

```
#####@#####+  
#  
# NetHack
```

.	.	D	\$.	.
.	.	L	&	.	+
.	.	!	.	{	.



The Greatest Game
You've Never Heard Of



*except by me probably, because I won't shut up about it.

What is NetHack?

1987 terminal dungeon game, forked off of Hack, which itself is forked off of the original Rouge, where the term Rougelike comes from.

Previous versions depended a lot on “Random Number Gods” but the gameplay of NetHack can be played way more strategically -- That's why I like it so much.

Rouge -> Hack -> NetHack

Gameplay

Dungeon Crawl

PERMADEATH

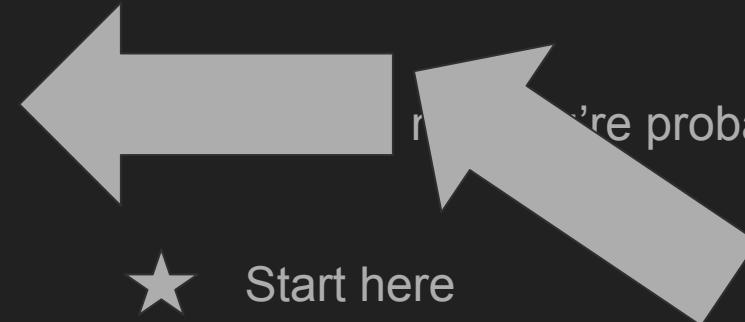
DND, but if you have no friends

Randomly Generated

Known for the sheer amount of
keyboard shortcuts you need to know

Levels of The Dungeon

Astral Plane



Remember, you're probably going to die there too

Dungeons of Doom



Gehennom



Ascending



Do I have to play the terminal
version like it's 1987?

Yes.

Do I have to play the terminal
version like it's 1987?

~~Yes.~~

Ok, no you don't have to.

The kitten picks up a lichen corpse.
The Kitten drops a lichen corpse.
The Kitten picks up a lichen corpse.
The Kitten drops a lichen corpse.
With great effort you move the boulder.
You try to move the boulder, but in vain.
You try to move the boulder, but in vain.
You try to move the boulder, but in vain.
You try to move the boulder, but in vain.
The Kitten picks up a lichen corpse.
The kitten drops a lichen corpse.
You have a little trouble lifting s - a lichen corpse.



nethack-x11

Naidneeltil the Evoker	Strength	10
The Dungeons of Doom, level 1	Dexterity	13
Hit Points 11	Max HP 11	
Power 9	Max Power 9	Constitution 14
Armor Class 9	Alignment Chaotic	Intelligence 20
Level 1		Wisdom 9
Gold 7		Charisma 9

Burdened

BrowserHack

beta

Click here for help

M - a purple spellbook.

You begin to memorize the runes.

You add the "stone to flesh" spell to your repertoire.



Inventory

Weapons



Armor



Comestibles



Scrolls



Spellbooks



Potions



Rings



Wands



Naidneeltt the Evoker St:10 Dx:10 Co:18 In:19 Wi:9 Ch:9 Neutral
Dlvl:1 \$:25 HP:11(11) Pw:7(7) AC:9 Exp:1

Browser Hack

<https://wang-lu.com/BrowserHack/>

Recommended Configuration ~/.nethackrc

```
OPTIONS=!autopickup # turns off autopickup  
OPTIONS=hilite_pet # highlights pets, making them easier to identify  
# and less likely for you to accidentally kill  
OPTIONS=color # adds color to your game (don't you want color?)  
OPTIONS=boulder:0 # makes boulders look like 0 instead of `
```



Roles



Level 0

@

This is you

Welcome to the Dungeons of Doom

Character Attributes

Strength

Dexterity

Constitution

Intelligence

Wisdom

Charisma

Alignment: Lawful, Chaotic, Neutral

Race: Human, Gnome, Dwarf, Elf, Orc

Archeologist

This is a difficult role

Rough starting stats and equipment

Can use uncursed touchstones like they are blessed (good money)

At xp 1 stealth, speed
At xp 10: auto search

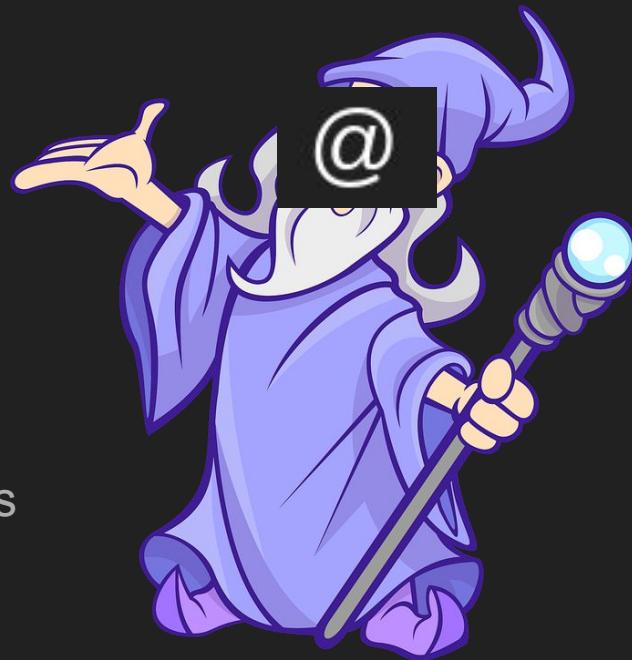
Lawful or neutral



Wizard

Weak as hell in the early game, limited weapon choice, but can become good at daggers.

EXCELLENT spellcasters



At xp 15: warning
At xp 17: teleport control

Neutral or chaotic

Barbarian

One of the more easier roles for new players

All 'hit' messages are replaced with 'smite', doesnt help anything -- but it is fun.



Xp 1: poison resistance

Xp 7: speed

Xp 15: stealth

Chaotic or neutral

Caveman

High starting strength
and constitution

Bad weapon choice,
BUT great quest
artifact, Sceptre of Might

No penalty for cannibalism

At xp 7: speed
At xp 15: warning

Lawful or neutral



Healer

Get an alignment bonus for healing pets

Hard early game

Good HP growth, not great fighting skills with weapons



Get most of the healing spellbooks /potions off the bat, with some money

Always neutral

Priest

Can know the
cursed/blessed/uncursed
status of items ON
SIGHT (giga helpful)

Decent spellcasters, not
great choice of weapons



At xp 15: Warning
At xp 20: fire resistance

Any alignment

Ranger

Bonus for multishot to ranged weapons except daggers

Bonus to untrap floor traps

Incurs a penalty for emergency spells



At xp 1: auto search

At xp 7: stealth

At xp 15: see invisible

Chaotic or Neutral

Rouge

This role is difficult

Get +1 multishot for daggers and can eventually spellcast

Better at disabling traps and opening containers

Can two weapon in combat



At xp 1: you get stealth

At xp 10: you get auto search

Always chaotic

Samurai

Get a +1 bonus from shooting a bow (yumi) and arrow. (ya)

Have special rules for conduct, and have japanese naming for items

Can dual wield weapons



At xp 1: you get speed,

At xp 15: you get stealth

Always Lawful

Valkyrie (Recommended for Beginners!)

Good starting stats,
good at taking

Hits. good weapon
choice Not good spell
casters

Always generated
female



At xp 1: you get cold
resistance and
stealth.
At xp 7: you get
speed

Any Alignment



But, naidneeltil, what if I hate myself? what do I choose?



Tourist

Laughably weak
starting stats



Get starting money
but shopkeepers will
fleece you if you are
under xp 15



don't choose this
unless you want a
challenge.



At xp 10: auto
searching

At xp 20: poison
resistance

Possible alignment : any
ascending with a tourist
is a flex.



Unironically What You're Gonna to Look Like





Movement



Level 1

You *can* move with the numpad if you want



Add this line to your `~/.nethackrc`:

`OPTIONS=numpad:1`



|.....f.....\$...|
+.<.@.....+
|.....!.....|



Use Vim Keys (with some additions) to move!

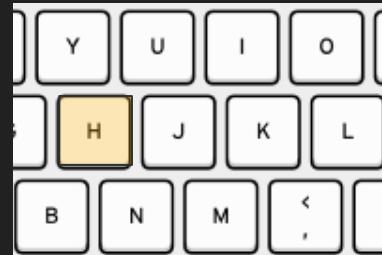
```
|.....f.....$..|  
+<..@.....+  
|.....!.....|
```

Moving Right.



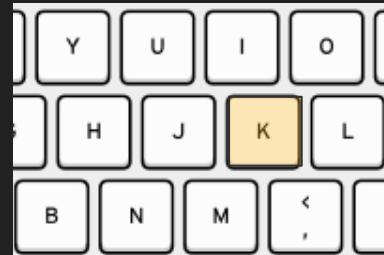
```
|.....f.....$..|  
+.<.@.....+  
|.....!.....|
```

Moving Left



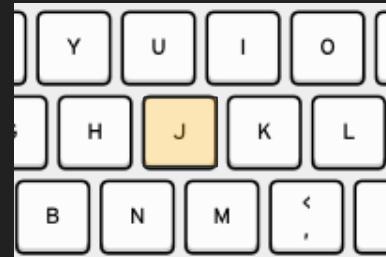
```
|.....@...f.....$...|  
+<.....+  
|.....!.....|
```

Moving Up



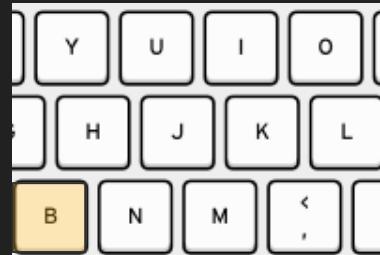
```
|.....f.....$..|  
+.<.@.....+  
|.....!.....|
```

Moving Down



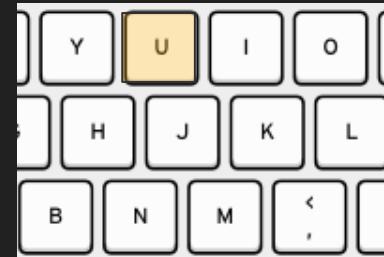
.....	f	\$..
+<.....+			
..@.....!				

Moving Diagonally
Downward



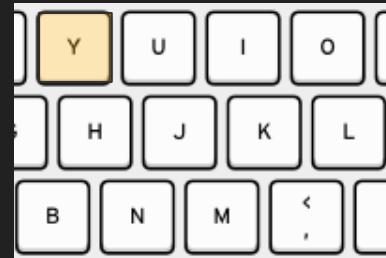
```
|.....f.....$..|  
+.<.@.....+  
|.....!.....|
```

Moving Diagonally
upward



|. . @ f \$...|
+ . < +
| ! |

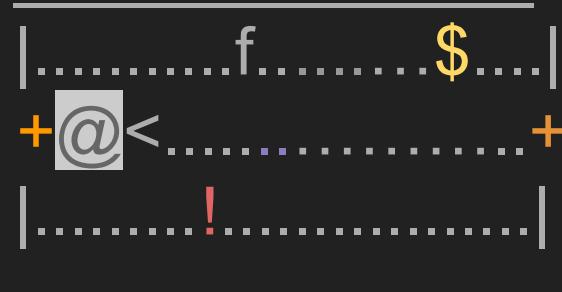
Moving Diagonally
Upward (left)



```
|.....f.....$..|  
+.<.@.....+  
|.....!.....|
```

Moving Diagonally
Downward (right)





Move into it / Ctr-d to kick it down

Opening a Door

|.....f.....\$...|
#@<.....+
.....!.....

Glyphs you Need to Know

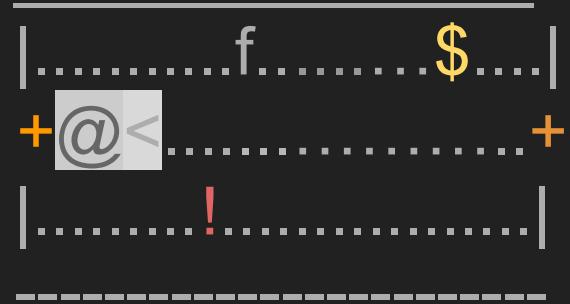
Point blank -- memorize them

- i show inventory
- ,
- .
- / what is that?
- s search
- S save game

```
|.....f.....$...|  
+@<.....+  
|.....!.....|
```



/ - for finding out what stuff on the screen is



/ - for finding out what stuff on the screen is

```
|.....f.....$...|  
+@<+  
|.....!.....|
```



/ - for finding out what stuff on the screen is

```
|.....f.....$...|  
+@<|.....+  
|.....!.....|
```

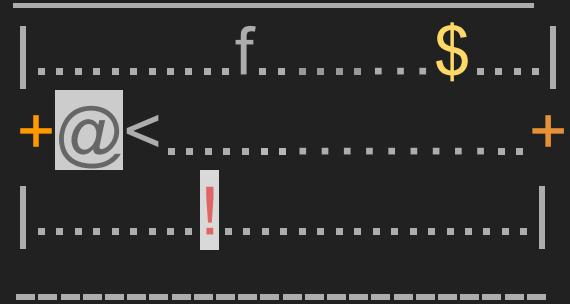


/ - for finding out what stuff on the screen is

```
|.....f.....$...|  
+@<...+  
|....!.....|
```

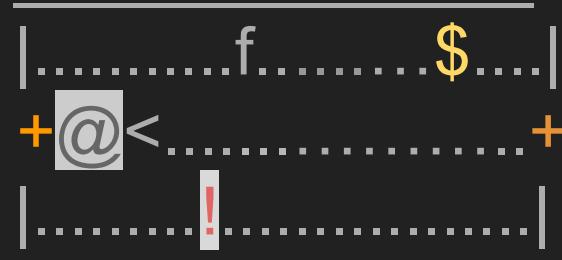


/ - for finding out what stuff on the screen is



/ - for finding out what stuff on the screen is

! - Red Potion (seen: normal vision)



. - for selecting in place where the cursor is

```
|.....f.....$...|  
+@<.....+  
|.....!.....|
```



Comma - for picking stuff up

Inventory

.....f.....\$...
+<.....+.....
.....@.....

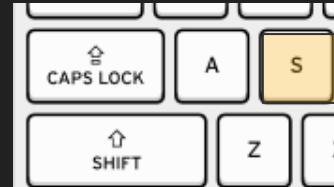
Potions

j - red potion



Comma - for picking stuff up
Press i to see inventory

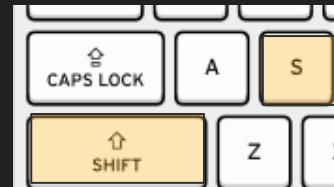
|.....f.....\$...|
+<.....+
|.....@.....|



s - for searching

Would you like to save? (y/n)

```
|.....f.....$...|  
+<.....+  
|.....@.....|
```



S - for saving the game



Level 2

Items

Spellbooks	+	Amulets	"
Scrolls	?	Weapons)
Rings	=	Armor	[
Potions	!	Tools	(
Food/corpse	%	Gems	*

But wait, I can't tell what they do!

All items in NetHack, (except in your starting inventory or food) Is unidentified!

It's up to you to find out what they are, and their blessed/cursed/uncursed status

! - Green potion



+ - cyan spellbook



? - Lorem Ipsum



Ways to Identify Objects:

- Scroll of Identify / identification spell
- Price check
- Engrave with a wand and check message
- Dropping rings in sinks (loses the ring in the process)
- Touchstone (for gems)
- Test it out on monsters
- Test it out on yourself (**dangerous!**)



+ - cyan spellbook



+ - Spellbook of
Polymorph

How do you Use Them?

There are A LOT of shortcuts, but you can usually guess hashtag commands

#quaff (potions)

#apply (tools)

#eat (comestibles)

#wear / #takeoff (armor/amulets/rings)

#read (scrolls/spellbooks)

#wield (weapons)

#drop (all times)

#help (to see all extension commands)

ESC -> if you decide against doing something

... But the shortcuts are not hard

#quaff

q

#apply

a

#eat

e

#wear

w

#wield

w

#takeoff

t

#read

r

#drop

d

#help

?



So don't be afraid to use
them, they are faster!



Monsters



Level 3

There are A LOT of monsters in NetHack

If they have the same character, they are the same kind of Monster.

D - Green Dragon (breaths poison ray)

D - Red Dragon (breaths fire)

Color matters!

h - hobbit (pretty easy to deal with)

h - possible mind flyer (really *really* dangerous)



Monsters can be....

Tame

You can sometimes gain pets (feed a hostile dog/cat/horse) / use the spell of charm monster / read a scroll of taming

Peaceful

(won't help you, but won't hurt you unless you hurt them first)

Hostile

will always track you down and attack you

Whether a monster is peaceful/hostile is determined often by your race/alignment. If you are a Gnome, other Gnomes are peaceful. If you are Chaotic, Bugbears will be peaceful

Monster Corpses %

Corpses also show up as food.

Some corpses/foods can give you intrinsics!

Sleep Resistance

Poison Resistance

Cold Resistance

Fire Resistance

Telepathy

Speed

Careful that the foods you eat aren't dangerous!

If you are eating a poisonous corpse for poison resistance-- make sure you have enough HP/ have external protection

otherwise, RIP

Fire, Cold,
Sleep, Shock,
Poison
resistance and
good MC & MR

Will try to do
their best to
steal the
Book of the
Dead

One of the
hardest difficulty
of generated
monsters

Powerful
cold touch
and can
cast spells

But at least you
can genocide this
with a scroll of
genocide.



L

Arch-Lich / Master-Lich

Fire, Poison, Acid,
Stoning
resistance &
good AC and MR

Will try to do their
best to steal the
Amulet of Yendor
Itself from you

One of the
hardest
monsters period

Will follow you up
and down stairs and
can FLY (NO
ESCAPE)

CAN'T BE
GENOCIDED!



&

Jubelix



#####@#####+.....L.....&....+

#

Ur Dead

|.....D.....\$.....|

|.....!.....{.....|

If you see this room, You should RUN

*you ain't gonna make it buddy

Dungeon Features



Level 4

Dungeon Features

Lava	}	Trees	#
Fountain/water	}	Upstairs	<
Sink	#	Downstairs	>
Traps	^		
Altars	_		

Altars _

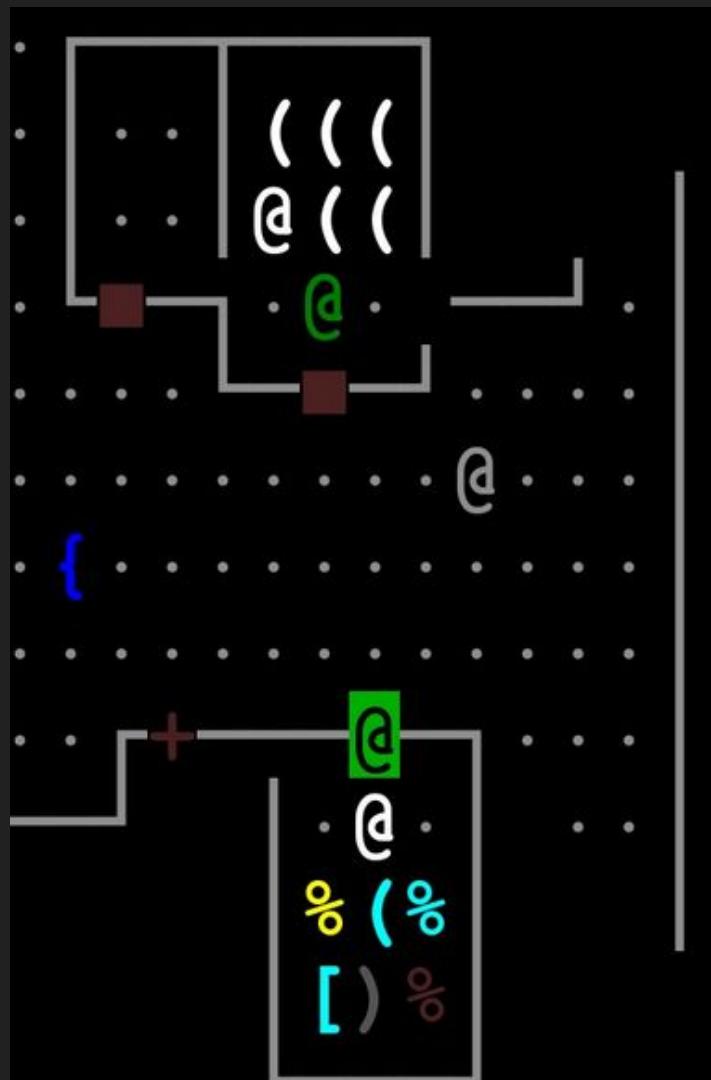
Dropping things on altars can tell you whether they are cursed/blessed/uncursed. (REALLY HELPFUL)

You can also give offerings through Placing a corpse on it, and doing #offer.
What does this do?

- Can convert the altar to your god if it isn't already
- If you #pray on an altar with water, you can make holy water
- If you offer on your god's altar, they can give you **artifact weapons.** 😎

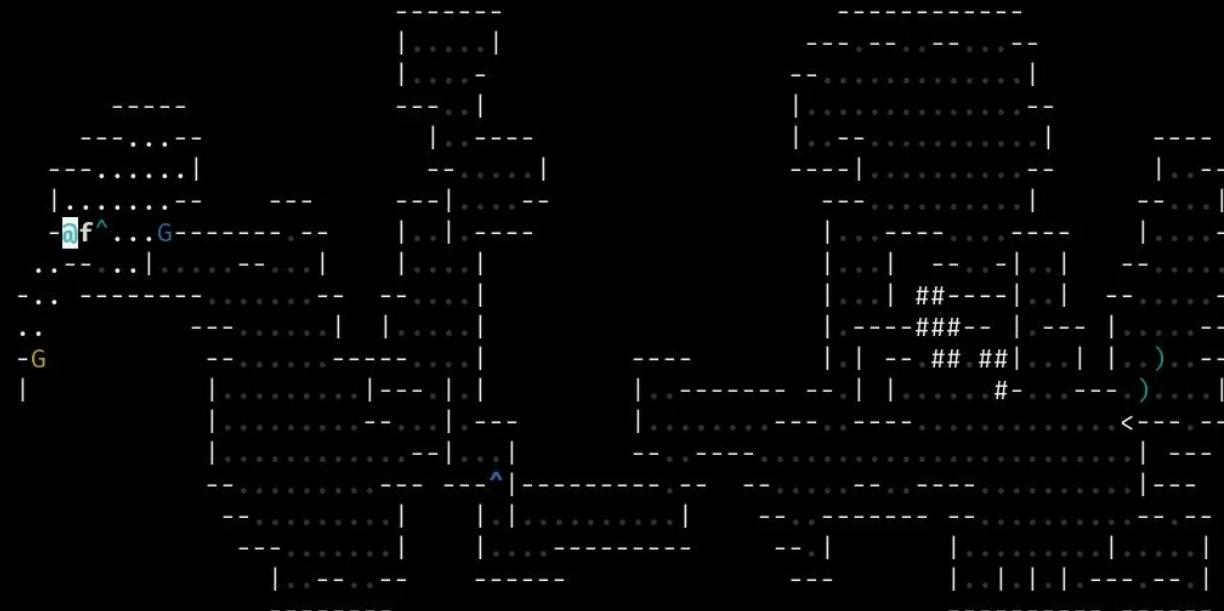
DON'T PRAY/SACRIFICE IN A TEMPLE THAT IS NOT ALIGNED WITH YOU - THE PRIEST WILL GET MAD

Shops



Gnomish Mines

You are carrying too much to get through.

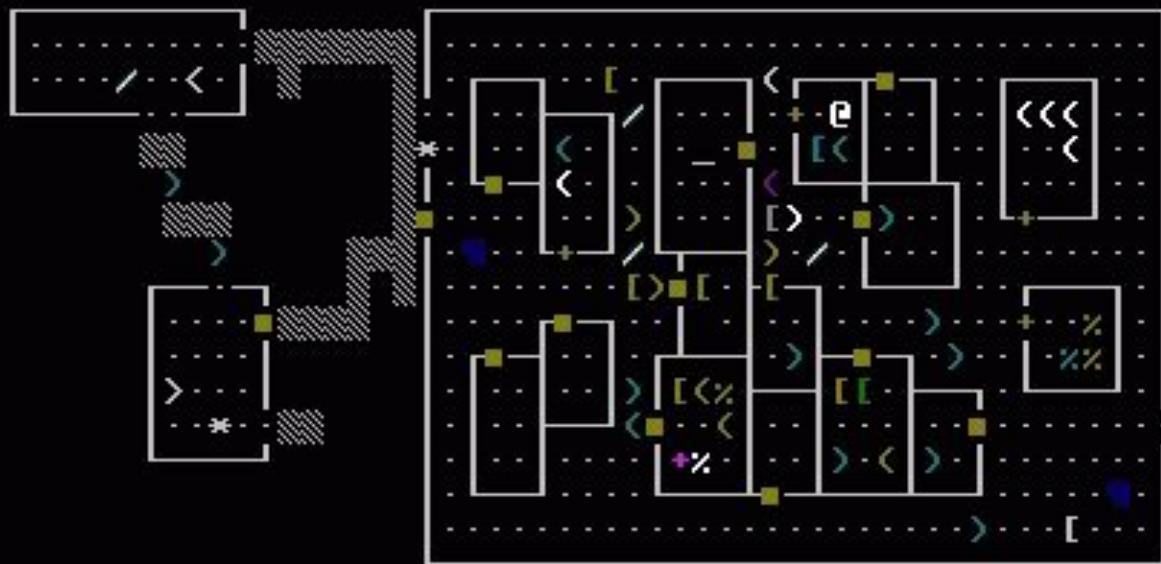


Helga the Fighter

Dlvl:3 \$:1417 HP:85(85) Pw:11(15) AC:-5 Xp:8 T:8416

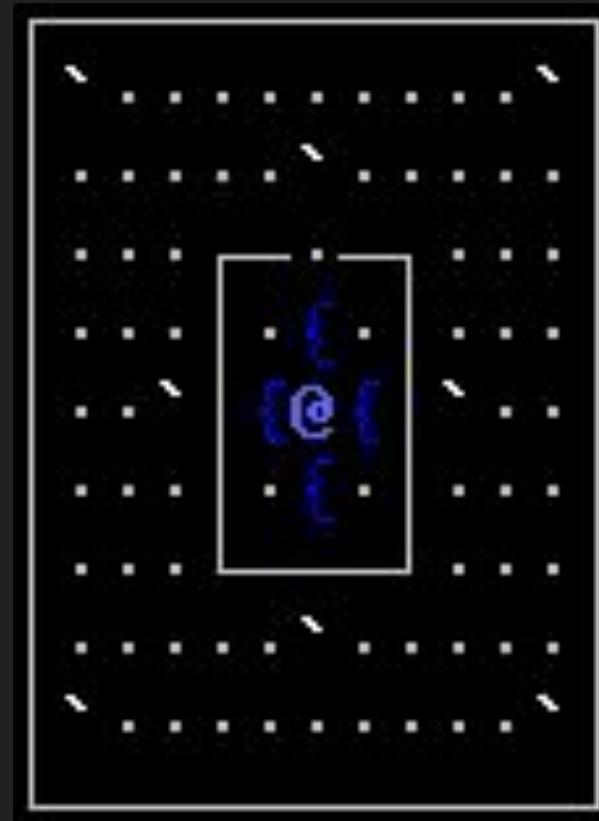
St:25 Dx:12 Co:18 In:8 Wi:9 Ch:11 Lawful

Minetown



Lilian the Raider St:18/17 Dx:18 Co:18 In:7 Wi:12 Ch:7 Chaotic
Dlvl:5 \$:0 HP:120(120) Pw:21(21) AC:-13 Exp:14 T:32036

Oracle



Sokoban



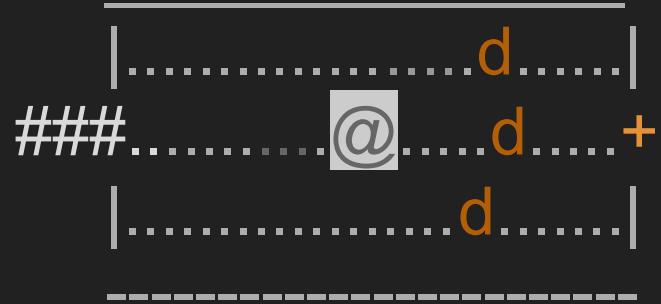
Last minute Dungeon Safety

Engraving Elbereth:

- if you stand on a square with Elbereth on it (not misspelled or faded) monsters can't attack you BUT you can't attack them either.
- Use with #engrave can do it with your finger, a wand, a dagger, etc

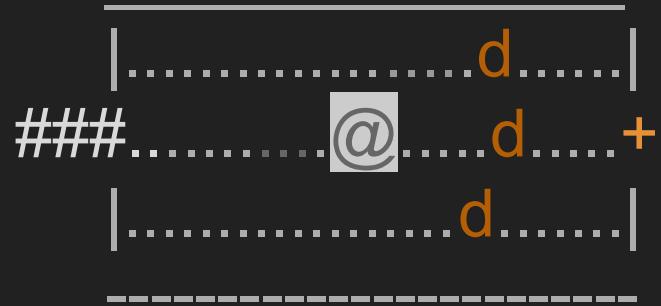
#pray

- Pray to your god/goddess and they will solve your biggest major issue. Only works if you haven't done it recently / your god/goddess is happy with you



Dlvl:2 \$:0 HP:5(20) Pw:7(7) AC:9 Xp:1 **Fainting**

#pray



Dlvl:2 \$:0 HP:5(20) Pw:7(7) AC:9 Xp:1 Fainting

Are you sure you want to pray? [yn] (n)

```
-----  
|.....d....|  
###.....@....d....+  
|.....d....|  
-----
```

Dlvl:2 \$:0 HP:5(20) Pw:7(7) AC:9 Xp:1 **Fainting**

You begin praying to Kiwi. You are surrounded by a shimmering light. Your stomach feels content



Dlvl:2 \$:\$0 HP:5(20) Pw:7(7) AC:9 Xp:1

You can't #pray again

At this point, it's will be up to you,
And what you have in your inventory in order to survive

https://nethackwiki.com/wiki/Main_Page

Main page Read View source View history Search NetHackWiki

net
h@ck
wiki

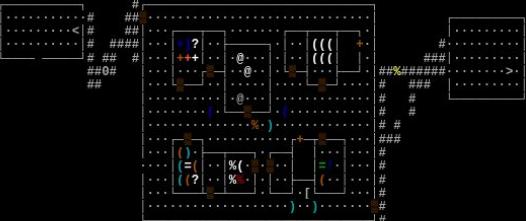
Hello, welcome to NetHackWiki!
"Why do you suppose they call them *MAGIC* markers?"

Featured article edit

The **mind flayer** and **master mind flayer**, , are especially perilous monsters. They are depicted with a humanoid body, an octopus-like head, and four tentacles around a lamprey-like mouth. Mind flayers can use their tentacles to eat your brain, decreasing your **intelligence**; this may result in developing **amnesia** and, in the worst cases, perishing as your last thoughts fade away from fatal intelligence drain.

[Read more...](#)

You have a little trouble removing f - a blessed smoky potion.



Jawn the Exhumor St:25 Dx:11 Co:10 In:17 Wi:14 Ch:11 Neutral S:40815
Dlvl:7 \$:2597 HP:55(55) Pw:69(69) AC:2 Xp:11/10000 T:11070 Burdened

NetHackWiki is a **free** community web site for the game **NetHack** that anyone can edit. **This wiki is one big spoiler, so turn back now if you want to figure things out for yourself.** Otherwise, consider taking a look at the basic **strategy** page.

News edit

- 25th November 2023 - Wiki has moved to new host in a new containerized environment.
- 1st November 2023 - The November NetHack Tournament 2023 has started.
- 14th September 2023 - EvilHack version 0.8.3 has been released. See this reddit post for more information.
- 29th May 2023 - xNetHack version 8.0 has been released. Details on Reddit here.
- 1st May 2023 - EvilHack version 0.8.2 has been released. See this reddit post for details.
- 16th February 2023 - NetHack 3.6.7 is released
- [Older news...](#)

Active discussions start new topic

- I think I just took the cake for weirdest death...
- Sokoban diagonal movement "You cannot pass that way!"
- Bilious down?
- Does the 'Beginner' mechanic add anything to the game?
- NetHack Book
- Instant quit
- Why do nagas in NetHack have no hands?
- Timeout for The Eye of the Aethiopica?
- Is there a better word for "uncursed"?
- Lost bell of opening

This wiki was founded on 11 October 2005. We have 3,859 articles.



Variants and Derivatives



Level 5



UnNetHack

Public

master ▾

21 Branches

10 Tags



bhaak The Tsurugi of Muramasa grants half physical c



EvilHack

Public

master ▾

13 Branches

8 Tags



k21971 Set default Druid pet name if one isn't set in th

ROGUE'S TALE



9 7

Pixel Dungeon



75/75

15/65

lv. 12



Wait, There's More?

Level ‘maybe you should touch grass’

```
#####@#####+  
# Delving into the  
# source: C Edition
```

|.....D.....\$.....|
|.....L.....&.....+.....|
|.....!.....{.....|



The Language
You've Definitely Heard Of



```
1 {
2     description = "A flake containing the latest development version of NetHack";
3
4     inputs = {
5         nixpkgs.url = "github:nixos/nixpkgs/nixos-unstable";
6         # Git URL, applicable to any Git repository using the https/ssh protocol.
7         git-example.url = "github:/NetHack/NetHack";
8     };
9
10
11     shellHook = !! echo "am I a real nethack dev yet? lets find out" !!;
12
13
14
15
16     devShells.${system}.default =
17         pkgs.mkShell
18     {
19         buildInputs = [
20             pkgs.lua
21             pkgs.gcc
22             pkgs.cmake
23
24
25
26
27
28
29         shellHook = !! echo "am I a real nethack dev yet? lets find out" !;
30
31
32
33
34
35 };
```



I can't walk you through
all the source code

But I'll try to go over what struck out to me
And then we can mod the game

```
[naidneeltil@Athena]-(~/NetHack)(NetHack-3.7 ?:1 x)
[09:23]-(^_^-)(12%)-[$] lsd
{} azure-pipelines.yml  ↗dat  ↗doc  ↗include  ↗Makefile  ↗Porting  ↗sound  ↗submodules  ↗test  ↗win
⚡ Cross-compiling      ↗DEVEL  ↗Files  ↗lib  ↗outdated  ↘README  ↗src  ↗sys  ↗util
```

What to focus on:

- DEVEL -> important info for contributors
- src -> where most of the logic is
- dat -> where lua data files are for non-gen rooms

Wait -- Lua? I Thought this was a C game?

Yes-- this is a change in the latest development version of nethack 3.7.*

It seems that Vanilla NetHack has been going through some major reconstruction

```
• air.lua      • bigrm-1.lua   • Cav-fila.lua  
• Arc-fila.lua • bigrm-10.lua  • Cav-filb.lua  
• Arc-filb.lua • bigrm-11.lua  • Cav-goal.lua  
• Arc-goal.lua • bigrm-2.lua   • Cav-loca.lua  
• Arc-loca.lua • bigrm-3.lua   • Cav-strt.lua  
• Arc-strt.lua • bigrm-4.lua   □ cmdhelp  
• asmodeus.lua • bigrm-5.lua   □ data  
• astral.lua   • bigrm-6.lua   □ data.base  
• baalz.lua    • bigrm-7.lua   • dungeon.lua  
• Bar-fila.lua • bigrm-8.lua   • earth.lua  
• Bar-filb.lua • bigrm-9.lua   □ engrave  
• Bar-goal.lua □ bogusmon    □ engrave.txt  
• Bar-loca.lua □ bogusmon.txt □ epitaph  
• Bar-strt.lua • castle.lua  □ epitaph.txt
```



```
10 -- overrun by orcs. Note the barricades (iron bars).
11
W 12 des.level_flags("mazelevel")      ■ Undefined global `des`.
13
W 14 des.level_init({ style="mines", fg=". ", bg=" ", smoothed=true, joined=true, walled=true })      ■ Undefined global `des`.
15
W 16 des.map([[      ■ Undefined global `des`.
17
18 .-----F-----.
19 |.
20 .|..|.
21 .|. |.|.|.|.|.|.|.|.|.
22 .F. | | | | | | | | |.
23 .|. |.|.|.|.|.|.|.|.|F|.
24 .|. |.|.|.|.|.|.|.|.|.
25 .|..|.
26 .
27 .-----|-----.
28 .|. |.|.| | | | | | |.
29 .|. |.|.| | | | | | | |.
30 .|. |.|.| | | | | | | | |.
31 .|. |.|.| | | | | | | | |.
32 .|..|.
33 .|.....F.....|.
34 .-----F-----F-----.
35 .
36 ]]);
37
38 -- Don't let the player fall into his likely death; used to explicitly exclude
39 -- the town, but that meant that you couldn't teleport out as well as not in.
W 40 des.teleport_region({ region={01,01,75,19}, exclude={01,00,35,21}, region_islev=1 })      ■ Undefined global `des`.
W 41 des.region(selection.area(01,01,35,17), "lit")      ■■ Undefined global `selection`.
W 42 des.levregion({ type="stair-up", region={01,03,21,19}, region_islev=1, exclude={00,01,36,17} });      ■ Undefined global `des`.
W 43 |           |
W 44 des.levregion({ type="stair-down", region={57,03,75,19}, region_islev=1, exclude={00,01,36,17} });      ■ Undefined global `des`.
45 |
46
47 -- shame we can't make polluted fountains
W 48 des.feature("fountain",16,09)      ■ Undefined global `des`.
W 49 des.feature("fountain",25,09)      ■ Undefined global `des`.
50
51 -- the altar's defiled; useful for BUC but never coaligned
W 52 des.alter({ x=20,y=13,align="noalign", type="shrine" })      ■ Undefined global `des`.
53
54 -- set up the shop doors; could be broken down
W 55 des.door("random",5,8)      ■ Undefined global `des`.
W 56 des.door("random",9,8)      ■ Undefined global `des`.
W 57 des.door("random",13,7)      ■ Undefined global `des`.
W 58 des.door("random",22,5)      ■ Undefined global `des`.
```

Now what the hell is des?

- Undefined global `des`.

des-file format

The **des-file format** is the language which is used to describe the [special levels](#) for NetHack. It is compiled into a binary file by `lev_comp`. It is not a *real* programming language: there is no flow control, and the order in which different NetHack features are created is fixed.

This file format was used extensively in 3.4.3 and it shows.

Other variants, such as UnNetHack and EvilHack that are branched off of 3.4.3 keep non-generated levels in des format

```
[naidneeltil@Athena]-(~/UnNetHack/dat)(master ✓)
[09:42]-(^_^-)(14%)-[$] lsd
└── advcal.des    └── castle.des      A DejaVuSansCondensed.ttf
  └── Arch.des    └── Caveman.des     A DejaVuSansMono.ttf
  └── Barb.des    └── cmdhelp        └── dragons.des
  └── bigroom.des └── Convict.des    └── dungeon.def
  └── blkmar.des   └── data.base      └── endgame.des
```

```
33
34 ##### Bottom (first) level of Sokoban #####
35 MAZE:"soko4-1",'
36 FLAGS:noteleport,hardfloor,premapped,solidify
37 GEOMETRY:center,center
38 #12345678901234567890123456789012345678901234567890
39 MAP
40 -----
41 |.....|--|....|
42 |.....|.-...|
43 |.....|....|
44 |..|-|.|-.|..|
45 -----|....|
46 |.....|....|
47 |.....|....|
48 ---| |....|
49 |.|---|....|
50 |.....|....|
51 |..|-----|
52 -----
53 ENDMAP
54 # Since there isn't a return portal, this forces the hero's initial placement
55 TELEPORT_REGION:(00,00,13,12),(0,0,0,0)
56
57 BRANCH:(06,04,06,04),(0,0,0,0)
58 STAIR:(06,06),up
59 REGION:(00,00,13,12),lit,"ordinary"
60 NON_DIGGABLE:(00,00,13,12)
61 NON_PASSWALL:(00,00,13,12)
62
63 # Boulders
64 OBJECT:(`","boulder"),(02,02)
65 OBJECT:(`","boulder"),(02,03)
66 #
67 OBJECT:(`","boulder"),(10,02)
68 OBJECT:(`","boulder"),(09,03)
69 OBJECT:(`","boulder"),(10,04)
70 #
71 OBJECT:(`","boulder"),(08,07)
72 OBJECT:(`","boulder"),(09,08)
73 OBJECT:(`","boulder"),(09,09)
```

But where is the main control?

In src/allmain.c

The moveloop function is the heart of NetHack, you may have noticed in the dev version, they've made a tutorial (!!!) which isn't in the latest stable released

```
void
moveloop(boolean resuming)
{
    moveloop_preamble(resuming);

    if (!resuming)
        maybe_do_tutorial();

    for (;;) {
        moveloop_core();
    }
}
```

The Preamble

```
| static void
| moveloop_preamble(boolean resuming)
{
    /* if a save file created in normal mode is now being restored in
       explore mode, treat it as normal restore followed by 'X' command
       to use up the save file and require confirmation for explore mode */
    if (resuming && iflags.deferred_X)
        (void) enter_explore_mode();

    /* side-effects from the real world */
    flags.moonphase = phase_of_the_moon();
    if (flags.moonphase == FULL_MOON) {
        You("are lucky! Full moon tonight.");
        change_luck(1);
    } else if (flags.moonphase == NEW_MOON) {
        pline("Be careful! New moon tonight.");
    }
    flags.friday13 = friday_13th();
    if (flags.friday13) {
        pline("Watch out! Bad things can happen on Friday the 13th.");
        change_luck(-1);
    }
}
```

Newgame

- src/allmain.c

```
void
newgame(void)
{
    int i;

    /* make sure welcome messages are given before noticing monsters */
    notice_mon_off();
    disp.botlx = TRUE;
    gc.context.ident = 1;
    gc.context.warnlevel = 1;
    gc.context.next_attrib_check = 600L; /* arbitrary first setting */
    gc.context.tribute.enabled = TRUE; /* turn on 3.6 tributes */
    gc.context.tribute.tributesz = sizeof(struct tribute_info);

    for (i = LOW_PM; i < NUMMONS; i++)
        gm.mvitals[i].mvflags = mons[i].geno & G_NOCORPSE;

    init_objects(); /* must be before u_init() */

    flags.pantheon = -1; /* role_init() will reset this */
    role_init(); /* must be before init_dungeons(), u_init(),
                   * and init_artifacts() */

    init_dungeons(); /* must be before u_init() to avoid rndmonst()
                      * creating odd monsters for any tins and eggs
                      * in hero's initial inventory */
    init_artifacts(); /* before u_init() in case $WIZKIT specifies
                       * any artifacts */
    u_init();

    l_nhcore_init(); /* create a Lua state that lasts until the end of the game
```

src/role.c

Where Roles are defined!

Lets see what we can do

```
/*
const struct Role roles[NUM_ROLES+1] = {
    { {"Archeologist", 0 },
    { {"Digger", 0 },
    { {"Field Worker", 0 },
    { {"Investigator", 0 },
    { {"Exhumer", 0 },
    { {"Excavator", 0 },
    { {"Spelunker", 0 },
    { {"Speleologist", 0 },
    { {"Collector", 0 },
    { {"Curator", 0 } },
    "Quetzalcoatl", "Camaxtli", "Huhetotl", /* Central American */
    "Arc",
    "the College of Archeology",
    "the Tomb of the Toltec Kings",
    PM_ARCHEOLOGIST,
    NON_PM,
    PM_LORD_CARNARVON,
    PM_STUDENT,
    PM_MINION_OF_HUHETOTL,
    NON_PM,
    PM_HUMAN_MUMMY,
    S_SNAKE,
    S_MUMMY,
    ART_ORB_OF_DETECTION,
    MH_HUMAN | MH_DWARF | MH_GNOME | ROLE_MALE | ROLE_FEMALE | ROLE_LAWFUL
    | ROLE_NEUTRAL,
    /* Str Int Wis Dex Con Cha */
    { 7, 10, 10, 7, 7, 7 },
    { 20, 20, 20, 10, 20, 10 },
    /* Init Lower Higher */
    { 11, 0, 0, 8, 1, 0 }, /* Hit points */
    { 1, 0, 0, 1, 0, 1 },
    14, /* Energy */
    10,
    5,
    0,
    2,
    10,
    A_INT,
    SPE_MAGIC_MAPPING,
    -4 }
```

Change NUM_ROLES

```
allmain.c    role.c    ●  hack.h  ●
NetHack > include > C hack.h > selectionvar
726     REST_LEVELS = 2, /* restoring remainder of dungeon */
727 };
728
729 struct rogueroom {
730     coordxy rlx, rly;
731     coordxy dx, dy;
732     boolean real;
733     uchar doortable;
734     int nroom; /* Only meaningful for "real" rooms */
735 };
736
737 #define NUM_ROLES (14) // change from 13 to 14
738 struct role filter {
```

Add new role with Cool new gods

```
[{ { "LUG Member", 0 },
  { { "Evoker", 0 },
    { "Conjurer", 0 },
    { "Thaumaturge", 0 },
    { "Magician", 0 },
    { "Enchanter", "Enchantress" },
    { "Sorcerer", "Sorceress" },
    { "Necromancer", 0 },
    { "Wizard", 0 },
    { "Mage", 0 } },
  "Chika", "Phantom0", "Nix", /* Egyptian */
  "Wiz"
```

```
[{ { "LUG Member", 0 },
  { { "Evoker", 0 },
    { "Conjurer", 0 },
    { "Thaumaturge", 0 },
    { "Magician", 0 },
    { "Enchanter", "Enchantress" },
    { "Sorcerer", "Sorceress" },
    { "Necromancer", 0 },
    { "Wizard", 0 },
    { "Mage", 0 } },
  "Chika", "Phantom0", "Nix", /* Egyptian */
  "Wiz",
  "the Lonely Tower",
  "the Tower of Darkness",
  PM_WIZARD,
  PM_KITTEN,
  PM_NEFERET_THE_GREEN,
  PM_APPRENTICE,
  PM_DARK_ONE,
  PM_VAMPIRE_BAT,
  PM_XORN,
  S_BAT,
  S_WRAITH,
  ART_EYE_OF_THE_AETHIOPICA,
  MH_HUMAN | MH_ELF | MH_GNOME | MH_ORC | ROLE_MALE | ROLE_FEMALE
  | ROLE_LAWFUL | ROLE_NEUTRAL | ROLE_CHAOTIC,
  /* Str Int Wis Dex Con Cha */
  { 7, 10, 7, 7, 7 },
  { 10, 30, 10, 20, 20, 10 },
  /* Init Lower Higher */
  { 10, 0, 0, 8, 1, 0 }, /* Hit points */
  { 4, 3, 0, 2, 0, 3 },
  12, /* Energy */
  0,
  1,
  0,
  3,
  10,
  A_INT,
  SPE_MAGIC_MISSILE,
  -4 ]]
```

Compile using instructions from sys/unix/NewInstall.unx

```
DTIMED_DELAY -DDUMPLOG -DCONFIG_ERROR_SECURE=FALSE -DCOMPRESS="/bin/gzip" -DCOMPRESS_EXTENSION=".gz" -DUSE_XPM -c -o wintty.o ..\win  
| -I..\include -DNOTPARMDECL -Wall -Wextra -Wreturn-type -Wunused -Wformat -Wswitch -Wshadow -Wwrite-strings -pedantic -Wmissing-declarati  
-Wimplicit-function-declaration -Wimplicit-int -Wmissing-prototypes -Wold-style-definition -Wstrict-prototypes -Wnonnull -Wformat-overflo  
:KDIR=."/var/home/naidneeltil/nh/install/games/lib/nethackdir\" -DDEFAULT_WINDOW_SYS=\"tty\" -DSYSCF -DSYSCF_FILE=\"/var/home/naidneeltil  
DTIMED_DELAY -DDUMPLOG -DCONFIG_ERROR_SECURE=FALSE -DCOMPRESS="/bin/gzip" -DCOMPRESS_EXTENSION=".gz" -DUSE_XPM -I/opt/X11/include -W  
  
| -I..\include -DNOTPARMDECL -Wall -Wextra -Wreturn-type -Wunused -Wformat -Wswitch -Wshadow -Wwrite-strings -pedantic -Wmissing-declarati  
-Wimplicit-function-declaration -Wimplicit-int -Wmissing-prototypes -Wold-style-definition -Wstrict-prototypes -Wnonnull -Wformat-overflo  
:KDIR=."/var/home/naidneeltil/nh/install/games/lib/nethackdir\" -DDEFAULT_WINDOW_SYS=\"tty\" -DSYSCF -DSYSCF_FILE=\"/var/home/naidneeltil  
DTIMED_DELAY -DDUMPLOG -DCONFIG_ERROR_SECURE=FALSE -DCOMPRESS="/bin/gzip" -DCOMPRESS_EXTENSION=".gz" -DUSE_XPM -I/opt/X11/include -W  
c  
| -I..\include -DNOTPARMDECL -Wall -Wextra -Wreturn-type -Wunused -Wformat -Wswitch -Wshadow -Wwrite-strings -pedantic -Wmissing-declarati  
-Wimplicit-function-declaration -Wimplicit-int -Wmissing-prototypes -Wold-style-definition -Wstrict-prototypes -Wnonnull -Wformat-overflo  
:KDIR=."/var/home/naidneeltil/nh/install/games/lib/nethackdir\" -DDEFAULT_WINDOW_SYS=\"tty\" -DSYSCF -DSYSCF_FILE=\"/var/home/naidneeltil  
DTIMED_DELAY -DDUMPLOG -DCONFIG_ERROR_SECURE=FALSE -DCOMPRESS="/bin/gzip" -DCOMPRESS_EXTENSION=".gz" -DUSE_XPM -I/opt/X11/include -W  
| -I..\include -DNOTPARMDECL -Wall -Wextra -Wreturn-type -Wunused -Wformat -Wswitch -Wshadow -Wwrite-strings -pedantic -Wmissing-declarati  
-Wimplicit-function-declaration -Wimplicit-int -Wmissing-prototypes -Wold-style-definition -Wstrict-prototypes -Wnonnull -Wformat-overflo  
:KDIR=."/var/home/naidneeltil/nh/install/games/lib/nethackdir\" -DDEFAULT_WINDOW_SYS=\"tty\" -DSYSCF -DSYSCF_FILE=\"/var/home/naidneeltil  
DTIMED_DELAY -DDUMPLOG -DCONFIG_ERROR_SECURE=FALSE -DCOMPRESS="/bin/gzip" -DCOMPRESS_EXTENSION=".gz" -DUSE_XPM -I/opt/X11/include -W  
  
| -I..\include -DNOTPARMDECL -Wall -Wextra -Wreturn-type -Wunused -Wformat -Wswitch -Wshadow -Wwrite-strings -pedantic -Wmissing-declarati  
-Wimplicit-function-declaration -Wimplicit-int -Wmissing-prototypes -Wold-style-definition -Wstrict-prototypes -Wnonnull -Wformat-overflo  
:KDIR=."/var/home/naidneeltil/nh/install/games/lib/nethackdir\" -DDEFAULT_WINDOW_SYS=\"tty\" -DSYSCF -DSYSCF_FILE=\"/var/home/naidneeltil  
DTIMED_DELAY -DDUMPLOG -DCONFIG_ERROR_SECURE=FALSE -DCOMPRESS="/bin/gzip" -DCOMPRESS_EXTENSION=".gz" -DUSE_XPM -I/opt/X11/include -W  
c  
| -I..\include -DNOTPARMDECL -Wall -Wextra -Wreturn-type -Wunused -Wformat -Wswitch -Wshadow -Wwrite-strings -pedantic -Wmissing-declarati  
-Wimplicit-function-declaration -Wimplicit-int -Wmissing-prototypes -Wold-style-definition -Wstrict-prototypes -Wnonnull -Wformat-overflo  
:KDIR=."/var/home/naidneeltil/nh/install/games/lib/nethackdir\" -DDEFAULT_WINDOW_SYS=\"tty\" -DSYSCF -DSYSCF_FILE=\"/var/home/naidneeltil  
DTIMED_DELAY -DDUMPLOG -DCONFIG_ERROR_SECURE=FALSE -DCOMPRESS="/bin/gzip" -DCOMPRESS_EXTENSION=".gz" -DUSE_XPM -I/opt/X11/include -W  
c  
| -I..\include -DNOTPARMDECL -Wall -Wextra -Wreturn-type -Wunused -Wformat -Wswitch -Wshadow -Wwrite-strings -pedantic -Wmissing-declarati  
-Wimplicit-function-declaration -Wimplicit-int -Wmissing-prototypes -Wold-style-definition -Wstrict-prototypes -Wnonnull -Wformat-overflo  
:KDIR=."/var/home/naidneeltil/nh/install/games/lib/nethackdir\" -DDEFAULT_WINDOW_SYS=\"tty\" -DSYSCF -DSYSCF_FILE=\"/var/home/naidneeltil  
DTIMED_DELAY -DDUMPLOG -DCONFIG_ERROR_SECURE=FALSE -DCOMPRESS="/bin/gzip" -DCOMPRESS_EXTENSION=".gz" -DUSE_XPM -I/opt/X11/include -W  
c
```

l - a LUG Member

Is this ok? [ynq]

naidneeltil the chaotic female human LUG Member

y + Yes; start game
n - No; choose role again
q - Quit
(end) █

Pick a role or profession

<role> <race> <gender> <alignment>

a - an Archeologist
b - a Barbarian
c - a Caveman/Cavewoman
h - a Healer
k - a Knight
m - a Monk
p - a Priest/Priestess
r - a Rogue
R - a Ranger
s - a Samurai
t - a Tourist
v - a Valkyrie
w - a Wizard
l - a LUG Member
* + Random

/ - Pick race first
" - Pick gender first
[- Pick alignment first
~ - Set role/race/&c filtering
q - Quit
(end) █

Nice.

It is written in the Book of Nix:



After the Creation, the cruel god Moloch rebelled against the authority of Marduk the Creator. Moloch stole from Marduk the most powerful of all the artifacts of the gods, the Amulet of Yendor, and he hid it in the dark cavities of Gehennom, the Under World, where he now lurks, and bides his time.

Your god Nix seeks to possess the Amulet, and with it to gain deserved ascendance over the other gods.

You, a newly trained Evoker, have been heralded from birth as the instrument of Nix. You are destined to recover the Amulet for your deity, or die in the attempt. Your hour of destiny has come. For the sake of us all: Go bravely with Nix!

--More-- █

Naidneeltil the Evoker St:10 Dx:15 Co:13 In:13 Wi:13 Ch:11 Chaotic
Dlvl:1 \$:0 HP:12(12) Pw:6(6) AC:9 Xp:1

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After the Creation, the cruel god Moloch rebelled against the authority of Marduk the Creator. Moloch stole from Marduk the most powerful of all the artifacts of the gods, the Amulet of Yendor, and he hid it in the dark cavities of Gehennom, the Under World, where he now lurks, and bides his time.

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--More--

KULFY

The End