certain time of the day.
            -Make sure you don't have downloads or uploads running in the
            background.
            -A user reported that running Valve's 'Steam' gaming platform in
             the background caused very regular major lag spikes for him.

PROBLEM 27: I resized some TomeNET windows by dragging them with the mouse,
            but it seems it doesn't have the desired effect.
Solution: After having resized windows via mouse, restart the game once
            by exiting with CTRL+Q key.

PROBLEM 28: While I am creating a new character, I got disconnected with a
            "Timeout 04" error message.
Solution: You have about 40 minutes to complete the character creation
            process. If you exceed this time, you will timeout and get
            disconnected.

PROBLEM 29: If I or other players nearby fire a lot of arrows or cast a lot
            of spells, my client lags or freezes somewhat.
            Could also happen when taking staircases or when there are a lot of
            monsters on the screen.
Solution: Try to reduce or even disable flush-waits, by toggling the client
            options 'thin_down_flush' and if that's not enough also
            'disable_flush'. For details about these, see (2.5).

PROBLEM 30: I accidentally closed one of the sub-windows and now it's gone.
            How do I get it back?
Solution: Closing a sub-window sets it to 'invisible'. To change that, there
            are two ways:
            1) in game: Press = and then f for the window flags menu, select

the affected window and press 'v' to toggle its visibility. You
will need to restart the game for the change to take effect.
Note that this might fail on Windows 10, in which case you'll need
to manually edit your TomeNET.ini file, or even delete it.
2) close TomeNET first, then edit the file 'TomeNET.ini' which is
located in your TomeNET folder with any text editor, locate the
particular window, and you'll see a line saying "Visibility=0".
Change the 0 to 1. Have a look at the X and Y coordinate of the
same window too and make sure they aren't negative. If they are,
just set them to 0. Save the ini file when you are done and start
TomeNET again.

PROBLEM 31: Changes I do to my macros seem to not get saved or macros I deleted
seem to still be there or client options I configured seem to reset
to their previous values although I saved the macros/options to
their respective .prf file.
Solution: Macros or client options can be saved to various .prf files which
might _all_ get loaded automatically and partially override each
other. So check _all_ (except for font*.prf and graphics*.prf
usually) .prf files in your lib/user folder and/or move or delete
them to make sure they don't get loaded if you don't intend them
to.
For example the file 'user.prf' usually carries your client options
and overrides the default file 'options.prf'. However, if there's a
file 'user-x11.prf' (system-specific for Linux X11 – on Windows
systems it'd be 'user-win.prf' accordingly) that one in turn will
override settings in user.prf.
An example regarding macro files: Let's say your character's name
is 'Gandalf' and you saved your macros to 'Gandalf.prf' faithfully.
However, since Gandalf is a human warrior, the client will also
automatically load the files called 'Human.prf' and 'Warrior.prf'
if those exist and also try to load a .prf file named like your
account name.
For details please see "Loading macros automatically" in (3.6).

PROBLEM 32: After logging on, the file 'audio.lua' was updated automatically.
Now the wrong sound effects seem to be played for game events.
Solution: Just log out and back in, and your sound should be fine again.
This typically happens if 'audio.lua' was updated.
On a side note: Also check if maybe the sound pack was updated too,
so you can redownload it and not miss out on newly added sound
effects. Usually an update to file 'audio.lua' means that the sound
pack has also been updated indeed.

PROBLEM 33: When trying to extract a music or sound pack to my xtra folder in
order to install it, I get an error message or it doesn't seem to
work correctly.
Solution: See (2.2) for details on how to install audio packs. Also note
that some people have reported that the program 'WinRAR' seems to
cause problems in some cases, giving them "file corrupted" errors.
A powerful free and open source program that is guaranteed to work
is '7zip' (a sourceforge project at the time of writing)
downloadable at: https://www.7-zip.org/

PROBLEM 34: (Deprecated)

PROBLEM 35: On certain terminal emulators, TomeNET when run in ncurses-mode
('-c' command-line option or just a GCU-only client) will display
wrong colours. This used to happen on Xfce4's 'Terminal' up till
TomeNET version 4.5.0 (but didn't happen on xterm).
Solution: Since TomeNET 4.5.0a a hack has been added to work with Xfce4's
'Terminal' terminal emulator.

On other terminals where colours aren't correct, try exporting
the TERM environment variable with the value "xterm16-color".
For example run tomenet with this command (assumed you're inside
the same folder as the executable binary 'tomenet'):
  TERM=xterm-16color ./tomenet -c
Or export it first:
  export TERM=xterm-16color
  ./tomenet -c
You can also try xterm-256color instead of xterm-16color.

PROBLEM 36: When running the client in terminal-mode, messages like
           "ALSA lib pcm.c...:(snd_pcm_recover) underrun occurred"
           pop up, but the sound/music actually works ok.
           How to get rid of the messages?
Solution: Either tweak your sound settings (buffer size etc.) so ALSA doesn't
           get underruns anymore, or, if the audio actually sounds ok, you can
           suppress the messages by starting TomeNET with '-e' option, for
           example:
             ./tomenet -c -e
           This will redirect all messages which usually are sent to stderr
           to a log file "tomenet.log" instead, which will be created in your
           TomeNET folder.
           Alternatively, you can just redirect all error out put to /dev/null
           to completely discard it:
             ./tomenet -c 2>/dev/null

PROBLEM 37: Can I made the game windows larger?
Solution: You can resize windows that hold messages (chat and/or game
           messages) simply by dragging the lower edge down/upwards with your
           mouse. This also works for the main window, but this one will not
           remember its new size unless you also save your client options
           after you resized it (press '=' and then 's' to save those).
           Alternatively, you can edit the TomeNET.ini file (on Windows) or
           the .tomenetrc file (on Linux or Mac OS X) and change the amount
           of lines for each window manually.
           Other than that, you can also increase the font size (that is the
           text size) in TomeNET: Either press '=' key and then cycle through
           pre-defined font sizes by tapping 'f' key, or again you can edit
           the TomeNET.ini file (Windows) or .tomenetrc file (Linux/Mac OS X)
           to set fonts manually for each game window.
           Well, and you could change your actual screen resolution of course.

PROBLEM 38: When I join the server I get spammed with violet LUA error messages
           and also it will say in orange/dark-green that my LUA files are
           getting updated.
Solution: This happens when your LUA files are quite outdated.
           Just wait until the lua update has completed, you see that it has
           when you get a light green message saying "Reinitializing Lua".
           When that happened, quit and rejoin the server, the LUA errors
           should no longer happen now.

PROBLEM 39: I want to edit my TomeNET.ini file to enter name and password, so I
           don't have to type it in everytime I log on. But I don't see this
           file in my 'TomeNET' folder.
Solution: Windows by default hides the extension of most files, this means
           that the ".ini" part is invisible.
           Three ways around this:
           1) In file explorer, go to 'folder options' (usually in the Extras
              menu) and turn off hiding known file extensions.
           2) Right-click on a small (3kB) plain-looking file named 'TomeNET'
              in your TomeNET folder, and choose 'edit' (pick notepad.exe for
              editing, if asked). This file is most likely TomeNET.ini with

```
                      its extension being hidden.
                  3) Open an editor (for example notepad) and go to menu File->Open
                      and browse to your TomeNET folder, and then type in
                      'tomenet.ini' to have notepad open it.

PROBLEM 40: I run the Windows client on Wine, and when I resize the main window
            it doesn't resize properly or its contents aren't resized properly.
Solution:   You need at least Wine 1.5.20 for this to work properly.
            (That Wine got a bugfix for correctly dispatching WM_EXITSIZEMOVE).

PROBLEM 41: I see black floor tiles that seem buggy. They can't be lit or they
            'smear' if other things pass over them.
Solution:   In a file explorer, navigate into the folder 'TomeNET/lib/user'
            and delete the file 'font-win.prf' in there.

PROBLEM 42: Keyboard input on KDE/Linux is strangely laggy.
Solution:   This is a weird one, but what has worked is to use smaller text
            fonts (at most 9X14).

PROBLEM 43: Aww, the ego power "Holy Avenger" that I'm so fond of does not
            exist in TomeNET anymore.
Solution:   It does. It has just been renamed to "Aman", it does the same (and
            a little bit more even) as (Holy Avenger) items in other variants.

PROBLEM 44: When trying to connect to the meta server I get an error message:
            "No setup info received" and the game terminates.
Solution:   This can happen on really bad/slow internet connections such as via
            mobile modems operating on arbitrarily (by the ISP) reduced
            bandwidth. There is no solution really, except retrying a few times
            until your connection attempt eventually "gets through". Make sure
            that no downloads or other bandwidth-using applications are running
            in parallel to increase your chances of successfully establishing a
            connection.

PROBLEM 45: The dark blue colour is too dark on my screen to be readable.
Solution:   Edit your config file (TomeNET.ini on Windows, .tomenetrc on Linux
            and Mac OS X) and find the line 'lighterDarkBlue'. In TomeNET.ini
            set it to 1 instead of 0, in .tomenetrc uncomment the line by
            removing the leading '#' symbol. Restart your game client.

PROBLEM 46: Sound sound effects, mostly the page sound (when someone pages you
            with the /page command) sounds oddly distorted.
Solution:   Make sure that you don't have all four volume sliders at maximum:
            Just lower the master slider by 1 or 2 steps.

PROBLEM 47: Testing your character's damage-per-second (dps) on the target
            dummies in Bree with melee weapons or ranged weapons (slings, bows
            or crossbows) has weird effects: You don't get more damage from
            increasing your number of attacks per round, even though all other
            stats (speed, critical hits) are exactly the same.
            Or you actually seem to get a sharp increase in damage by bumping
            into the target dummy instead of using the melee auto-retaliator.
Solution:   You are experiencing game engine limits regarding the world surface
            (including all towns, like Bree). See (9.7) for details.

PROBLEM 48: The TomeNET-Updater for Windows gives a message about captcha when
            I try to update sound pack or music pack.
Solution:   Unfortunately the updater cannot defeat captchas of one-click
            hosters from where the audio packs are downloaded.
            This means that you just have to retry after some time has passed,
            for example an hour, and hope that you won't get a captcha request
            then.
```

(In general, captcha requests tend to pop up when the file is very
frequently accessed.)

PROBLEM 49: On Linux/X11 I get 100% cpu usage unless I disable audio (with the
'-q' command-line option). This usually happens with more special
audio hardware.
Solution: Change the audio sample rate in '.tomenetrc' config file to match
your audio hardware's native sample rate. Most on-board sound chips
use 48000 aka 48kHz, but if you encounter this problem you probably
use a more sophisticated system that might run at higher rates such
as 96000 aka 96kHz.

PROBLEM 50: On Linux/X11 I get 100% cpu usage when switching workspace away
from TomeNET when I have 'recall_flicker' option enabled.
(The system on which this happened had AMD graphics drivers, but
that might not be relevant.)
Solution: This is suspected to be a problem with 'Awesome' window manager.
However, if you use Gnome, starting Awesome through
gnome-session --session=awesome
has been reported to solve the problem.

PROBLEM 51: I get an antivirus warning when I try to run the installer version
of TomeNET (the self-installing '.exe' file) or in general for the
'install_tomenet' executable/process.
Installation also fails or fails partially.
Solution: Avast and Trendmicro antivirus are known for causing trouble with
the Nullsoft NSIS installer system that TomeNET utilises.
Disable the antivirus program before you install TomeNET.
Also, some scanners like virustotal.com will detect 'killproc'
heuristics in the install_tomenet.exe helper process - which makes
sense since this installer indeed will attempt to kill any running
TomeNET process before it updates, this is the intended behaviour.

PROBLEM 52: On Windows 10 (maybe 8 too), the self-installer freezes on startup.
Solution: Why are you STILL using Windows.. Ok well, you can try to just sit
it out, some people have reported that the NSIS installer is known
to freeze for about 15 minutes on Windows 10. Maybe it will just
continue if you wait for a while.

PROBLEM 53: Windows OS: Using the 'Alt' modifier key in macros doesn't work.
Solution: None. Install Linux in addition to Windows (dual-boot).

PROBLEM 54: I cannot select a server from the meta server list, it seems my key
presses get ignored. Or in general, letters and numbers seem to get
ignored, but arrow keys and other non-alphanumerical keys work.
Solution: If you are using a non-english keyboard layout with asian or
cyrillic letters, switch it to english layout.
Usually it's an IME (Microsoft Input Method Editor) setting. Eg if
you had set it to korean, you might only be able to use arrow keys
in the game, but not keys like ":" to chat or "?" for help. Switch
it to for example EN-US IME (US English) and you should be fine.

PROBLEM 55: Editing config files of all kinds (ini/prf/opt/ins..) doesn't seem
to have any effect.
Solution: If you're on Windows and using a game version greater than 4.6.1a,
TomeNET will make copies of your 'scpt' and 'user' folders and work
with those instead of the original ones (which are probably in your
Program Files folder). The working copies are located at folder:
C:\users\yourname\
The drive letter and path could vary depending on your Windows
installation, but this is the normal location in almost all cases.
(The reason the game does this is that Windows starting at version

7 will severely limit access to the Program Files folder.)

PROBLEM 56: On a fresh TomeNET installation on Linux, the game will fail to
            start, giving a font-not-found error (usually about font '9x15'),
            like this: "Font not found: 9x15".
Solution: TomeNET uses basic Linux system fonts (and allows you to switch to
            fonts of your own choice instead, if you want to). Some Linux
            distributions do not have these installed by default though, for
            example Antergos.
            Install the necessary fonts packages on your system, using the
            system's package manager. It should usually be 'xorg-fonts-misc' or
            'linux-fonts-misc' or 'xorg-x11-fonts-misc'.
            On some distros (Archlinux too probably) you might have to install
            the 'xorg-mkfontscale' package.
            After installation, reboot your system to ensure they work.
            If there is still a problem, you could try installing
            xorg-fonts-type1 or awesome-terminal-fonts too. Maybe it helps.

PROBLEM 57: On older Linux systems that do not use pulseaudio, audio (sound/
            music) is not working at all. (First see PROBLEM 20 please.)
Solution: Tell SDL explicitly to use ALSA. However, SDL is known for
            producing quite some CPU overhead when enabling this, for no good
            reason, so it is strongly recommended to install pulseaudio instead
            (if there is a problem with TomeNET not using pulseaudio, see below
            PROBLEM 58 that fixes this).
            To tell SDL to emulate ALSA, do export SDL_AUDIODRIVER=alsa.
            For example create a small script to start Tomenet, 'tomenet-alsa':
              export SDL_AUDIODRIVER=alsa
              ./tomenet $@

PROBLEM 58: On Linux, audio (sound/music) is not working in the way that the
            client on starting up will report in the console:
            "ALSA lib pcm_dmix.c:1089:(snd_pcm_dmix_open) unable to open slave"
            and also a "Warning" in-game:
            "Couldn't open mixer: No available audio device".
Solution: Tell SDL to use Pulseaudio instead of ALSA, as your system is most
            likely reserving the ALSA device exclusively for the Pulseaudio
            service. To do so, export SDL_AUDIODRIVER=pulse. For example create
            a small script to start Tomenet, 'tomenet-pulse':
              export SDL_AUDIODRIVER=pulse
              ./tomenet $@

PROBLEM 59: On Mac OS X when I run TomeNET.command file, nothing happens, or
            when I run it from within a terminal, TomeNET only starts in
            non-window mode, ie terminal mode.
Solution: TomeNET requires X11 to run in windowed mode. To provide X11
            on Mac OS X, install 'XQuartz' and run the 'TomeNET.command' file
            from within it.

PROBLEM 60: Editing the Colormap_0 entry (TomeNET.ini) or colormap_0 entry
            (.tomenetrc) doesn't do anything, no matter which colour I choose.
Solution: Indeed the entry #0 cannot be changed and is always black ie
            #000000. All other entries are freely modifiable though.

PROBLEM 61: I changed a key in the macro menu and now it doesn't work anymore.
Solution: To restore a key's default behaviour, press % to enter the macro
            menu and choose 'd' to delete a macro from a key, then press the
            key in question.

PROBLEM 62: I sometimes lose the ability to run for no apparent reason.
Solution: Make sure you don't trigger your NumLock key. For running, numlock
            should be turned off all the time.

PROBLEM 63: My audio (sound/music) should be working fine, but I don't hear
             anything.
Solution: Aside from checking all other audio-related problems in this
             section, make sure the reason isn't simply that you have disabled
             the 'Master' or 'Sound' or 'Music' switch in the audio mixer:
             Press CTRL+U for the mixer (CTRL+F on rogue-like key set) and check
             that the 'Master' button and any other relevant audio button has
             a green 'X' symbol between the white brackets: [X] , indicating
             that it is enabled. If not, enable all four buttons and see if it
             works now.
             This might have happened because you accidentally hit one of the
             shortcut keys listed under the four buttons, that can toggle the
             mixer settings from anywhere in the game, outside the mixer UI.

PROBLEM 64: Some modified keys seem to collide with other keys, for example
             When I press CTRL+m it seems to be same as pressing the ENTER key.
Solution: There is currently no 'native' fix for this. A workaround is to use
             an external tool such as AutoHotKey and (in above example) have it
             map CTRL+m to something else (eg: ^m::+{1} to map CTRL+m to '!').

PROBLEM 65: A recent Windows 10 update from end of 2020 or beginning 2021 seems
             to have broken running TomeNET (as well as some other programs) as
             normal user for some users.
             The client will just terminate on startup and throw this error:
             "Font file corrupted"
Solution: A workaround is to run TomeNET as privileged user or as super user
             (administrator).

PROBLEM 66: Tokariew found out about a linking problem when cross-compiling
             TomeNET on Fedora 33 with mingw-gcc10.
Solution: Using the linker flag -fstack-protector resolved this.

PROBLEM 67: I want to macro CTRL+Z but it automatically changes into "\W".
Solution: In the macro wizard, press 'a' to enter the action, and instead of
             just   ^z   prefix it with a '\' like this: \^z
             The '\' will prevent auto-changing of the ^z to \W.
             Next you can press 'h' to create a hybrid macro (or whatever you
             see fit) and press the key you want to bind it to.

PROBLEM 68: I'm using the '/?' command to search for something in the guide
             that should definitely be there, but instead I get the message
             "Search term '<what I searched for>' not found."
Solution: If you really specified a supposedly valid search topic, check your
             spelling and make sure you have updated your Guide to the latest
             release. You can do that in three different ways:
             - In-game press = for options menu, then C to check or U to update.
             - Run the TomeNET-Updater app in your TomeNET installation folder
               (or use the desktop shortcut if available), click "Update Guide".
             - Go to the www.tomenet.eu website and download it manually, place
               it into your TomeNET folder and overwrite the existing file
               'TomeNET-Guide.txt' with your downloaded one.
             If it is not a real 'topic', instead invoke the guide (press ˜g or
             double-tap '?' key to do that) and then press 's' for a normal text
             search instead of a topic/chapter search.
             This will find any occurance of your search string in the guide.

PROBLEM 69: When trying to login with a character I get an error
             "Bad socket filedescriptor" and the client terminates.
PROBLEM 70: When trying to select a server the client crashes with a segfault
             (a segmentation fault, core dumped).
Solution: Probably your client failed to pre-load the TomeNET Guide.

(69+70)   This happens if your client version is too old and the guide has
                 meanwhile become too big for it.
                 You can either update your client to the latest version, which
                 should be capable again to pre-buffer it correctly (the proper and
                 recommended way), or you could -as a temporary workaround- just
                 delete the TomeNET-Guide.txt file in your TomeNET folder (which is
                 not the recommended way of course).

PROBLEM 71: When playing the game via terminal or over SSH a lot of characters
             are rendered wrong, eg appearing as "^B" two-symbol combination
             even, making the display mostly unreadable.
Solution: Turn off 'font_map_solid_walls' in options page 2 (press =2).

PROBLEM 72: When using a custom font that remaps characters, some or most of
             the tiles, monsters or other visuals seem to not map correctly but
             are displayed as if it was a default font instead.
Solution: Turn off 'font_map_solid_walls' in options page 2 (press =2).

PROBLEM 73: When you start TomeNET in a terminal, you get an error message:
             "TomeNET needs an 80x24 'curses' screen
              Unable to initialize a display module!"
Solution: Even though you might not be running the client in command-line
             mode, it still requires a terminal size of at least 80x24 on start
             up. Enlarge the terminal window so that it is at least 80 colums
             wide and 24 rows high.
             On mobile devices you can usually just pinch-zoom out to decrease
             the font size and thereby gain more screen estate, or you can
             switch the on-screen keyboard to 'floating' mode, which means it
             no longer takes up screen estate at all, but hovers 'over' any
             content.

PROBLEM 74: GCU client doesn't allow switching big_map in = menu or via /opt.
Solution: Currently, live-resizing is not available in the GCU client.
             However, big_map is still supported, but it must be set in the
             config file (usually "~/.tomenetrc") before starting the client.
             This is done by editing the config file and setting the size of the
             main window to 46 lines via this config file line:
             Mainwindow_Lines 46
             Note that if the client on startup complains that the display is
             not large enough (ie has less than 46 lines), on devices that have
             touch input such as mobile phones you can just pinch-zoom out to
             decrease the font size until it is small enough that you get at
             least 46 lines. Or you can switch the on-screen keyboard to
             'floating' mode, which means it no longer takes up screen estate at
             all, but hovers 'over' any content.

PROBLEM 75: GCU client doesn't allow movement via arrow keys.
Solution: Terminals encode arrow keys as special 'escape sequences' ie one
             arrow key would register as multiple key presses starting on 'ESC'
             instead of just a single keypress. These sequences can actually be
             macroed by TomeNET just fine in 'multi_key_macros' mode. This mode
             is activated automatically and only by a GCU client, so everything
             works out of the box in theory. However:
             You need to ensure that these macros are either loaded, or create
             them yourself in the macro menu, by specifying a direction, eg '2'
             for southward movement as the macro action and create a normal
             macro via 'n' and then pressing the arrow-down key.
             It should be normal so it will work for menu-navigation too.
             If you don't need that, you could at least make it a hybrid macro
             if you want to run via '.' followed by that arrow key. On the off
             chance that you need neither menu navigation nor running via '.'
             then a command macro would do just fine.

However, it is recommended to just macro all running actions too
and simply macro them to shift+arrowkeys, eg enter action '.2' for
southward running and create a command (or whatever you prefer)
macro where you press shift+arrowdown key as trigger.
In case some or all shift+arrowkey combinations have no effect,
make sure that the settings of the terminal you are currently using
don't reserve these as hotkeys for themselves. For example in Xfce4
the xfce4-terminal by default sets hotkeys shift+up and shift+down
for scrolling by one line up or down respectively, which will hide
these keypresses from TomeNET. Go to the terminal preferences and
delete these shortcuts, then they will work in the game.
In clients after 4.9.2 there is a pre-defined set of GCU macros for
movement in the file lib/user/pref-gcu.prf which is automatically
loaded on startup so you don't have to create the macros yourself.
These macro are all 'normal' macros ('P:' prefix in the file).

PROBLEM 76: On logging in with a character I receive one or more messages in
           yellow colour saying "Error in ... parsing ...".
Solution: Usually caused by an outdated config file, such as .opt (options)
           or .prf (preferences). This happens for example if the name of an
           option has changed since an older game version.
           To fix this, just save your options again by pressing: = s
           or if it was a prf file (usually a macro file) by pressing: % s
           Alternatively you can also fix it by going to your TomeNET user
           folder (eg by pressing ~U) and editing the file of the specified
           name:
           Find and either delete the line that has the error in it or correct
           the option name if you know its new name (in the game press = for
           the options menu and look for a similar option that might be the
           same as the old one just with a new name).
           For example all options that were starting on "hi..." as short form
           of "high..." were at some point changed to actually read "high..."
           instead. For example "hilite_player" -> "highlite_player" etc.

PROBLEM 77: Asian Windows clients (CJK, ie chinese/japanese/korean):
           I cannot switch languages in Windows via keyboard shortcut while
           TomeNET is in focus, or ALT+TAB isn't behaving as expected, or
           the game's window focus is not switchable as usual.
Solution: As long as you don't rely on CJK IME (Input Method Editors for
           chinese, japanese, korean languages), you can safely disable IME
           and it should fix the problem. There are three ways:
           1) In game, press = for options menu, then press E to toggle IME.
              Quit the client via CTRL+Q to ensure the option is saved.
           2) Edit your TomeNET.ini file with a text editor, find the option
              'DisableIME' and set it to '1' instead of '0'.
           3) Start TomeNET with the command-line option '-I', for example
              from a terminal window or a .BAT file: TomeNET.exe -I

PROBLEM 78: On startup the game keeps asking for bigmap (double screen height)
           mode or for graphics mode.
Solution: TomeNET writes a hint to its config file after asking this so next
           startup it knows not to ask again when it reads the config file.
           Since this mechanism doesn't seem to work, you either
           - set the TomeNET config file to write-protected or
           - have some script that automatically overwrites it with an initial
             state/version.
           You can also edit your TomeNET config file with a text editor and
           add the missing hint manually to suppress the query on startup:
           For Windows client:
            Edit TomeNET.ini (must be same base filename as the executable, ie
            in this case TomeNET.exe, assumed you aren't using a command-line
            parameter to load a differently named ini file) and add or modify

```
            a line in it: "HintBigmap=0"
        For X11 client (Linux/OSX):
         Edit .tomenetrc file (assumed you aren't using a command-line parm
         to load a differently named rc file) and add a line just saying:
         "hintBigmap".


  =============================================================================
```