

Missione 1

```
( )=(
Mission goal
Go to the top of the main tower of the castle.

Useful commands
cd LOCATION
Move to the given location.
Remark: 'cd' is an abbreviation for "change directory".

pwd
Show the path to your current location.
Remark: 'pwd' is an abbreviation for "print working directory".

ls
Show a list of locations that are currently accessible.
Remark: 'ls' is an abbreviation of "list".

gsh check
Check if the mission objective has been achieved.

gsh reset
Restart the mission from the beginning.

Remarks
( )=)
```

```
[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 Main_tower
[mission 1] $ ls
First_floor
[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] $ gsh check

Congratulations, mission 1 has been successfully completed!
```

Missione 2

“gsh goal” per gli obbiettivi

```
[mission 2] $ gsh goal

Mission goal
Go the castle's cellar.

Secondary objective
Understand the difference between ``cd -`` and ``cd ..``.

Useful commands
cd -
Jump back to the location you were in prior to your last move.
cd ..
Move to the parent directory (one step back along the path to your current location).
pwd
See the path to your current location.
```

Uso il comando “cd -” per ritornare alla cartella dove mi trovavo prima dello spostamento. “cd ..” per ritornare alla cartella sopra rispetto a quella in cui mi trovo.

```
[mission 2] $ cd -
/home/kali/gameshell/World/Castle/Main_tower/First_floor/Second_floor
[mission 2] $ cd ..
[mission 2] $ pwd
/home/kali/gameshell/World/Castle/Main_tower/First_floor
[mission 2] $ cd -
/home/kali/gameshell/World/Castle/Main_tower/First_floor/Second_floor
[mission 2] $ cd -
/home/kali/gameshell/World/Castle/Main_tower/First_floor
[mission 2] $ cd -
/home/kali/gameshell/World/Castle/Main_tower/First_floor/Second_floor
[mission 2] $ cd -
/home/kali/gameshell/World/Castle/Main_tower/First_floor
[mission 2] $ cd ..
[mission 2] $ pwd
/home/kali/gameshell/World/Castle/Main_tower
[mission 2] $ cd ..
[mission 2] $ cd Cellar
[mission 2] $ pwd
/home/kali/gameshell/World/Castle/Cellar
[mission 2] $ gsh check

Congratulations, mission 2 has been successfully completed!
```

Missione 3

```
()=(
Mission goal
Go back to the starting location and then go to the throne room using only two commands.
Remark
You may experiment with as many commands as you want, but
to validate the mission the following conditions need to be met:
- the second to last command takes you to the starting point,
- the last command takes you directly to the throne room.
Useful commands
cd
Move back to the starting location.
cd LOCATION1/LOCATION2/LOCATION3
Make several moves in one command.
Remark
UPPERCASE words appearing in commands are meta-variables: you need to replace them by appropriate (string) values.
)@=()
```

Comando “cd” per ritornare alla cartella iniziale e poi “cd” seguito dal percorso per andare alla “sala del trono”.

```
[mission 3] $ cd
[mission 3] $ cd /home/kali/gameshell/World/Castle/Main_building/Throne_room
[mission 3] $ gsh check

Congratulations, mission 3 has been successfully completed!
```

Missione 4

```
[mission 4] $ gsh goal

(0)=====
Mission goal
=====
Build a "Hut" in the forest, and then build a "Chest" in the hut.

Useful commands
=====
mkdir DIRECTORY
Create a new directory inside the current directory.
Remark: "mkdir" is an abbreviation for "make directory".
=====
(0)=====
```

Creo la cartella "Hut" in "Forest" e dentro creo un'altra cartella di nome "Chest"

```
~/Castle/Main_building/Throne_room
[mission 4] $ cd

~
[mission 4] $ pwd
/home/kali/gameshell/World

~
[mission 4] $ ls
Castle Forest Garden Mountain Stall

~
[mission 4] $ cd Forest

~/Forest
[mission 4] $ ls

~/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!
```

Missione 5

```
~/Forest/Hut
[mission 5] $ gsh goal

Mission goal
=====
Go back to the cellar and get rid of all the spiders. Leave the bats alone: they appear on the castle's coat of arms and are said to confer luck.

Useful commands
=====
rm FILES FILE2 ... FILEn
Delete the files (permanently).
Remark: "rm" is an abbreviation for "remove".
=====
```

Rimuovo gli elementi con il comando "rm"

```
[mission 5] $ ls
Castle Forest Garden Mountain Stall

~
[mission 5] $ cd Castle

~/Castle
[mission 5] $ ls
Cellar Great_hall Main_building Main_tower Observatory

~/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 spide_1 spider_2 spider_3
rm: cannot remove 'spide_1': No such file or directory

~/Castle/Cellar
[mission 5] $ rm spider_1

~/Castle/Cellar
[mission 5] $ ls
barrel_of_apples bat_1 bat_2

~/Castle/Cellar
[mission 5] $ gsh check

Congratulations, mission 5 has been successfully completed!
```

Missione 6

```
[mission 6] $ gsh goal

Mission goal
Collect all the coins that you can find in the garden in front of the castle, and put them in your chest in your hut in the forest.

Useful commands
mv FILE1 FILE2 ... FILEN DIRECTORY
Move the files to the directory.
Remark: "mv" is an abbreviation of "move".

The "-" symbol is an abbreviation for the initial directory.
Example: wherever you are, "--/Tavern" denotes the directory (or file) "Tavern" in the initial directory.

"the quieter you become, the more you are able to hear"
```

Con il comando “mv” sposto i file, mv + i file che voglio spostare + il percorso dove voglio spostare i file

```
~/Castle/Cellar
[mission 6] $ cd

~
[mission 6] $ ls
Castle Forest Garden Mountain Stall

~/Garden
[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 /home/kali/gameshell/World

~/Garden
[mission 6] $ gsh check

Congratulations, mission 6 has been successfully completed!
```

Missione 7

```
[mission 7] $ gsh goal

Mission goal
Collect all the coins hidden in the garden in front of the castle, and put them in your chest (in your hut in the forest).

Secondary objective
Learn how to use the "Tab" key to go faster.

Useful commands
ls -A
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.

"the quieter you become, the more you are able to hear"
```

“ls -A” per vedere tutti i file anche quelli nascosti e “mv” per spostare le coin nascoste nella directory “Chest”.

```
~/Garden
[mission 7] $ ls -A
.44733_coin_2 .51376_coin_3 .52682_coin_1 Flower_garden Maze Shed

~/Garden
[mission 7] $ mv .44733_coin_2 .51376_coin_3 .52682_coin_1 /home/kali/gameshell/World/Forest/Hut/Chest

~/Garden
[mission 7] $ gsh check

Congratulations, mission 7 has been successfully completed!
```

Missione 8

```
[mission 8] $ gsh goal

Mission goal
-----
Get rid of all the spiders that are crawling in the cellar. Again, do not disturb the bats.

Shell patterns
-----
*
The "*" character stands in for any sequence of characters
(including an empty sequence).
?
The "?" character stands in for any single character.

Those wildcards can be used to denote lists of existing files / directories in the current working directory.

For example: if the current folder contains
file-1 Folder-1 file-14 potato
then
*      -> file-1 Folder-1 file-14 potato
*1     -> file-1 Folder-1
*0*    -> Folder-1 potato
**     -> error, no matching file
*-*    -> file-1 Folder-1
*-??   -> file-14

--/Castle/Cellar
```

```
[mission 8] $ ls -A
10423_spider_48 14540_spider_19 17628_spider_20 20514_spider_25 26010_spider_42 28736_spider_3 5125_spider_41 6854_spider_37
10706_bat_5 14588_spider_33 1786_spider_24 21981_spider_12 26528_spider_15 2936_spider_5 5380_spider_16 7070_spider_29
10734_spider_50 15484_spider_2 18189_spider_18 2287_spider_46 26759_spider_4 29425_spider_10 573_spider_13 7394_spider_31
117_spider_23 15621_bat_1 18560_spider_14 23622_spider_36 27061_bat_4 3188_spider_44 597_spider_34 8060_spider_35
12460_spider_9 1687_spider_1 18632_spider_43 24152_spider_17 27383_spider_45 32193_spider_40 6019_spider_38 8502_spider_11
12812_spider_49 1744_spider_8 18650_spider_28 2441_spider_27 2742_spider_21 3305_spider_39 6831_bat_3 9913_spider_6
14460_bat_2 17463_spider_22 1976_spider_26 26010_spider_32 27582_spider_30 502_spider_47 6853_spider_7 barrel_of_apples
```

Dopo aver eseguito “ls -A” per trovare tutti i ragni nascosti eseguo il comando “rm -v *_spider_*” per rimuovere tutti i ragni in una volta senza rimuoverli uno ad uno.

```
--/Castle/Cellar
[mission 8] $ rm -v *_spider_*
removed '10423_spider_48'
removed '10734_spider_50'
removed '117_spider_23'
removed '12460_spider_9'
removed '12812_spider_49'
removed '14540_spider_19'
removed '14588_spider_33'
removed '14584_spider_2'
removed '1687_spider_1'
removed '1744_spider_8'
removed '17463_spider_22'
removed '17628_spider_20'
removed '1786_spider_24'
removed '18189_spider_18'
removed '18560_spider_14'
removed '18632_spider_43'
removed '18650_spider_28'
removed '1976_spider_26'
removed '20514_spider_25'
removed '21981_spider_12'
removed '2287_spider_46'
removed '23622_spider_36'
removed '24152_spider_17'
removed '2441_spider_27'
removed '26010_spider_32'
removed '26010_spider_42'
removed '26528_spider_15'
removed '26759_spider_4'
removed '27383_spider_45'
removed '2742_spider_21'
removed '27582_spider_30'
removed '28736_spider_3'
```

Missione 9

```
[mission 9] $ gsh goal

Mission goal
-----
The spiders are getting clever: they found a way to hide.
Get rid of all the spiders that are hiding in the cellar without disturbing the bats.

Shell patterns
-----
*
The "*" character stands in for any sequence of characters (including an empty sequence).
?
The "?" character stands in for any single character.

Remark
-----
The wildcards "*" and "?" don't see hidden files, you need to add an explicit dot at the start of the pattern.

--/Castle/Cellar
[mission 9] $ ls -A
10148_spider_25 12183_spider_20 15496_spider_41 18005_spider_42 20784_spider_35 23612_spider_34 27061_bat_4 29942_spider_21 6831_bat_3
18566_spider_49 12887_spider_24 15621_bat_1 18382_spider_19 2136_spider_37 2361_spider_50 27802_bat_5 3813_spider_7 8445_spider_39
18706_bat_5 13884_spider_20 15649_spider_46 18563_bat_3 21638_spider_36 23712_spider_9 27996_spider_17 31288_spider_28 8699_bat_2
10927_spider_33 1412_spider_16 16740_spider_44 19980_spider_4 22136_spider_15 23927_spider_18 2845_spider_7 31828_spider_23 9937_spider_38
11807_spider_5 18112_spider_25 18916_spider_30 20803_spider_8 2248_spider_40 23185_spider_14 28939_spider_45 5384_spider_10 barrel_of_apples
11811_bat_1 14294_spider_27 17589_spider_47 20358_spider_11 2343_spider_8 26355_spider_43 28424_spider_3 5785_spider_32
12842_spider_40 14460_bat_2 17867_spider_13 20474_spider_12 23566_spider_22 2637_spider_1 29665_spider_31 6299_bat_4

--/Castle/Cellar
[mission 9] $ rm -r -v *_spider_*
--/Castle/Cellar
[mission 9] $ ls -A
10706_bat_5 11811_bat_1 14460_bat_2 15621_bat_1 18563_bat_3 27802_bat_5 27802_bat_5 6299_bat_4 6831_bat_3 8699_bat_2 barrel_of_apples

--/Castle/Cellar
[mission 9] $ gsh check

Congratulations, mission 9 has been successfully completed!
```

Come nella missione 8 eseguo il comando “rm -r” però prima del nome del file da eliminare inserisco un punto per eliminare i file nascosti.

Missione 10



Copio con il comando “cp” gli standard nella directory “Chest”



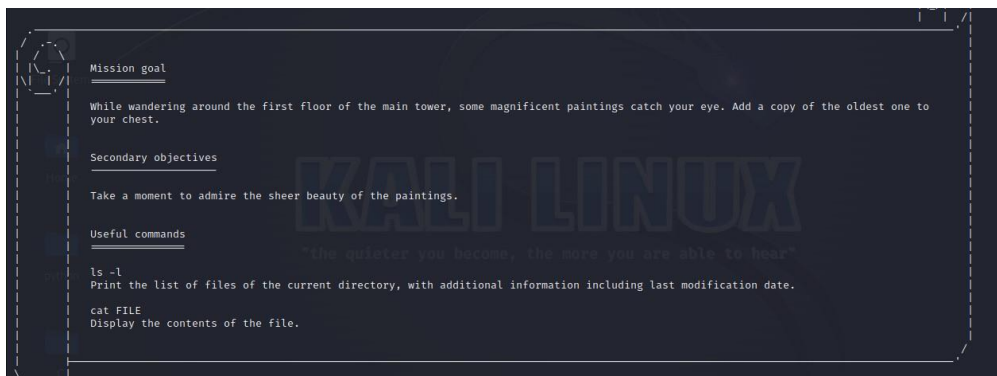
Missione 11



Faccio la copia di tutti i “tapestry” eseguendo il comando “cp *_tapestry_*” + il percorso dove si vuole copiare.



Missione 12



“ls -l” per vedere tutti i file all’interno della directory con tutte le informazione come data di modifica e permessi.

```
~/Castle/Main_tower/First_floor
[mission 12] $ ls -l
total 16
-rw-r--r-- 1 kali kali 1455 Oct 23 1981 painting_cDOoZWun
-rw-r--r-- 1 kali kali 1055 Jun 7 1997 painting_tocwxSwT
-rw-r--r-- 1 kali kali 1502 Jul 20 2018 painting_UnfNUWAm
drwxr-xr-x 3 kali kali 4096 Jul 17 03:19 Second_floor/
```

Copia del file

```
~/Castle/Main_tower/First_floor
[mission 12] $ cp painting_cDOozWun /home/kali/gameshell/World/Forest/Hut/Chest

~/Castle/Main_tower/First_floor
[mission 12] $ gsh check

Congratulations, mission 12 has been successfully completed!
```

“cat” per vedere il contenuto del file.

[illegible]

Missione 13

```
[mission 13] $ gsh goal
()=(
|
| Mission goal
|
| Nostradamus predicted a spectacular star conjunction on the 05-22-1997.
| But what will the day of the week be on that date?
|
| When you have it, run the command ``gsh check``.
|
| Useful commands
|
| cal
| Print a calendar for the current month.
|
| cal YEAR
| Print a calendar for the given year.
|
()=(
|
|
```

Uso "cal 1997" per vedere il calendario dell'anno così da sapere il giorno richiesto negli obiettivi.

```

[mission 13] $ cal 1997

          January
Su Mo Tu We Th Fr Sa      Su Mo Tu We Th Fr Sa      March
  1  2  3  4  5              1  2  3  4  5  6  7  8
  6  7  8  9 10 11          9 10 11 12 13 14 15
12 13 14 15 16 17 18        16 17 18 19 20 21 22
19 20 21 22 23 24 25        23 24 25 26 27 28 29
26 27 28 29 30 31           30 31

          April
Su Mo Tu We Th Fr Sa      Su Mo Tu We Th Fr Sa      June
  1  2  3  4  5              1  2  3  4  5  6  7
  6  7  8  9 10 11 12        8  9 10 11 12 13 14
13 14 15 16 17 18 19        15 16 17 18 19 20 21
20 21 22 23 24 25 26        22 23 24 25 26 27 28
27 28 29 30                 29 30

          July
Su Mo Tu We Th Fr Sa      Su Mo Tu We Th Fr Sa      September
  1  2  3  4  5              1  2  3  4  5  6
  6  7  8  9 10 11 12        7  8  9 10 11 12 13
13 14 15 16 17 18 19        14 15 16 17 18 19 20
20 21 22 23 24 25 26        21 22 23 24 25 26 27
27 28 29 30 31              28 29 30

          October
Su Mo Tu We Th Fr Sa      Su Mo Tu We Th Fr Sa      November
  1  2  3  4  5              1  2  3  4  5  6
  6  7  8  9 10 11          7  8  9 10 11 12 13
12 13 14 15 16 17 18        14 15 16 17 18 19 20

          November
Su Mo Tu We Th Fr Sa      Su Mo Tu We Th Fr Sa      December
  1  2  3  4  5  6          1  2  3  4  5  6
  7  8  9 10 11 12          7  8  9 10 11 12 13
13 14 15 16 17 18 19        14 15 16 17 18 19 20

~/Castle/Main_tower/First_floor
[mission 13] $ gsh check -
What was the day of the week for the 05-22-1997?
1 : Monday
2 : Tuesday
3 : Wednesday
4 : Thursday
5 : Friday
6 : Saturday
7 : Sunday
Your answer: 4

Congratulations, mission 13 has been successfully completed

```


Missione 14

```
/eV\...
Mission goal
||
|| Checking for hidden files is taking too long!
||
|| Create an alias "la" to run the command ``ls -A`` in order to list all files, including hidden ones, with only 2 letters.
||
|| Define the synonym
||
|| la
||
|| for the command
||
|| ls -A
||
|| and check that it works as expected.
||
|| How fortunate, there is a nice rock hidden just where you are.
||
|| Useful commands
||
|| alias STRING="COMMAND"
|| Create a synonym for a string, that will stand for a command.
||
/eV\...
```

Con il comando “alias” sostituisco il comando “ls -A” con il comando più rapido “la”

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

~/Castle/Main_tower/First_floor
[mission 14] $ la
.nice_rock painting_cDOoZWun painting_tocwxSwT painting_UnfNUWAm Second_floor/

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

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

Missione 15

```

Mission goal
||
|| Create a file named "journal.txt" in your chest and write a short message in it.
|| You can use this file to record your notes and solutions for the upcoming missions.
||
|| Details
||
|| ``nano`` is a command-line text editor. You can use it whenever you need to edit a file from the shell.
||
|| Useful commands
||
|| nano FILE
|| Edit the file from the shell.
|| (If the file does not exist, it will be created.)
||
|| Keybindings are listed at the bottom of the screen (the ``^`` symbol means "Control"). The most important ones are:
|| Control-x quit
|| Control-o save
|| Control-w search for a string
||
|| Remark: do not use Control-s or Control-z!
||

```

Prima mi sposto nella cartella “Chest” poi creo il file journal.txt con il comando “nano”

```
~/Castle/Main_tower/First_floor
[mission 15] $ cd

~
[mission 15] $ cd Forest/Hut/Chest

~/Forest/Hut/Chest
[mission 15] $ nano journal.txt

~/Forest/Hut/Chest
[mission 15] $ gsh check

Congratulations, mission 15 has been successfully completed!
```

Missione 16

```
()=()()=()  
  
Mission goal  
Create an alias "journal" in order to easily edit your journal file wherever you are.  
  
Details  
To edit the journal file with "nano" from, for example, the cellar or the throne room, you need to give the full path to the file:  
~/Forest/.../journal.txt".  
To avoid typing this long command each time, you can create an alias just like  
alias la='ls -a'  
  
Useful commands  
nano FILE  
Edit the file from the shell.  
(If the file does not exist, it will be created.)  
alias STRING='COMMAND'  
Create a synonym for a string, that will stand for a command.
```

Sostituisco il comando “nano percorso_file” con journal tramite comando alias.

```
~/Forest/Hut/Chest  
[mission 16] $ alias journal='nano /home/kali/gameshell/World/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!
```

Missione 17

```
[mission 17] $ gsh goal  
  
Mission goal  
At the back of the cellar, there is a small opening going to the spider queen's lair.  
Go there, and remove the spider queen (and nothing else).  
  
Note: you have a limited amount of time (20 seconds) to do that. You can use the command "gsh reset" to reset the timer.  
Another thing: shell patterns have been deactivated. You cannot use the wildcards "*" or "?".  
  
Useful commands  
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 the "Tabulation" key twice successively shows a list of possible completions.
```

Dopo essermi spostato nella cella del castello uso il comando “cd” seguito dalle prime lettere e con il tasto “Tab” compilo tutto il nome in automatico senza compilarlo tutto a mano.

```
~/Castle/Cellar  
[mission 17] $ cd .Lair_of_the_spider_queen\ xDbSUPoMnYXzRmVu MZKdmOfsiXUrSeHe/  
  
~/Castle/Cellar/.Lair_of_the_spider_queen xDbSUPoMnYXzRmVu MZKdmOfsiXUrSeHe  
[mission 17] $ la  
aIaZkBo0l0TUIiJB_baby_bat_ZnVqMchcbkCUfBeK NrNxnbpGaiouSYQA_spider_queen_WByLKvqWXcmFkGPN  
  
~/Castle/Cellar/.Lair_of_the_spider_queen xDbSUPoMnYXzRmVu MZKdmOfsiXUrSeHe  
[mission 17] $ rm -r NrNxnbpGaiouSYQA_spider_queen_WByLKvqWXcmFkGPN  
  
~/Castle/Cellar/.Lair_of_the_spider_queen xDbSUPoMnYXzRmVu MZKdmOfsiXUrSeHe  
[mission 17] $ gsh check  
Perfect, it took you only 18 seconds to complete this mission!  
  
Congratulations, mission 17 has been successfully completed!
```

Missione 18

```
[mission 18] $ gsh goal

()=(
Mission goal
As you are walking around the castle, you feel like you are being watched... Turn your head quickly enough and you may see one of the
paintings' eyes following you.
1/ Run the "xeyes" command, and stop it.
2/ Run the "xeyes" command in the background.
Useful commands
xeyes
Open a window with 2 eyes that track your mouse.
COMMAND 8
Run the command in the background. "the quieter you become, the more you are able to hear"
Control-c
This key binding usually interrupts the current command by sending it the "INT" signal.
()=(
```

Con il comando "xeyes" apro il processo che segue il movimento del muose e con il comando "xeyes &"lo metto in background.

```
~/Castle/Cellar
[mission 18] $ xeyes &
[1] 117229

~/Castle/Cellar
[mission 18] $ gsh check
Congratulacions, mission 18 has been successfully completed!
```

Missione 19

```
[mission 19] $ gsh goal

Mission goal
Find the copper coin in the small maze in the garden and move it to your chest.
If you want, you can use a graphical file manager. The maze is to be found in directory
/home/kali/gameshell/World/Garden/Maze

~/Garden/Maze/d367a9415fa249a3641e1cda5889
[mission 19] $ ls
73a882d872cacc560d2715d7/ c1a661f2aaf4def730e7f/

~/Garden/Maze/d367a9415fa249a3641e1cda5889
[mission 19] $ cd c1a661f2aaf4def730e7f/

~/Garden/Maze/d367a9415fa249a3641e1cda5889/c1a661f2aaf4def730e7f
[mission 19] $ ls
6a4af292bc938b8074/ bbba524165c9c40250/

~/Garden/Maze/d367a9415fa249a3641e1cda5889/c1a661f2aaf4def730e7f/6a4af292bc938b8074
[mission 19] $ cd 6a4af292bc938b8074/

~/Garden/Maze/d367a9415fa249a3641e1cda5889/c1a661f2aaf4def730e7f/6a4af292bc938b8074
[mission 19] $ ls
00000_copper_coin_00000

~/Garden/Maze/d367a9415fa249a3641e1cda5889/c1a661f2aaf4def730e7f/6a4af292bc938b8074
[mission 19] $ cd 00000_copper_coin_00000
bash: cd: 00000_copper_coin_00000: Not a directory

~/Garden/Maze/d367a9415fa249a3641e1cda5889/c1a661f2aaf4def730e7f/6a4af292bc938b8074
[mission 19] $ mv 00000_copper_coin_00000 ~/Forest/Hut/Chest

~/Garden/Maze/d367a9415fa249a3641e1cda5889/c1a661f2aaf4def730e7f/6a4af292bc938b8074
[mission 19] $ gsh check

Congratulacions, mission 19 has been successfully completed!
```

Missione 20

```
[mission 20] $ gsh goal

Mission goal

Find the silver coin in the maze in the garden and move it to your chest using the shell.

Useful commands

ls -R
Print the list of all files / directory, including those in sub-directories (recursively).

tree
Print the tree of files and directories, starting from the current working directory.
```

“ls -R” per vedere tutte le directory con le varie sub-directory e il comando “tree” per vedere le directory con i vari livelli del percorso.

```
[mission 20] $ tree
.
├── 761f4cc4af9bf06
│   ├── 4564e88dd403c5b163
│   │   ├── 4500a5c6a06c
│   │   ├── ac1cb01b35ec
│   │   └── d894d073232fee6fbef23
│   ├── f6e2a4c2a047a
│   │   ├── 39b49e5a6d0a1782fe9e8dbe3
│   │   ├── 5fece0349a0c9d1f672f45a9
│   │   └── 9e07f9b9b4fac893
│   └── f98329cd5a0db0
│       ├── 699d3863d325d30c9ed1549
│       ├── e6c345119
│       └── fe35883a0f9b2d1f9d6580e63
├── 85fc9e4b862f748a88766f9
│   ├── 30cc60f44cab65fdd7
│   │   ├── 4d29a4b72bbe
│   │   ├── 59b847a0cd780496045b9f8e
│   │   └── 7f31231c68300b3e173f7f15a5
│   ├── d5fd4088e
│   │   ├── 6f688aa9cdcbc0f5ab42cdbc
│   │   ├── 98e71a361eac2fa86d9064278971
│   │   └── bde254d51111ca081925a824689c
│   └── daf52ed9bd4f1cf999c5448d9335
│       ├── 5163fe768b1
│       ├── 7c52309e8c1d5174330dc03b7c5d7f7
│       ├── fd0f8dadb8e6be9e252b6413f
│       └── 00000_silver_coin_00000
└── e0017aadf1f42335746682752c91a3
    ├── 751adb83155bb148ffed
    ├── 407169ac4a9c9d758729
    ├── a7e9e6be
    ├── d4f0797cd711fca
    └── cb5b2106d88aa95929239bb28fe

~/Garden/Maze
[mission 20] $ ls -R
.:
761f4cc4af9bf06/ 85fc9e4b862f748a88766f9/ e0017aadf1f42335746682752c91a3/

./761f4cc4af9bf06:
4564e88dd403c5b163/ f6e2a4c2a047a/ f98329cd5a0db0/

./761f4cc4af9bf06/4564e88dd403c5b163:
4500a5c6a06c/ ac1cb01b35ec/ d894d073232fee6fbef23/

./761f4cc4af9bf06/4564e88dd403c5b163/4500a5c6a06c:

./761f4cc4af9bf06/4564e88dd403c5b163/ac1cb01b35ec:

./761f4cc4af9bf06/4564e88dd403c5b163/d894d073232fee6fbef23:

./761f4cc4af9bf06/f6e2a4c2a047a:
39b49e5a6d0a1782fe9e8dbe3/ 5fece0349a0c9d1f672f45a9/ 9e07f9b9b4fac893/

./761f4cc4af9bf06/f6e2a4c2a047a/39b49e5a6d0a1782fe9e8dbe3:

./761f4cc4af9bf06/f6e2a4c2a047a/5fece0349a0c9d1f672f45a9:

./761f4cc4af9bf06/f6e2a4c2a047a/9e07f9b9b4fac893:

./761f4cc4af9bf06/f98329cd5a0db0:
699d3863d325d30c9ed1549/ e6c345119/ fe35883a0f9b2d1f9d6580e63/

./761f4cc4af9bf06/f98329cd5a0db0/699d3863d325d30c9ed1549:

./761f4cc4af9bf06/f98329cd5a0db0/e6c345119:

~/Garden/Maze/85fc9e4b862f748a88766f9
[mission 20] $ cd daf52ed9bd4f1cf999c5448d9335/

~/Garden/Maze/85fc9e4b862f748a88766f9/daf52ed9bd4f1cf999c5448d9335
[mission 20] $ ls
5163fe768b1/ 7c52309e8c1d5174330dc03b7c5d7f7/ fd0f8dadb8e6be9e252b6413f/

~/Garden/Maze/85fc9e4b862f748a88766f9/daf52ed9bd4f1cf999c5448d9335
[mission 20] $ cd fd0f8dadb8e6be9e252b6413f/

~/Garden/Maze/85fc9e4b862f748a88766f9/daf52ed9bd4f1cf999c5448d9335/fd0f8dadb8e6be9e252b6413f
[mission 20] $ ls
00000_silver_coin_00000

~/Garden/Maze/85fc9e4b862f748a88766f9/daf52ed9bd4f1cf999c5448d9335/fd0f8dadb8e6be9e252b6413f
[mission 20] $ mv 00000_silver_coin_00000 ~/Forest/Hut/Chest

~/Garden/Maze/85fc9e4b862f748a88766f9/daf52ed9bd4f1cf999c5448d9335/fd0f8dadb8e6be9e252b6413f
[mission 20] $ gsh check

Congratulations, mission 20 has been successfully completed!
```


Missione 21

```
(0)=====|-----|(0)
```

```
Mission goal
```

```
Find the gold coins in the maze hidden in the garden and move them to your chest.
```



```
Useful commands
```

```
find CONDITION  
Search for files satisfying the condition, starting from your current working directory.  
  
There are many possible conditions. They can constrain the  
file names, size, modification date, etc. For example -name "PATTERN"  
-lname "DATEFORM"  
are both related to file names.  
  
man COMMAND  
Display the manual of the command.  
  
Important key bindings:  
q      Quit  
_ Space scroll down one page  
/ STRING search for the string  
n      find the next occurrence of the  
search string  
  
Remark
```

```
The description of the ``find`` command is deliberately kept short. You will find more information in the manual. (You can for exemple  
search for the string "-name" in the manual.)
```

```
~/Garden/Maze
[mission 21] $ find . -type f -iname *gold*
./448da33cf3a111db06956c7c/14c099442fb2b0cdd24f15d/6fb45172/Gold_CoiN_2
./99bc0544c0740ee3/75a4c52a9/0a09c5301d3dc49/gold_coin_1

~/Garden/Maze
[mission 21] $ mv ./448da33cf3a111db06956c7c/14c099442fb2b0cdd24f15d/6fb45172/Gold_CoiN_2 ~/Forest/Hut/Chest

~/Garden/Maze
[mission 21] $ mv ./99bc0544c0740ee3/75a4c52a9/0a09c5301d3dc49/gold_coin_1 ~/Forest/Hut/Chest

~/Garden/Maze
[mission 21] $ cd ~/Forest/Hut/Chest

~/Forest/Hut/Chest
[mission 21] $ ls
11334_tapestry_03      32273_tapestry_05      50003_tapestry_09      61365_tapestry_06      coin_3      journal.txt      painting_cD0oZWun      standard_3
15142_tapestry_07      33908_tapestry_02      50086_tapestry_01      coin_1      gold_coin_1      00000_copper_coin_00000      standard_1      standard_4
27927_tapestry_08      37411_tapestry_10      53451_tapestry_04      coin_2      Gold_CoiN_2      00000_silver_coin_00000      standard_2

~/Forest/Hut/Chest
[mission 21] $ gsh check

Congratulations, mission 21 has been successfully completed!
```

Missione 22 il comando “head”

```

(0)=)=====)
Mission goal
A forgetful old hermit called Servillus has set up camp in a cave with his old, leather-bound potion book.
Go to the cave and help him remember the recipe of his famous herbal tea.

In order to validate the mission, you need to be in the cave with Servillus **and** your last command prior to "gsh check" must show
the recipe (including its title), but nothing else.

Note: you shouldn't alter the content of the book of potions.

Useful commands
cat FILE
Display the contents of the file.

head FILE
Print the first 10 lines of the file.

head -n K FILE
Print the first K lines of the file.

Remark
A "FILE" may contain directories if the file in question is not in the current directory.
=====
(0)=)=====)
~/Mountain/Cave
[mission 22] $ cat servillus
a86d669be5bdbecdc595e36161c292ab2bef7983@18812

      .
      ^\
     ^V'
    /_/\
   //..\\ I 0 0
  \|. '[ I .
  \|V\j\ I . 0
 /_ ~ ~ , \ I
 \|_ _ j ^ \ I 0
  \|_ _ v } I 0 .
 | | | I
 | | | I c('_____)o
 | | | I
 _/j L l\ _I _//^____^\\_

Row

```

```
~/Mountain/Cave/Book_of_potions
[mission 22] $ cd ..

~/Mountain/Cave
[mission 22] $ head -6 Book_of_potions/page_07
Herbal tea
_____

1) Boil water.
2) Add herbs from the forest.
3) Let it sit for five minutes and drink while hot.

~/Mountain/Cave
[mission 22] $ gsh check

Congratulations, mission 22 has been successfully completed!
```

Mission 23 "Il comando "tail"

Mission goal

The old man seems to enjoy your company very much. He invites you to stay for supper, and starts preparing a delicious stew for the both of you. While getting the cauldron ready he asks for your help. Read him the steps of the recipe from his book.

In order to validate the mission, you need to be in the cave with Servillus **and** last command prior to "gsh check" must show the steps of the recipe (without its title).

Note: you shouldn't alter the content of the book of potions.

Useful commands

cat FILE
Display the contents of the file. "the quieter you become, the more you are able to hear"

tail FILE
Print the last 10 lines of the file.

tail -n K FILE
Print the last K lines of the file.

```
~/Mountain/Cave
[mission 23] $ cat Book_of_potions/table_of_contents
1. Transformation potion _____ pages 1-2
2. Elixir of youth _____ pages 3-4
3. Philter of love _____ page 5
4. Bottled death (powerful poison) _____ page 6
5. Herbal tea _____ page 7
6. Draft of invisibility _____ pages 7-8
7. Homeopathic healing potion (part 1) _____ pages 8-9
8. Homeopathic healing potion (part 2) _____ page 10
9. Homeopathic healing potion (part 3) _____ page 11
10. Toadstool stew _____ page 12
11. Distilled water _____ page 13
12. King's ale _____ Page 13
```

```
~/Mountain/Cave
[mission 23] $ tail -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!
```


Mission 24

```
( )=(
Mission goal

While cleaning the dishes, Servillus mentions an interesting potion that lets the drinker (temporarily) take the physical appearance of anyone.
Read the recipe of the potion from the hermit's book.

In order to validate the mission, you need to be in the cave with Servillus **and** your last command prior to ``gsh check`` must show the whole recipe (with its title).

Note: you shouldn't alter the content of the book of potions.

Useful commands

cat FILE1 FILE2 ... FILEn
Display the contents of the files in order.
Remark: ``cat`` is an abbreviation for "concatenate".
( )=(
```

```
~/Mountain/Cave
[mission 24] $ cat Book_of_potions/table_of_contents
1. Transformation potion _____ pages 1-2
2. Elixir of youth _____ pages 3-4
3. Philter of love _____ page 5
4. Bottled death (powerful poison) _____ page 6
5. Herbal tea _____ page 7
6. Draft of invisibility _____ pages 7-8
7. Homeopathic healing potion (part 1) _____ pages 8-9
8. Homeopathic healing potion (part 2) _____ page 10
9. Homeopathic healing potion (part 3) _____ page 11
10. Toadstool stew _____ page 12
11. Distilled water _____ page 13
12. King's ale _____ Page 13
```

```
~/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!

Mission 25

```
()=(
Mission goal
The old hermit notices your interest for potion recipes, and sees promise in your ability to lookup lists of ingredients. He challenges you to find the steps for the elixir of Youth.
In order to validate the mission, you need to be in the cave with Servillus **and** your last command prior to "gsh check" must show the steps for the recipe and nothing else.
Note: you shouldn't alter the content of the book of potions.

Useful commands
cat FILE1 FILE2 ... FILEn
Display the contents of the files in order.
tail
Print the last 10 lines sent on the standard input. "If you become, the more you are able to hear"
tail -n K
Print the last K lines sent on the standard input.
COMMAND1 | COMMAND2
Run the two commands, feeding the "standard output" of the former into the "standard input" of the latter.
Remark: by analogy with plumbing "|" is called "pipe".

~/Mountain/Cave
[mission 25] $ cat Book_of_potions/page_03 Book_of_potions/page_04
Elixir of youth

Warning: **do not** drink if you are older than 30.

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] $ cat Book_of_potions/page_03 Book_of_potions/page_04 | tail -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!
```