```
File Actions Edit View Help
            Remarks
           UPPERCASE words appearing in commands are meta-variables: you need to replace
           them by appropriate (string) values.
           Most filesystems treat uppercase and lowercase characters differently. Make
           sure you use the correct path.
 /8\/\_
[mission 1] $
[mission 1] $ ls
Castle Forest Garden Mountain Stall
[mission 1] $ cd Castle
[mission 1] $ ls
Cellar Great_hall Main_building Main_tower Observatory
[mission 1] $ cd Mian tower
bash: cd: Mian_tower: No such file or directory
[mission 1] $ cd Main_tower
[mission 1] $ ls
First_floor
[mission 1] $ cd first_floor
bash: cd: first_floor: No such file or directory
[mission 1] $ cd First floor
[mission 1] $ ls
Second_floor
[mission 1] $ cd Second floor
[mission 1] $ ls
Top_of_the_tower
[mission 1] $ cd Top_of_the_tower
[mission 1] $ ls
[mission 1] $ ls
[mission 1] $ gsh check
Congratulations, mission 1 has been successfully completed!
   Use the command
  $ gsh help
  I to get the list of "gsh" commands. |
[mission 2] $ gsh gool
Error: unknown gsh command 'gool'.
```

les one of the following commander shock goal help years

```
bash: cd: ../sastel: No such file or directory
[mission 2] $ cd ../Castel
bash: cd: ../Castel: No such file or directory
[mission 2] $ cd ..
[mission 2] $ ls
Second floor
[mission 2] $ cd ..
[mission 2] $ ls
First floor
[mission 2] $ cd ..
[mission 2] $ ls
Cellar Great_hall Main_building Main_tower Observatory
[mission 2] $ cd ..
[mission 2] $ ls
Castle Forest Garden Mountain Stall
[mission 2] $ cd Castle
[mission 2] $ ls
Cellar Great hall Main building Main tower Observatory
[mission 2] $ cd Cellar
[mission 2] $ ls
barrel of apples
[mission 2] $ gsh check
Congratulations, mission 2 has been successfully completed!
   Use the command
   $ gsh help
  | to get the list of "gsh" commands. |
[mission 3] $ gsh goal
        Mission goal
        Go back to the starting location and then go to the throne room using only two commands.
        Remark
```

```
reset the current mission
[mission 3] $ cd ../../..
[mission 3] $ ls
Castle Forest Garden Mountain Stall
[mission 3] $ cd Castle/Main_building/Throne_room
[mission 3] $ gsh endpont
Error: unknown gsh command 'endpont'.
Use one of the following commands: check, goal, help, reset
[mission 3] $ ls
Kings_quarter
[mission 3] $ cd ../../../
[mission 3] $ ls
Castle Forest Garden Mountain Stall
[mission 3] $ gsh reset
  | Use the command
  | $ gsh help
 | to get the list of "gsh" commands.
[mission 3] $ cd
[mission 3] $ cd Castle/Main_building/Throne_room
[mission 3] $ gsh check
                                    Well done!!!
                                    From now on, the current location will be shown just before the command prompt.
      1 ::::::
      Harrer's
                _.-!00 @.!-._
     ||:::::.-!()oo @!()@.-'_.|
'.'-;|:.-'.6$a.6 ()$%-'o.'\U||

`>'-.!a%()a'a_%-'..-o _.|'||

jgs ||-._'-.a.-'_.-o |'||

||=['-...-\U/.-' o |'||
       '-.]=| |'|
```

```
File Actions Edit View Help
~/Forest
[mission 4] $
~/Forest
[mission 4] $ ls
~/Forest
[mission 4] $ ls
~/Forest
[mission 4] $ ls
~/Forest
[mission 4] $ cd
[mission 4] $ ls
Castle Forest Garden Mountain Stall
[mission 4] $ cd Forest
~/Forest
[mission 4] $ mkdir Hut
~/Forest
[mission 4] $ cd Hut
~/Forest/Hut
[mission 4] $ mkdir Chest
~/Forest/Hut
[mission 4] $ gsh check
Congratulations, mission 4 has been successfully completed!
   Use the command
   $ gsh help
  | to get the list of "gsh" commands. |
~/Forest/Hut
[mission 5] $ gsh goal
```

```
[mission 5] $ ls
Castle Forest Garden Mountain Stall
[mission 5] $ cd Castle
~/Castle
[mission 5] $ cd cellar
bash: cd: cellar: No such file or directory
~/Castle
[mission 5] $ cd Cellar
~/Castle/Cellar
[mission 5] $ ls
barrel_of_apples bat_1 bat_2 spider_1 spider_2 spider_3
~/Castle/Cellar
[mission 5] $ rm Spider_1 spider_2 spider_3
rm: cannot remove 'Spider_1': No such file or directory
~/Castle/Cellar
[mission 5] $ rm spider_1 spider_2 spider_3
rm: cannot remove 'spider_2': No such file or directory
rm: cannot remove 'spider_3': No such file or directory
~/Castle/Cellar
[mission 5] $ ls
barrel_of_apples bat_1 bat_2
~/Castle/Cellar
[mission 5] $ gsh check
  Use the command
  | $ gsh help
  | to get the list of "gsh" commands.
```

~/Castle/Cellar [mission 6] \$ gsh goal

```
/home/kali/gameshell
[mission 6] $ cd
[mission 6] $ ls
Castle Forest Garden Mountain Stall
[mission 6] $ cd Garden
~/Garden
[mission 6] $ cd ../Forest/hut
bash: cd: ../Forest/hut: No such file or directory
~/Garden
[mission 6] $ cd ../Forest
~/Forest
[mission 6] $ cd ../Forest/Hut/Chest
~/Forest/Hut/Chest
[mission 6] $ cd
[mission 6] $ cd Garden
~/Garden
[mission 6] $ ls
coin_1 coin_2 coin_3 Flower_garden Maze Shed
~/Garden
[mission 6] $ mv coin_1 coin_2 coin_3 ../Forest/Hut/Chest
~/Garden
[mission 6] $ cd ../Forest/Hut/Chest
~/Forest/Hut/Chest
[mission 6] $ ls
coin_1 coin_2 coin_3
~/Forest/Hut/Chest
[mission 6] $ gsh check
   Use the command
   $ gsh help
  I to get the list of "gsh" commands.
```

```
List all the files of the current directory, including hidden files. (A file is "hidden" when its name starts with a dot.)
         Tab
         The tabulation key "completes" the name of a file or directory once you have typed the beginning of its name. This only works
         if there is only one possible completion.
         Tab-Tab
         Pressing tabulation twice successively shows a list of possible completions.
~/Forest/Hut/Chest
[mission 7] $ cd
[mission 7] $ cd Garden
~/Garden
[mission 7] $ ls
Flower_garden Maze Shed
~/Garden
[mission 7] $ ls _a
ls: cannot access '_a': No such file or directory
~/Garden
[mission 7] $ ls -a
. . .17699_coin_3 .2204_coin_2 .61159_coin_1 Flower_garden Maze Shed
~/Garden
[mission 7] $ mv .17699_coin_3 .2204_coin_2 .61159_coin_1 ../Forest/Hut/Chest
~/Garden
[mission 7] $ gsh check
   Use the command
   $ gsh help
  | to get the list of "gsh" commands.
```

```
~/Castle/Cellar
[mission 8] $ ls *spider
ls: cannot access '*spider': No such file or directory
~/Castle/Cellar
[mission 8] $ ls *10
1452 spider 10
~/Castle/Cellar
[mission 8] $ ls *_spider_??
10264_spider_41 12381_spider_28 13449_spider_25 14753_spider_49 17996_spider_33 19182_spider_43 21953_spider_47 23290_spider_21 26213_spider
10304_spider_17 12405_spider_14 14489_spider_12 16305_spider_48 18875_spider_20 19953_spider_45 22088_spider_22 23570_spider_34 26824_spider_
10395 spider 13 12420 spider 39 1452 spider 10 16958 spider 31 19148 spider 37 20425 spider 23 22220 spider 19 260 spider 32
                                                                                                                                     28534 spider
~/Castle/Cellar
[mission 8] $ rm * spider ??
~/Castle/Cellar
[mission 8] $ ls
15487_bat_1 16707_spider_7 18605_bat_2 23507_spider_3 24784_spider_1 2524_spider_5 28468_bat_3 28820_spider_4 29778_bat_4 3858_spider_8 52
~/Castle/Cellar
[mission 8] $ rm * spider ?
~/Castle/Cellar
[mission 8] $ ls
15487_bat_1 18605_bat_2 28468_bat_3 29778_bat_4 6358_bat_5 barrel_of_apples
~/Castle/Cellar
[mission 8] $ gsh chack
Error: unknown gsh command 'chack'.
Use one of the following commands: check, goal, help, reset
~/Castle/Cellar
[mission 8] $ gsh check
Congratulations, mission 8 has been successfully completed!
   Use the command
   $ gsh help
  | to get the list of "gsh" commands.
~/Castle/Cellar
[mission 9] $ gsh goal
```

```
-rw-r--r-- 1 kali kali 34 Dec 15 14:21 .7492_spider_18
-rw-r--r-- 1 kali kali 34 Dec 15 14:21 .8028 spider 5
-rw-r--r-- 1 kali kali 34 Dec 15 14:21 .9008 spider 21
-rw-r--r-- 1 kali kali 169 Dec 15 14:21 .9016 spider 40
~/Castle/Cellar
[mission 9] $ rm -all .*spider*
rm: invalid option -- 'a'
Try 'rm --help' for more information.
~/Castle/Cellar
[mission 9] $ rm .*spider*
~/Castle/Cellar
[mission 9] $ ls -all
total 52
drwxr-xr-x 2 kali kali 4096 Dec 15 14:25 .
drwxr-xr-x 7 kali kali 4096 Dec 15 13:23 ..
-rw-r--r-- 1 kali kali 211 Dec 15 14:07 15487 bat 1
-rw-r--r-- 1 kali kali 239 Dec 15 14:21 .181 bat 4
-rw-r--r-- 1 kali kali 211 Dec 15 14:07 18605_bat_2
-rw-r--r-- 1 kali kali 258 Dec 15 14:21 .25835 bat 3
-rw-r--r-- 1 kali kali 192 Dec 15 14:07 28468 bat 3
-rw-r--r-- 1 kali kali 149 Dec 15 14:07 29778_bat_4
-rw-r-r-- 1 kali kali 258 Dec 15 14:21 .3143_bat_1
-rw-r--r-- 1 kali kali 258 Dec 15 14:21 .31554_bat_2
-rw-r--r-- 1 kali kali 195 Dec 15 14:21 .6299_bat_5
-rw-r--r-- 1 kali kali 211 Dec 15 14:07 6358_bat_5
-rw-r-r-- 1 kali kali 121 Dec 15 13:36 barrel_of_apples
~/Castle/Cellar
[mission 9] $ gsh check
Congratulations, mission 9 has been successfully completed!
                                  Congratulations !
                                  From now on, the 'ls' command will automatically show a "/" character at the end of directories.
     ||:::::' _.-!oo @.!-._'-.
\'. ||:::::-!()oo a!()a.-' .|
   '-;|:.-'.&$a.& ()$%-'o.'\U||
 `>'-.!a%()a'a_%-'_.-o _.|'||
jgs||-._'-.a.-'_.-' _.-o |'||
||=['-._.-\U/.-' o |'||
    || '-.]=|| |'|
```

```
~/Castle/Observatory
[mission 10] $ ls star_chart
star chart
~/Castle/Observatory
[mission 10] $ cd star chart
bash: cd: star_chart: Not a directory
~/Castle/Observatory
[mission 10] $ cd
[mission 10] $ ls
Castle/ Forest/ Garden/ Mountain/ Stall/
[mission 10] $ cd Castle
~/Castle
[mission 10] $ l
1: command not found
~/Castle
[mission 10] $ ls
Cellar/ Great_hall/ Main_building/ Main_tower/ Observatory/
~/Castle
[mission 10] $ cd Great_hall/
~/Castle/Great_hall
[mission 10] $ ls
15982_suit_of_armour 42647_stag_head 58549_decorative_shield standard_1 standard_2 standard_3 standard_4
~/Castle/Great_hall
[mission 10] $ cp standard* ../../Forest/Hut/Chest
~/Castle/Great hall
[mission 10] $ gsh check
Congratulations, mission 10 has been successfully completed!
   Use the command
   $ gsh help
   to get the list of "gsh" commands.
```

```
~/Castle/Main tower/First floor
[mission 12] $ ls
painting EtpwqllT painting fSQToCzp painting uQKgGBcA Second_floor/
~/Castle/Main tower/First floor
[mission 12] $ ls -l
total 16
-rw-r--r-- 1 kali kali 1503 Mar 18 2013 painting EtpwqllT
-rw-r--r-- 1 kali kali 1055 Dec 14 1995 painting fSQToCzp
-rw-r--r-- 1 kali kali 1454 Jun 27 1985 painting uQKgGBcA
drwxr-xr-x 3 kali kali 4096 Dec 15 13:23 Second floor/
~/Castle/Main tower/First floor
[mission 12] $ cp painting uQKgGBcA ../../Forest/Hut/Chest
~/Castle/Main tower/First floor
[mission 12] $ gsh chesk
Error: unknown gsh command 'chesk'.
Use one of the following commands: check, goal, help, reset
~/Castle/Main tower/First floor
[mission 12] $ gsh check
Congratulations, mission 12 has been successfully completed!
   Use the command
   $ gsh help
   to get the list of "gsh" commands.
~/Castle/Main_tower/First_floor
[mission 13] $
```

```
21 22 23 24 25 26 27 19 20 21 22 23 24 25 16 17 18 19 20 21 22
28 29 30
                   26 27 28 29 30 31 23 24 25 26 27 28 29
                                       30
       July
                         August
                                           September
Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa
                               1 2 3 1 2 3 4
   1 2 3 4 5 6
7 8 9 10 11 12 13 4 5 6 7 8 9 10
                                      8 9 10 11 12 13 14
14 15 16 17 18 19 20 11 12 13 14 15 16 17 15 16 17 18 19 20 21
21 22 23 24 25 26 27 18 19 20 21 22 23 24 22 23 24 25 26 27 28
28 29 30 31
                  25 26 27 28 29 30 31 29 30
     October
                        November
                                            December
Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa
      1 2 3 4 5
                                 1 2 1 2 3 4 5 6 7
6 7 8 9 10 11 12 3 4 5 6 7 8 9 8 9 10 11 12 13 14
13 14 15 16 17 18 19 10 11 12 13 14 15 16 15 16 17 18 19 20 21
27 28 29 30 31
             24 25 26 27 28 29 30 29 30 31
~/Castle/Main_tower/First_floor
[mission 13] $ gsh check
What was the day of the week for the 02-27-2030?
  1 : Monday
 2: Tuesday
 3 : Wednesday
 4: Thursday
 5 : Friday
 6 : Saturday
 7 : Sunday
Your answer: 3
Congratulations, mission 13 has been successfully completed!
   Use the command
  $ gsh help
   to get the list of "gsh" commands.
```

```
~/Castle/Main_tower/First_floor
[mission 14] $ alias la='ls -A'

~/Castle/Main_tower/First_floor
[mission 14] $ la
.nice_rock painting_EtpwqllT painting_fSQToCzp painting_uQKgGBcA Second_floor/

~/Castle/Main_tower/First_floor
[mission 14] $ gsh check

Congratulations, mission 14 has been successfully completed!
```

```
~/Forest/Hut/Chest
[mission 15] $ nano journal.txt
~/Forest/Hut/Chest
[mission 15] $ ls
painting_uQKgGBcA standard_2 standard_4
standard 3
~/Forest/Hut/Chest
[mission 15] $ gsh check
The file '/home/kali/gameshell/World/Forest/Hut/Chest/journal.txt' is empty...
 I Use the command
 | $ gsh help
 | to get the list of "gsh" commands. |
~/Forest/Hut/Chest
[mission 15] $ nano journal.txt
~/Forest/Hut/Chest
[mission 15] $ gsh check
Congratulations, mission 15 has been successfully completed!
```

```
~/Forest/Hut/Chest
[mission 16] $ alias journal=' nano ~/Forest/Hut/Chest/journal.txt'
~/Forest/Hut/Chest
[mission 16] $ journal
~/Forest/Hut/Chest
[mission 16] $ gsh check
Congratulations, mission 16 has been successfully completed!
                                 Congratulations!
                                 From now on you can use the file
                                 "~/.gshrc"
                                 to record aliases. More information can be found in the file (it has been created for you).
               .-!oo a.!-. '-.
     ||:::::.-!()oo a!()a.-' .|
  .'-;|:.-'.&$@.& ()$%-'o.'\U||
   `>'-.!a%()a'a_%-'_.-o _.|'||
jgs ⊩._'-.@.-'_.-' _.-o |'|
    ||=[ '-._.-\U/.-'
```

```
~/Castle/Cellar/.Lair_of_the_spider_queen RaTuAJvbaiUUVvib iHTprzSkvSkLUUsa [mission 18] $ xeyes ^C 
~/Castle/Cellar/.Lair_of_the_spider_queen RaTuAJvbaiUUVvib iHTprzSkvSkLUUsa [mission 18] $ xeyes & [1] 54193 
~/Castle/Cellar/.Lair_of_the_spider_queen RaTuAJvbaiUUVvib iHTprzSkvSkLUUsa [mission 18] $ gsh check

Congratulations, mission 18 has been successfully completed!
```

~/Garden/Maze [mission 19] \$ ls 616fa1a0cd791558de7f36/ fed8f447f9e42285e9bfa44ec4c/ ~/Garden/Maze [mission 19] \$ cd 616fa1a0cd791558de7f36/ ~/Garden/Maze/616fa1a0cd791558de7f36 [mission 19] \$ ls bb68755271b942/ c4a9073c55c1a3bc5fa05/ ~/Garden/Maze/616fa1a0cd791558de7f36 [mission 19] \$ cd bb68755271b942/ ~/Garden/Maze/616fa1a0cd791558de7f36/bb68755271b942 [mission 19] \$ ls 7b53bf0badff380970a1651/ 9ae4a69cd/ ~/Garden/Maze/616fa1a0cd791558de7f36/bb68755271b942 [mission 19] \$ cd 7b53bf0badff380970a1651/ ~/Garden/Maze/616fa1a0cd791558de7f36/bb68755271b942/7b53bf0badff380970a1651 [mission 19] \$ la 00000 copper coin 00000 ~/Garden/Maze/616fa1a0cd791558de7f36/bb68755271b942/7b53bf0badff380970a1651 [mission 19] \$ mv 00000_copper_coin_00000 ~/Forest/Hut/Chest ~/Garden/Maze/616fa1a0cd791558de7f36/bb68755271b942/7b53bf0badff380970a1651 [mission 19] \$ gsh check Congratulations!

||:::::' _.-!oo @.!-._'-. ||:::::-!()oo @!()@.-'_.| -;|:.-'.&\$@.& ()\$%-'o.'\U|| >'-.!@%()@'@_%-'_.-o _.|'|| ||-._'-.@.-'_.-' _.-o |'|| ||=['-._.-\U/.-' __o_|'|

·-.]=|

From now on, the command `ls` will try using a color code to make it easier to differentiate between directories and several kinds of files.

```
./6b13ce757f/72e0dbf3ae72734648c9ccfd2607:
410e4185a/ 791c8057f5873e16d01d41/ b357203db7009fb2df57642b673fdb4/
./6b13ce757f/72e0dbf3ae72734648c9ccfd2607/410e4185a:
./6b13ce757f/72e0dbf3ae72734648c9ccfd2607/791c8057f5873e16d01d41:
./6b13ce757f/72e0dbf3ae72734648c9ccfd2607/b357203db7009fb2df57642b673fdb4;
00000 silver coin 00000
./6b13ce757f/e4068fe0647465c9:
./6b13ce757f/e4068fe0647465c9/3efcc714c6ee:
./6b13ce757f/e4068fe0647465c9/64e676cf25ecd86d:
./6b13ce757f/e4068fe0647465c9/fcbf171ea7cd83399e9cab69:
./9388fc084ca44609496aadb:
./9388fc084ca44609496aadb/78da26336bdc0f3c8e708:
2b68fa9719c64c705/ 3eefe35f309f2b4/ a4878f7816bdf3/
./9388fc084ca44609496aadb/78da26336bdc0f3c8e708/2b68fa9719c64c705:
./9388fc084ca44609496aadb/78da26336bdc0f3c8e708/3eefe35f309f2b4:
./9388fc084ca44609496aadb/78da26336bdc0f3c8e708/a4878f7816bdf3:
./9388fc084ca44609496aadb/a5f2ccc86a8c6035a:
./9388fc084ca44609496aadb/a5f2ccc86a8c6035a/12160e0f05049d168d24e4520410e07:
./9388fc084ca44609496aadb/a5f2ccc86a8c6035a/477635aca1b9f16f:
./9388fc084ca44609496aadb/a5f2ccc86a8c6035a/8bf472574;
./9388fc084ca44609496aadb/e33da3b15db2e3ee0cb3e31b:
06007a42af2ad7d8f309ffcbbaf6970/ b983112168e9309622f196e123524/ f7e3ed244c7edb7db19704e263ad1/
./9388fc084ca44609496aadb/e33da3b15db2e3ee0cb3e31b/06007a42af2ad7d8f309ffcbbaf6970:
./9388fc084ca44609496aadb/e33da3b15db2e3ee0cb3e31b/b983112168e9309622f196e123524;
./9388fc084ca44609496aadb/e33da3b15db2e3ee0cb3e31b/f7e3ed244c7edb7db19704e263ad1:
[mission 20] $ cd ./6b13ce757f/72e0dbf3ae72734648c9ccfd2607/b357203db7009fb2df57642b673fdb4
~/Garden/Maze/6b13ce757f/72e0dbf3ae72734648c9ccfd2607/b357203db7009fb2df57642b673fdb4
[mission 20] $ ls
00000_silver_coin_00000
~/Garden/Maze/6b13ce757f/72e0dbf3ae72734648c9ccfd2607/b357203db7009fb2df57642b673fdb4
[mission 20] $ mv 00000 silver coin 00000 ~/Forest/Hut/Chest
~/Garden/Maze/6b13ce757f/72e0dbf3ae72734648c9ccfd2607/b357203db7009fb2df57642b673fdb4
[mission 20] $ gsh check
You are back at the entrance of the maze ...
  | Use the command
  | $ gsh help
  I to get the list of "gsh" commands.
```

```
[mission 21] $ find -type f -iname *gold*
./Garden/Maze/7ddd975582ff2dd614cabefa02490/dc537c6f378f4d/31e07542f052d3417f1a935177275e8/GolD_CoiN_2
./Garden/Maze/44a69c5ffb2dd2/64a43d9437/0185f666ed1396644fc4f/gold coin 1
[mission 21] $ find -iname *gold*
./Garden/Maze/7ddd975582ff2dd614cabefa02490/dc537c6f378f4d/31e07542f052d3417f1a935177275e8/GolD_CoiN_2
./Garden/Maze/44a69c5ffb2dd2/64a43d9437/0185f666ed1396644fc4f/gold_coin_1
[mission 21] $ mv ^C
[mission 21] $ find -iname *gold* mv ~/Forest/Hut/Chest/
find: paths must precede expression: 'mv'
[mission 21] $ mv 'find -iname *gold*' ~/Forest/Hut/Chest/
mv: cannot stat 'find -iname *gold*': No such file or directory
[mission 21] $ mv Garden/Maze/7ddd975582ff2dd614cabefa02490/dc537c6f378f4d/31e07542f052d3417f1a935177275e8/GolD_CoiN_2 ~/Forest/Hut/Chest/
[mission 21] $ mv Garden/Maze/44a69c5ffb2dd2/64a43d9437/0185f666ed1396644fc4f/gold coin 1 ~/Forest/Hut/Chest/
[mission 21] $ gsh check
   Use the command
   $ gsh help
   to get the list of "gsh" commands.
```

```
~/Mountain/Cave
[mission 23] $ tail -n 9 Book_of_potions/page_12
1) Boil water in a cauldron.
2) Add in a few death caps (Amanita phalloides).
3) Also add a few fly agarics (Amanita muscaria).
4) And some destroying angels (Amanita virosa).
5) Mix in a few deadly webcaps (Cortinarius rubellus).
6) Feel free to add in any colourful fungi you have on hand.
7) Let half of the water evaporate.
8) Season with a pinch of salt and a few herbs.
9) Serve hot in a bowl.

~/Mountain/Cave
[mission 23] $ gsh check
Congratulations, mission 23 has been successfully completed!
```

~/Mountain/Cave [mission 24] \$ cat Book_of_potions/page_01 Book_of_potions/page_02 Transformation potion

- 1) Boil water in a cauldron.
- 2) Add 3 measures of fluxweed to the cauldron.
- 3) Add 2 bundles of knotgrass to the cauldron.
- 4) Stir 4 times, clockwise.
- 5) Wave your wand then let potion brew for 80 minutes.
- 6) Add 4 leeches to the cauldron.
- 7) Crush 2 scoops of lacewing flies to a fine paste.
- 8) Add 2 measures of the crushed lacewings to the cauldron.
- 9) Heat for 30 seconds on a low heat.
- 10) Add 3 measures of boomslang skin to the cauldron.
- 11) Crush a bicorn horn into a fine powder.
- 12) Add 1 measure of the crushed horn to the cauldron.
- 13) Heat for 20 seconds at a high temperature.
- 14) Wave your wand then let potion brew for 24 hours.
- 15) Add 1 additional scoop of lacewings to the cauldron.
- 16) Stir 3 times, counter-clockwise.
- 17) Split potion into multiple doses, if desired.
- 18) Add a pieces of the person you wish to become.
- 19) Wave your wand to complete the potion.

~/Mountain/Cave [mission 24] \$ gsh check

Congratulations, mission 24 has been successfully completed!

```
~/Mountain/Cave
[mission 25] $ cat Book of potions/page 03 Book of potions/page 04 | tail -n 16
1) Fill a cauldron with used bath water.
2) Put a moderately large frog in the water.
3) Let the preparation rest overnight.
4) The next morning thank and free your little green friend.
5) Boil the water and add in a few sticks of oak tree.
6) Crush 5 river stones to a fine powder.
7) Mix in a third of the powder and stir vigorously.
8) Let the preparation rest for a day.
9) Add hairs from the tail of a squirrel (willingly given).
10) Add the remaining stone powder.
11) Stir the potion very vigorously, in all directions.
12) Take some time to rest after such an effort.
13) Rest a little bit more.
14) Even take a nap if you want.
15) Add a few larch tree needles for seasoning.
16) Drink the potion from the cauldron.
```

~/Mountain/Cave [mission 25] \$ gsh check

Congratulations, mission 25 has been successfully completed!

```
~/Mountain/Cave
[mission 26] $ head -n 6 Book_of_potions/page_13
Distilled water
1) Boil water in a big pot.
2) Condense the vapor in a fresh container.
3) Add minerals for a better taste (optional).
~/Mountain/Cave
[mission 26] $ head -n 6 Book of potions/page 13 | tail -n 3
1) Boil water in a big pot.
2) Condense the vapor in a fresh container.
3) Add minerals for a better taste (optional).
~/Mountain/Cave
[mission 26] $ gsh check
Congratulations, mission 26 has been successfully completed!
```

[mission 27] \$ gsh check
Congratulations, mission 27 has been successfully completed!

```
[mission 28] $ ps
   PID TTY
                    TIME CMD
  1304 pts/0
                00:00:00 zsh
 99408 pts/0
                00:00:00 bash
 99463 pts/0
                00:00:00 bash
117071 pts/0
                00:00:00 ps
[mission 28] $ ps
   PID TTY
                    TIME CMD
  1304 pts/0
                00:00:00 zsh
 99408 pts/0
                00:00:00 bash
 99463 pts/0
                00:00:00 bash
117091 pts/0
                00:00:00 ps
[mission 28] $ ps
   PID TTY
                    TIME CMD
  1304 pts/0
                00:00:00 zsh
 99408 pts/0
                00:00:00 bash
 99463 pts/0
                00:00:00 bash
117116 pts/0
                00:00:00 ps
[mission 28] $ ps
   PID TTY
                    TIME CMD
  1304 pts/0
                00:00:00 zsh
 99408 pts/0
                00:00:00 bash
 99463 pts/0
                00:00:00 bash
117141 pts/0
                00:00:00 ps
[mission 28] $ gsh check
Congratulations, mission 28 has been successfully completed!
   Use the command
  | $ gsh help
  | to get the list of "gsh" commands.
```

```
13089 snowflake 17568 snowflake 21915 snowflake
                                                  28467 snowflake 32262 snowflake
                                                                   32841 snowflake
13149 snowflake 17680 snowflake 22963 snowflake
                                                  28468 bat 3
14000_snowflake 17797_snowflake 23067_snowflake 28728_snowflake 33029_snowflake
1401 snowflake 17798 snowflake 237 snowflake
                                                  28891 snowflake 33527 snowflake
14302 snowflake 177 snowflake
                                 23853 snowflake 29053 snowflake 34531 snowflake
14667 snowflake 17963 snowflake 24792 snowflake 29277 snowflake 34761 snowflake
                                                                   35133 snowflake
15137 snowflake 18605 bat 2
                                 2514 snowflake
                                                  29778 bat 4
15268 snowflake 19143 snowflake 2518 snowflake
                                                  29937 snowflake 35529 snowflake
~/Castle/Cellar
[mission 29] $ find -n coal
find: unknown predicate `-n'
~/Castle/Cellar
[mission 29] $ find -iname coal
~/Castle/Cellar
[mission 29] $ ps
    PID TTY
                    TIME CMD
   1304 pts/0
                00:00:00 zsh
 99408 pts/0
                00:00:00 bash
 99463 pts/0
                00:00:00 bash
 227337 pts/0
                00:00:00 nice fairy
                00:00:00 mischievous imp
 227338 pts/0
 227345 pts/0
                00:00:00 spell
 227346 pts/0
                00:00:00 spell
 227347 pts/0
                00:00:00 spell
 227348 pts/0
                00:00:00 tail
 227362 pts/0
                00:00:00 tail
 239288 pts/0
                00:00:00 sleep
 239329 pts/0
                00:00:00 sleep
 239370 pts/0
                00:00:00 sleep
 239371 pts/0
                00:00:00 ps
~/Castle/Cellar
[mission 29] $ gsh check
Congratulations, mission 29 has been successfully completed!
```

Mission goal

To get better in the magical art, one needs to know mental math.

Get ready, because Merlin is about to test your precision with sums.

Run the command ``gsh check`` to start.

~/Castle/Cellar [mission 30] \$ gsh check 89 + 48 = ?? 137 76 + 27 = ?? 103 2 + 20 = ?? 22 90 + 83 = ?? 173 9 + 19 = ?? 28

Congratulations, mission 30 has been successfully completed!

```
~/Castle/Main_building/Library
[mission 31] $ gsh check < Mathematics_101
24 * 5 = ?? 66 * 35 = ?? 37 * 96 = ?? 12 * 41 = ?? 72 * 55 = ?? 100 * 44 = ?? 2 * 18 = ?? 4 * 61 = ?? 23 * 83 = ?? 50 * 52 = ?? 93 * 43 = ?? 71 * 27 = ?? 55 * 4 = ?? 3 * 28 = ??
? 55 * 78 = ?? 32 * 82 = ?? 40 * 41 = ?? 62 * 70 = ?? 53 * 58 = ?? 69 * 82 = ?? 23 * 72 = ?? 5 * 61 = ?? 43 * 53 = ?? 76 * 67 = ?? 87 * 31 = ?? 20 * 63 = ?? 9 * 32 = ?? 37 * 43
1 = ?? 90 * 75 = ?? 38 * 38 = ?? 45 * 77 = ?? 39 * 24 = ?? 59 * 76 = ?? 23 * 31 = ?? 86 * 91 = ?? 46 * 26 = ?? 69 * 48 = ?? 66 * 98 = ?? 38 * 4 = ?? 35 * 56 = ?? 89 * 34 = ?? 46
9 * 14 = ?? 26 * 16 = ?? 78 * 51 = ?? 30 * 77 = ?? 67 * 55 = ?? 84 * 33 = ?? 4 * 5 = ?? 49 * 78 = ?? 17 * 24 = ?? 5 * 12 = ?? 39 * 9 = ?? 55 * 10 = ?? 25 * 83 = ?? 28 * 85 = ??
79 * 95 = ?? 88 * 79 = ?? 31 * 3 = ?? 93 * 38 = ?? 36 * 94 = ?? 53 * 46 = ?? 1 * 15 = ?? 44 * 30 = ?? 62 * 46 = ?? 61 * 50 = ?? 59 * 21 = ?? 98 * 44 = ?? 83 * 32 = ?? 40 * 70 = ?? 89 * 77 = ?? 98 * 80 = ?? 78 * 91 = ?? 73 * 77 = ?? 42 * 60 = ?? 80 * 70 = ?? 52 * 96 = ?? 16 * 78 = ?? 87 * 40 = ?? 98 * 27 = ?? 15 * 39 = ?? 85 * 57 = ?? 79 * 12 = ?? 58
0 * 44 = ?? 55 * 69 = ?? 84 * 50 = ?? 34 * 9 = ?? 75 * 29 = ?? 15 * 69 = ?? 95 * 8 = ?? 88 * 14 = ?? 58 * 94 = ?? 11 * 76 = ?? 53 * 16 = ?? 79 * 65 = ??
Congratulations, mission 31 has been successfully completed!

While you are waiting, a snail goes by ...
```

| Use the command | \$ gsh help

| to get the list of "gsh" commands.

```
~/Castle/Main_building/Library/Merlin_s_office
[mission 32] $ ls grimoire_*
grimoire 1011 grimoire 1264 grimoire 15926 grimoire 17531 grimoire 20746 grimoire 23196 grimoire 26039 grimoire 29250 grimoire 30758
                                                                                                                                          grimoire 5388 grimoire 6875 grimoire
grimoire_10659 grimoire_12782 grimoire_15982 grimoire_17574 grimoire_20988 grimoire_23247 grimoire_26075
                                                                                                            grimoire_29319
                                                                                                                           grimoire_30903
                                                                                                                                           grimoire_5763 grimoire_7021
grimoire 1079
               grimoire 13002 grimoire 16115 grimoire 17752 grimoire 21093
                                                                             grimoire 23334 grimoire 2642
                                                                                                            grimoire 29749
                                                                                                                           grimoire 30982
                                                                                                                                           grimoire 578
                                                                                                                                                         grimoire 7439
                                                                                                                                           grimoire_6013 grimoire_7968
grimoire_10905 grimoire_13329 grimoire_16193 grimoire_18066 grimoire_21896 grimoire_2393
                                                                                            grimoire 27436 grimoire 29899
                                                                                                                           grimoire 31544
grimoire_11023 grimoire_14052 grimoire_16261 grimoire_18336 grimoire_22507
                                                                             grimoire_24065 grimoire_27617
                                                                                                            grimoire_30009
                                                                                                                           grimoire_31580
                                                                                                                                           grimoire_6043 grimoire_8107
grimoire 11043 grimoire 1497
                              grimoire 16488 grimoire 18761 grimoire 22544
                                                                             grimoire 24581 grimoire 27820
                                                                                                           grimoire 30092
                                                                                                                           grimoire 32513
                                                                                                                                           grimoire 6065 grimoire 8806
grimoire_11943 grimoire_150
                               grimoire 16906 grimoire 1982 grimoire 22597
                                                                             grimoire 24960 grimoire 2814
                                                                                                            grimoire 30324
                                                                                                                           grimoire_3948
                                                                                                                                           grimoire 6080 grimoire 8972
grimoire 12158 grimoire 15081 grimoire 17078 grimoire 20082 grimoire 22649
                                                                             grimoire 25230 grimoire 28223
                                                                                                            grimoire 30329
                                                                                                                           grimoire_4623
                                                                                                                                           grimoire 6150 grimoire 9194
grimoire_12298 grimoire_15507 grimoire_17277 grimoire_20728 grimoire_22829 grimoire_25472 grimoire_2840
                                                                                                            grimoire 30377 grimoire 4960
                                                                                                                                           grimoire 6771 grimoire 947
~/Castle/Main_building/Library/Merlin_s_office
[mission 32] $ ls /grimoire * > Drawer/inventory.txt
ls: cannot access '/grimoire_*': No such file or directory
~/Castle/Main_building/Library/Merlin_s_office
[mission 32] $ ls grimoire_* > Drawer/inventory.txt
~/Castle/Main_building/Library/Merlin_s_office
[mission 32] $ less Drawer/inventory.txt
~/Castle/Main_building/Library/Merlin_s_office
[mission 32] $ gsh check
```

Congratulations, mission 32 has been successfully completed!

While you are waiting, a bat flies by ...

to get the list of "gsh" commands.

Use the command \$ gsh help

```
grimoire xaRXWsry:XtSHbpViOVatMRpRzQXdjMgQSgShspjDuQQdUPVrRkIWEyKPQWTwYZQttiFKZXhONSZDcPtQNReAcJyewPaDsdjIFaHgg
grimoire xGtnOZXKnGb:vVXtzFLuenTvOrAjdHKLDLKzDWvdREGaLZgOvdZoaIIHFFOjfmxgJXZzwHvMgitIRsJHBWjDhvlVwUKgivJoUCrCom
grimoire YOVoYbaCOgdJrNCOTroNKTiXm:xzkzfHxRdmeTETvbKTgFOCPUGYYYHPeaZKEOgShUdOSJfcMuFaHAmuTZiHvsTaVOWlvckNYEWzeLv
~/Castle/Main building/Library/Merlin s office
[mission 33] $ grep -l gsh grimoire * 2>/dev/null
grimoire cszdYKtVNsAWrmGoRKysBV
~/Castle/Main building/Library/Merlin s office
[mission 33] $ grep -l -i gsh grimoire * 2>/dev/null
grimoire aaoCkJyCt
grimoire buwSLiFGFBDXffEe
grimoire cszdYKtVNsAWrmGoRKysBV
grimoire DGBaFoRha
grimoire EHCWUnUdVADRubtweEW
grimoire_eTSCVgALVrSJtif
grimoire eVQWVpzCYURnzkyzJo
grimoire GttDDpPUcBTUWNfzBWk
grimoire hduecXjJqGRqu
grimoire iCUHQhAvGYv
grimoire IdRfCSsZUvMg
grimoire kgZkinWIKfab
grimoire MlmHwQjBFxLKbZWNdXDloOhAAP
grimoire nDaYvednkqmeXbKkBokvUUFHsCZDL
grimoire nRdkaOrxMeEdSIEXCzvrhQc
grimoire oAiDgDzjWVWkXIoFRaljwz
grimoire_ptOxxTojHyMUvNGrMOXMjAAWvOrSLC
grimoire_syHLLpniVpEl
grimoire tdEvsYiuHIJTqnFvq
grimoire TjJNssVzZfUMgpwuUzOgjdBtCeAIWk
grimoire UgdhZtmSAnbxwbKiJDScai
grimoire_vUSpgClsgCQpx
grimoire WUYeWzQShATgqAeEnuUSXwsFVeMs
grimoire xaRXWsry
grimoire xGtnOZXKnGb
grimoire YOVoYbaCOqdJrNCQTroNKTjXm
~/Castle/Main building/Library/Merlin s office
[mission 33] $ gsh check
Congratulations, mission 33 has been successfully completed!
```



```
~/Castle/Main_building/Throne_room
[mission 35] $ cd kings_quarter/
bash: cd: Kings_quarter/: Permission denied

~/Castle/Main_building/Throne_room
[mission 35] $ ls -l
total 4
dr--rw-rw- 2 kali kali 4096 Dec 15 13:23 Kings_quarter/

~/Castle/Main_building/Throne_room
[mission 35] $ chmod +x Kings_quarter/

~/Castle/Main_building/Throne_room
[mission 35] $ cd Kings_quarter/

~/Castle/Main_building/Throne_room/Kings_quarter
[mission 35] $ gc
Congratulations, mission 35 has been successfully completed!
```

```
to get the list of "gsh" commands.
~/Castle/Main building/Throne room
[mission 37] $ chmod +rwx Safe/
~/Castle/Main building/Throne room
[mission 37] $ cd Safe/
~/Castle/Main building/Throne room/Safe
[mission 37] $ chmod +rwx crown
~/Castle/Main building/Throne room/Safe
[mission 37] $ cat crown
                jgs
(^\/^\/^)
 \a*a*a/
 { 662 }
~/Castle/Main building/Throne room/Safe
[mission 37] $ mv crown ~/Forest/Hut/Chest
~/Castle/Main_building/Throne_room/Safe
[mission 37] $ gc
What are the 3 digits inscribed on the base of the crown? 662
Congratulations, mission 37 has been successfully completed!
tar: gameshell/World/Forest/Hut/chest: Cannot open: Permission denied
tar: Exiting with failure status due to previous errors
SAVEFILE MIGHT BE INCORRECT
   Use the command
   $ gsh help
   to get the list of "gsh" commands.
```

```
~/Garden
[mission 38] $ cd Maze/
~/Garden/Maze
[mission 38] $ ls -l
total 40
drwxr-xr-x 12 kali kali 4096 Dec 17 13:44 2adf8f433259a796/
drwxr-xr-x 12 kali kali 4096 Dec 17 13:44 2f8c7d9e453d39a41bfcc3fd03b1ea/
drwxr-xr-x 12 kali kali 4096 Dec 17 13:44 54b9637146f79c3ef2cf4d/
drwxr-xr-x 12 kali kali 4096 Dec 17 13:44 84117e12cf83b2e167/
drwxr-xr-x 12 kali kali 4096 Dec 17 13:44 9d6415850/
drwxr-xr-x 12 kali kali 4096 Dec 17 13:44 b3c5f276addd21/
drwxr-xr-x 12 kali kali 4096 Dec 17 13:44 bd5d69a82454aefe0dcbd/
drwxr-xr-x 12 kali kali 4096 Dec 17 13:44 e0741006a5dddd68520cb98f/
drwxr-xr-x 12 kali kali 4096 Dec 17 13:44 e1c8cea72/
drwxr-xr-x 12 kali kali 4096 Dec 17 13:44 eeadea7df52f9e62/
~/Garden/Maze
 [mission 38] $ find . -type f -exec grep -H rubis '{}' \;
~/Garden/Maze
 [mission 38] $ find . -type f -exec grep -H ruby '{}' \;
 ./9d6415850/8a5b5abb1fdcb6e15e46ef8f0/7e13a4e3cc/58860:58860 ruby 3edfc54991c3595ebe22c6fe4159ad5c3ef33b77
 ~/Garden/Maze
 [mission 38] $ mv 9d6415850/8a5b5abb1fdcb6e15e46ef8f0/7e13a4e3cc/58860 ~/Forest/Hut/Chest
~/Garden/Maze
 [mission 38] $ gc
Congratulations, mission 38 has been successfully completed!
```

Mission goal Combine several commands with "|" in order to find the diamond in the maze, and move it to your chest. Remark The filename doesn't contain the string "diamond". You need to find a file that contains the string "diamond". Useful commands find Search files from the current working directory. Conditions on the file may be added about filenames, size, modification date, etc. grep [OPTIONS] STRING FILE1 ... FILEN Search for a string inside the files. Useful option: -l only print the names of files containing the string. xargs COMMAND read lines from stdin and run the command COMMAND LINE1 LINE2 ... LINEN ``xargs`` is particularly useful after a ``|`` redirection.

```
~/Garden/Maze/a8d4ae983e8/2c96378032c
[mission 39] $ ls -l
total 40
-rw-r--r-- 1 kali kali 5 Dec 18 04:29 1c36f9c531a9e570361b2e294092794
-rw-r--r-- 1 kali kali 5 Dec 18 04:29 5793971f2ed61c3
-rw-r--r-- 1 kali kali 81 Dec 18 04:29 586ca54799955be0f6e18ae963b94a7
-rw-r--r-- 1 kali kali 5 Dec 18 04:29 706ce30b549cfad8
-rw-r--r -- 1 kali kali 5 Dec 18 04:29 75b076c88ee53f757
-rw-r--r-- 1 kali kali 5 Dec 18 04:29 81a7b696c91723b7
-rw-r--r-- 1 kali kali 5 Dec 18 04:29 901f9b739
-rw-r--r-- 1 kali kali 5 Dec 18 04:29 9b2f4fd51fd257c5395da3f48f
-rw-r--r-- 1 kali kali 5 Dec 18 04:29 d666710115418c4e9c062d78b317b
-rw-r--r-- 1 kali kali 5 Dec 18 04:29 e9d9712085
~/Garden/Maze/a8d4ae983e8/2c96378032c
[mission 39] $ cd 586ca54799955be0f6e18ae963b94a7
bash: cd: 586ca54799955be0f6e18ae963b94a7: Not a directory
~/Garden/Maze/a8d4ae983e8/2c96378032c
[mission 39] $ cat 586ca54799955be0f6e18ae963b94a7
586ca54799955be0f6e18ae963b94a7 diamond c205392bc73ef6410b544781a5683e2ff4446d95
~/Garden/Maze/a8d4ae983e8/2c96378032c
[mission 39] $ mv 586ca54799955be0f6e18ae963b94a7 ~/Forest/Hut/Chest
~/Garden/Maze/a8d4ae983e8/2c96378032c
[mission 39] $ gsh check
Congratulations, mission 39 has been successfully completed!
```

```
~/Garden/Maze
[mission 39] $ find . -type f -exec grep -l diamond '{}' \;
./a8d4ae983e8/2c96378032c/586ca54799955be0f6e18ae963b94a7
```

```
the King bought a knife for 2 coppers.
the King bought a shiny rock for 3 coppers.
(20)
~/Stall
[mission 40] $ gsh reset
   Use the command
   $ gsh help
    to get the list of "gsh" commands.
(0)
~/Stall
[mission 40] $ grep King *_s_c_r_o_l_l_* | grep -v PAID
the King bought a chackal for 2 coppers.
the King bought a pin for 6 coppers.
the King bought a walking stick for 4 coppers.
the King bought an opal for 5 coppers.
the King bought a belt for 6 coppers.
(1)
~/Stall
[mission 40] $ gsh check
How much does the king owe? 23
```

Congratulations, mission 40 has been successfully completed!

```
(7)
~/Stall
[mission 41] $ grep -v "UnPAID" *_s_c_r_o_l_l_* | wc -l
10667
(8)
~/Stall
[mission 41] $ grep -v "PAID" *_s_c_r_o_l_l_* | wc -l
47
(9)
~/Stall
[mission 41] $ gsh reset
   Use the command
    $ gsh help
   to get the list of "gsh" commands.
(0)
~/Stall
[mission 41] $ grep -v "PAID" *_s_c_r_o_l_l_* | wc -l
65
(1)
~/Stall
[mission 41] $ gsh check
How many unpaid items are there? 65
Congratulations, mission 41 has been successfully completed!
```

```
[mission 42] $ tr "a-z" 'm-za-n' < secret message
fcpc gq kw ugjj:
wms ugjj ecr kw afcqr, ylb ctcpwrfgle gr amlryglq.
rfgq afcqr gq gl rfc acjjyp, ylb rfc umpb rm kyic
gr pc-ynncyp gq: hqik
kcpjgl rfc clafylrcp
~/Castle/Main_building/Library/Merlin_s_office/Drawer
[mission 42] $ tr "a-z" 'o-za-p' < secret_message</pre>
here is my will:
you will get my chest, and everything it contains.
this chest is in the cellar, and the word to make
it re-appear is: jskm
merlin the enchanter
~/Castle/Main building/Library/Merlin s office/Drawer
[mission 42] $ tr "a-z" 'o-za-p' < secret_message
here is my will:
you will get my chest, and everything it contains.
this chest is in the cellar, and the word to make
it re-appear is: jskm
merlin the enchanter
~/Castle/Main_building/Library/Merlin_s_office/Drawer
[mission 42] $ gsh check
What's the key that will make Merlin's chest to appear?
jskm
```

Congratulations, mission 42 has been successfully completed!



```
Use the command
  | $ gsh help
  to get the list of "gsh" commands.
~/Castle/Main building/Library/Merlin s office/Drawer
[mission 43] $
                          ip6-allrouters ip6-loopback
               ff02::2
                                                              localhost
               ip6-allnodes
                             ip6-localhost kali
ff02::1
~/Castle/Main_building/Library/Merlin_s_office/Drawer
[mission 43] $ gsh goal
() = (
                                                                                 (0=()
        Congratulations!
        You have finished all the missions.
        You can now quit GameShell, or go back to some old missions.
        Use ``gsh HELP`` to get a list of all GameShell commands.
        The commands `gsh index` and `gsh goto N` are particularly interesting.
        Note: the admin password has been changed to 'qwerty'.
                                                                                  (0=()
```