

ESAME W8D4

TASK 1

Sviluppo del gioco e richiesta: Cercare di completare quanti più livelli possibili del gioco “Gameshell” e documentarli in una “guida operativa”.

Per semplificare il lavoro ho deciso di creare all'inzio una legenda con tutti i comandi utilizzati (ovviamente aggiornata di livello in livello), così da evitare ripetizioni su comandi già usati e semplificare la ricerca di quest'ultimi in caso di necessità.

LEGENDA

gsh goal : permette di vedere l'obiettivo della missione

gsh check : permette di vedere se la missione è riuscita

gsh help : ti da l'accesso alla lista dei comandi già usati

pwd : serve a vedere in che directory siamo ora (Es: /home/kali/gameshell.3/World)

ls : permette di vedere le directory presenti (Es: Castle Forest Garden Mountain Stall)

ls -A : indica tutti i file nella directory, anche quelli nascosti

ls -l : indica tutti i file nella directory, con ulteriori informazioni (tipo quelle dell'ultima modifica)

ls -r : stampa la lista di tutti i file e directory, comprese le sub directories

cd LOCATION : serve per cambiare directory (Es: cd Castle e siamo dentro a Castle)

cd LOCATION1/LOCATION2 ecc : serve per velocizzare il passaggio tra directory (cd Castle/Main_building/Throne_room)

cd - : serve per tornare alla posizione in cui ci si trovava prima dell'ultimo spostamento

cd .. : serve per spostarsi nella parent directory (un passo indietro lungo il percorso della posizione attuale)

cd : ritorna alla directory iniziale

mkdir DIRECTORY : permette di creare una directory dentro quella in cui siamo già

rm FILE1 FILE2 ... FILEn : permette di cancellare i file

~ : ovunque tu sia indica la directory scritta nella directory iniziale (Es: ~/Forest/Hut/Chest)

bash: /home/kali/gameshell.3/World/Forest/Hut/Chest: Is a directory)

* : si usa per tutte le sequenze di carattere

? : si usa per un singolo carattere

cp : permettere di copiare i file in altri directory

cat : mostra il contenuto del file

cal: stampa un calendario per il mese corrente (se si aggiunge l'anno stampa l'anno in questione)

TAB : Permette di completare il nome senza doverlo scrivere tutto

xeyes : apre una finestra con 2 occhi che seguono il mouse

COMMAND &: apre il comando in background

tree : stampa l'albero dei file e delle directory dall'attuale file directory

find : permette di cercare file che soddisfano determinate condizioni dalla tua directory di partenza

head -n K FILE : stampa i primi K del file

tail -n K FILE : stampa gli ultimi K del file

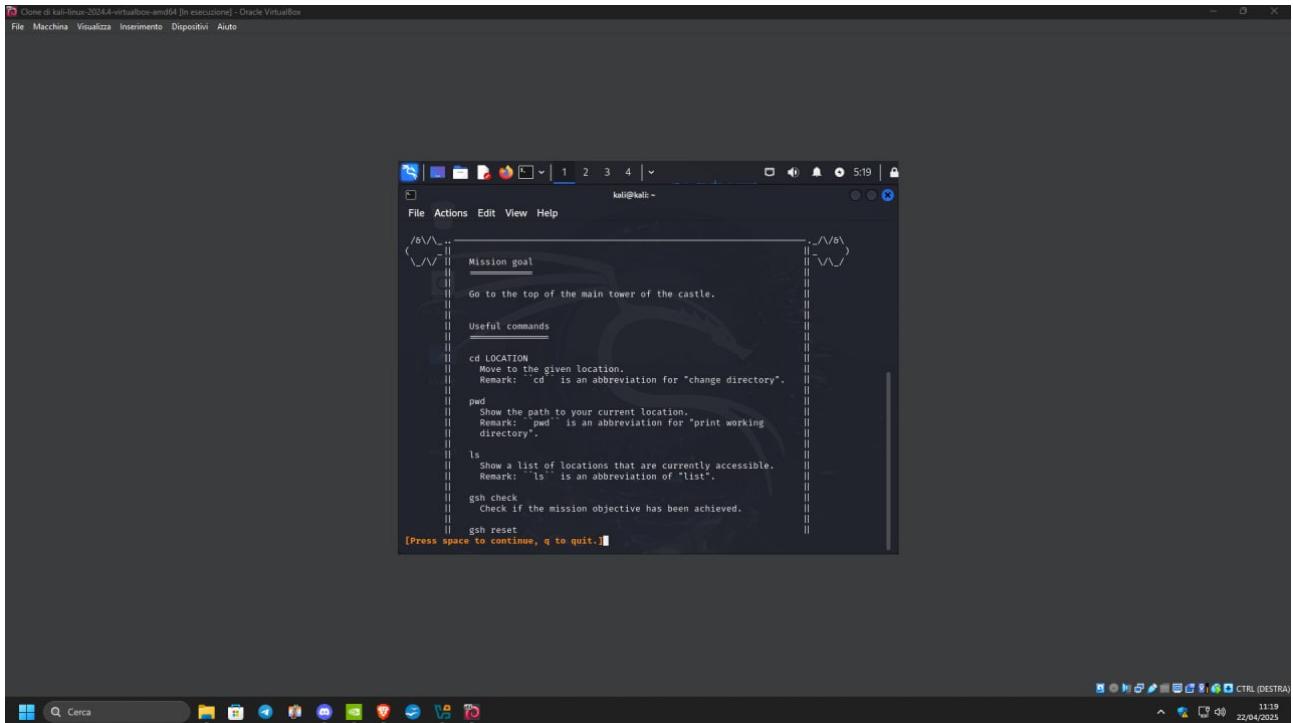
ps : mostra i processi attualmente attivi

kill N : termina il processo

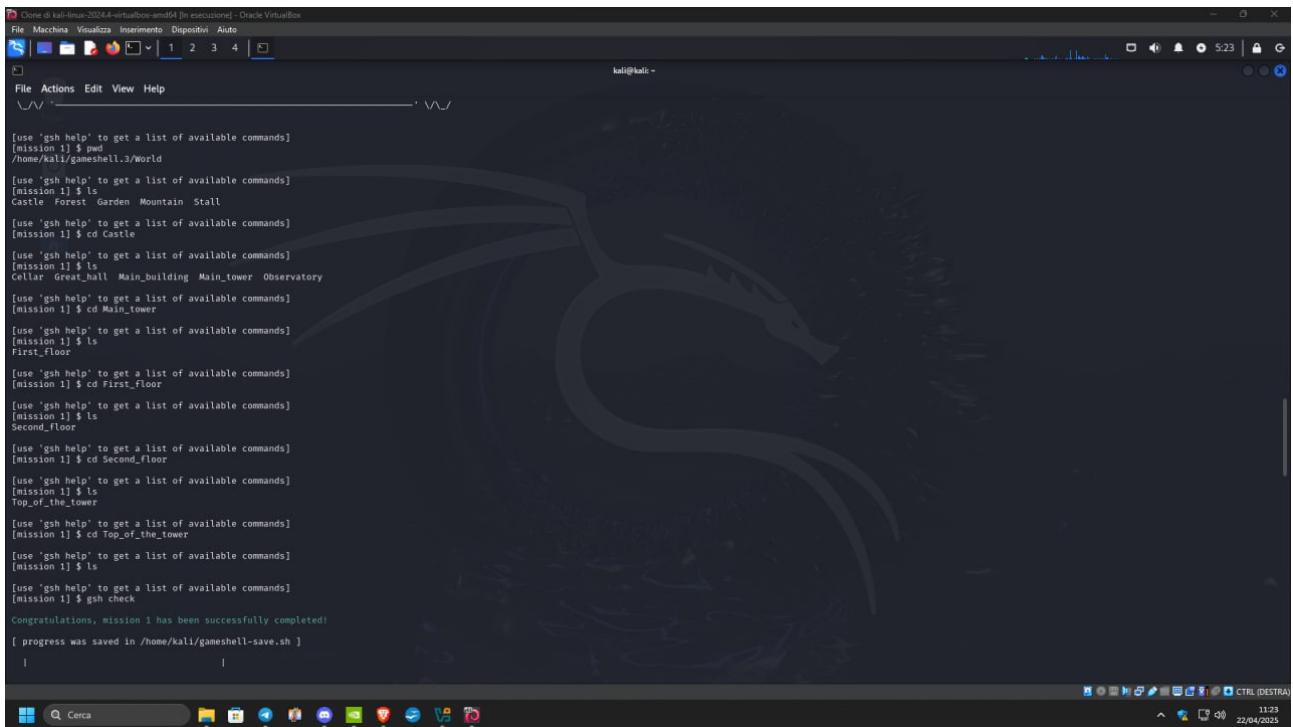
clear : pulisce lo schermo

ATTENZIONE: L'ERRORE PIU' FREQUENTE E' LO SCRIVERE SBAGLIATO. I NOMI NELLE CARTELLE SONO CASE-SENSITIVE. BASTA UNA LETTERA E DARA' QUESTO MESSAGGIO IN ERRORE: bash: cd: main_tower: No such file or directory

LIVELLO 1



Per iniziare digitiamo il comando gsh goal e vediamo che l'obiettivo è arrivare in cima alla torre principale del castello.



Una volta fatto questo iniziamo con l'orientarci tramite il comando pwd. Siamo nella cartella World. Ora dobbiamo vedere l'interno della cartella tramite il comando ls. Vediamo che abbiamo un castello, una foresta, un giardino, una montagna e una bancarella. Ora con l'uso dei comandi che abbiamo imparato ci basterà muoverci fino alla cima della torre principale del castello.

LIVELLO 2

A screenshot of a terminal window titled "Clone di kali-linux-2024.4-virtualbox-amd64 [In esecuzione] - Oracle VirtualBox". The terminal shows the following text:

```
[mission 2] $ pwd  
/home/kali/gameshell.3/World  
[use 'gsh help' to get a list of available commands]  
[mission 2] $ ls  
Castle Forest Garden Mountain Stall  
[use 'gsh help' to get a list of available commands]  
[mission 2] $ # START OF COMMANDS HISTORY  
[use 'gsh help' to get a list of available commands]  
[mission 2] $ gsh goal  
^O  
(o)--->>oooooooooooooooooooooooooooo<(o)  
'` 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.  
'`.....  
(o)--->>oooooooooooooooooooooooooooo<(o)  
[use 'gsh help' to get a list of available commands]  
[mission 2] $ ^[[
```

The terminal window is part of a Kali Linux desktop environment, with a dragon wallpaper and various icons in the dock.

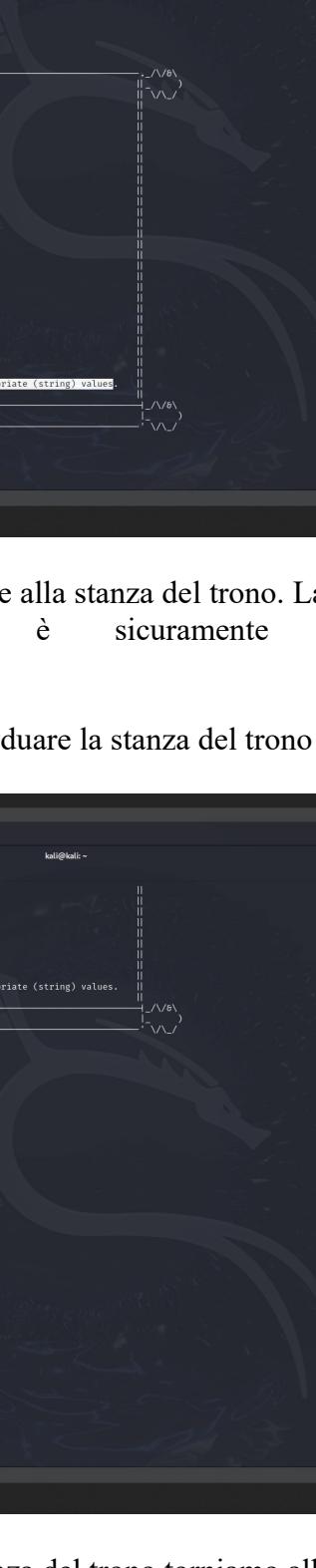
Come possiamo vedere il livello 2 è molto semplice ora che conosciamo i comandi base

A screenshot of a terminal window titled "Clone di kali-linux-2024.4-virtualbox-amd64 [In esecuzione] - Oracle VirtualBox". The terminal shows the following text:

```
[use 'gsh help' to get a list of available commands]  
[mission 2] $ pwd  
/home/kali/gameshell.3/World  
[use 'gsh help' to get a list of available commands]  
[mission 2] $ ls  
Castle Forest Garden Mountain Stall  
[use 'gsh help' to get a list of available commands]  
[mission 2] $ cd Castle  
[use 'gsh help' to get a list of available commands]  
[mission 2] $ ls  
Cellar Great_hall Main_building Main_tower Observatory  
[use 'gsh help' to get a list of available commands]  
[mission 2] $ cd Cellar  
[use 'gsh help' to get a list of available commands]  
[mission 2] $ ls  
barrel_of_apples  
[use 'gsh help' to get a list of available commands]  
[mission 2] $ gsh check  
Congratulations, mission 2 has been successfully completed!  
[ progress was saved in /home/kali/gameshell-save.sh ]  
|  
| Use the command  
| $ gsh help  
| to get the list of "gsh" commands.  
+-----+  
[mission 3] $ ^[[
```

The terminal window is part of a Kali Linux desktop environment, with a dragon wallpaper and various icons in the dock.

LIVELLO 3



```
Congratulations, mission 2 has been successfully completed!
[ progress was saved in /home/kali/gameshell-save.sh ]

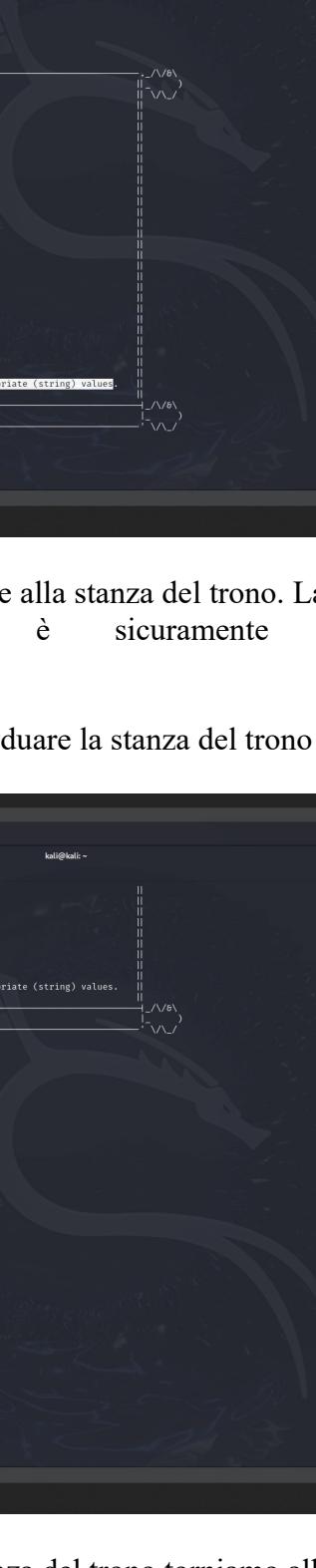
|   Use the command
|   $ gsh help
|   to get the list of "gsh" commands.

[mission 3] $ gsh goal
/\V\
\_\_V_ 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.

[use 'gsh help' to get a list of available commands]
[mission 3] $
```

Come possiamo leggere l'obiettivo è arrivare alla stanza del trono. La difficoltà sarà farlo con solo 2 comandi, il migliore metodo è sicuramente quello consigliato, cd LOCATION1/LOCATION2/LOCATION3.

Quindi come primo punto consiglio di individuare la stanza del trono per poi tornare all'inizio.



```
|| 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.

[use 'gsh help' to get a list of available commands]
[mission 3] $ pwd
/home/kali/gameshell.3/World/Castle/Cellar
[use 'gsh help' to get a list of available commands]
[mission 3] $ cd ..
[use 'gsh help' to get a list of available commands]
[mission 3] $ pwd
/home/kali/gameshell.3/World/Castle
[use 'gsh help' to get a list of available commands]
[mission 3] $ ls
Cellar Great_hall Main_building Main_tower Observatory
[use 'gsh help' to get a list of available commands]
[mission 3] $ cd Great_hall
[use 'gsh help' to get a list of available commands]
[mission 3] $ ls
[use 'gsh help' to get a list of available commands]
[mission 3] $ pwd
/home/kali/gameshell.3/World/Castle/Great_hall
[use 'gsh help' to get a list of available commands]
[mission 3] $ cd ..
[use 'gsh help' to get a list of available commands]
[mission 3] $ cd Main_building
[use 'gsh help' to get a list of available commands]
[mission 3] $ ls
Library Throne_room
[use 'gsh help' to get a list of available commands]
[mission 3] $
```

Ora che abbiamo capito dove si trova la stanza del trono torniamo all'inizio e risolviamo l'esercizio.

ATTENZIONE: il gioco è molto preciso bisogna seguire alla lettera le istruzioni per il completamento del livello, possibili errori:

Cione di Kali-Linux-2024.4-virtualbox-amd64 [in esecuzione] - Oracle VirtualBox

File Macchina Visualizza Inserimento Dispositivi Aiuto

File Actions Edit View Help

Sorry, mission 3 hasn't been completed.

[progress was saved in /home/kali/gameshell-save.sh]

| |

| Use the command |

| \$ gsh help |

| to get the list of "gsh" commands. |

| |

[mission 3] \$ pwd

/home/kali/gameshell.3/world/Castle/Main_building/Throne_room

[use 'gsh help' to get a list of available commands]

[mission 3] \$ cd

[use 'gsh help' to get a list of available commands]

[mission 3] \$ pwd

/home/kali/gameshell.3/world

[use 'gsh help' to get a list of available commands]

[mission 3] \$ gsh check

Sorry, mission 3 hasn't been completed.

[progress was saved in /home/kali/gameshell-save.sh]

| |

| Use the command |

| \$ gsh help |

| to get the list of "gsh" commands. |

| |

[mission 3] \$ cd Castle/Main_building/Throne_room

[use 'gsh help' to get a list of available commands]

[mission 3] \$ gsh check

Sorry, mission 3 hasn't been completed.

[progress was saved in /home/kali/gameshell-save.sh]

| |

| Use the command |

| \$ gsh help |

| to get the list of "gsh" commands. |

| |

Qua invece c'è la risoluzione dell'esercizio.

The screenshot shows a Kali Linux terminal window titled "Clone di kali-vm-2024-4 virtualbox-amd64 [In esecuzione] - Oracle VirtualBox". The terminal displays a game shell session with the following text:

```
File Macchina Visualizza Inserimento Dispositivi Auto
File Actions Edit View Help
Use the command
| $ gsh help
| to get the list of "gsh" commands.
[mission 3] $ cd
[use 'gsh help' to get a list of available commands]
[mission 3] $ cd Castle/Main_building/Throne_room
[use 'gsh help' to get a list of available commands]
[mission 3] $ gsh check
Congratulations, mission 3 has been successfully completed!

Well done!!!
From now on, the current location will be shown just before the command prompt.

[ progress was saved in /home/kali/gameshell-save.sh ]

Use the Command
| $ gsh help
| to get the list of "gsh" commands.
[mission 4] $
```

The terminal window is set against a background of a dragon illustration. The desktop environment includes icons for various applications like a file manager, browser, and terminal, along with system status indicators at the top right.

LIVELLO 4

The screenshot shows a Kali Linux terminal window titled "Clone di kali-linux-2024.4-virtualbox-amd64 [in esecuzione] - Oracle VirtualBox". The terminal displays a game shell session with the following text:

```
[progress was saved in /home/kali/gameshell-save.sh]
[mission 4] $ gsh help
| Use the command
| $ gsh help
| to get the list of "gsh" commands.
+-----+
~/Castle/Main_building/Throne_room
[mission 4] $ gsh goal
$: command not found

~/Castle/Main_building/Throne_room
[mission 4] $ gsh goal

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".

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

The terminal has a dark blue background with a faint dragon watermark. The bottom of the screen shows the Windows taskbar with various icons.

Ora impariamo l'uso di un nuovo comando `mkdir`. Come al solito controlliamo dove siamo (in realtà il gioco ci aiuta già dicendoci sopra a dove scriveremo il codice).

Clone di kali-linux-2024.4-virtualbox-amd64 [In esecuzione] - Oracle VirtualBox

File Macchina Visualizza Inserimento Dispositivo Aiuto

kali@kali: ~

```
| Use the command
|   $ gsh help
| to get the list of "gsh" commands.
|
```

```
~/Castle/Main_building/Throne_room
[mission 4] $ d gsh goal
d: command not found

~/Castle/Main_building/Throne_room
[mission 4] $ gsh goal

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".
```

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

[mission 4] $ pwd
/home/kali/gameshell.3/world

[mission 4] $ ls
Castle Forest Garden Mountain Stall

[mission 4] $ cd Forest
~/Forest
[mission 4] $ ls
~/Forest
[mission 4] $
```

Solito procedimento con cd torniamo all'inizio e da lì arriviamo alla foresta. Ora che siamo nella foresta creiamo la capanna e la cassa con l'uso del comando imparato:

```
~  
[mission 5] $ cd Forest  
  
~/Forest  
[mission 5] $ ls  
Hut  
  
~/Forest  
[mission 5] $ cd Hut  
  
~/Forest/Hut  
[mission 5] $ ls  
Chest  
  
~/Forest/Hut  
[mission 5] $ █
```

Come vediamo dall'immagine l'esercizio è molto facile completarlo.

LIVELLO 5

Ora impariamo come cancellare i programmi. Seguiamo sempre il solito procedimento con cd.

Come possiamo vedere usando il comando rm abbiamo “ucciso” i ragni lasciando intoccati i pipistrelli. Prossimo livello.

LIVELLO 6

Ora dobbiamo andare nel giardino e poi tornare nella foresta. E' un semplice movimento di file da una cartella ad un'altra. Per il movimento possiamo farci aiutare dal comando tilde ~.

```
~/Garden
[mission 6] $ ls
coin_1 coin_2 coin_3 Flower_garden Maze Shed

~/Garden
[mission 6] $ mv coin_1 coin_2 coin_3 ~/Chest
mv: target '/home/kali/gameshell.3/World/Chest': No such file or directory

~/Garden
[mission 6] $ mv coin_1 coin_2 coin_3 ~/Forest/Hut/Chest

~/Garden
[mission 6] $ ~/Forest/Hut/Chest
bash: /home/kali/gameshell.3/World/Forest/Hut/Chest: Is a directory

~/Garden
[mission 6] $ ls ~/Forest/Hut/Chest
coin_1 coin_2 coin_3

~/Garden
[mission 6] $ gsh check

Congratulations, mission 6 has been successfully completed!

[ progress was saved in /home/kali/gameshell-save.sh ]
```

Come possiamo vedere nel giardino ci sono 3 monete, quindi le spostiamo nella nostra cassa.
ATTENZIONE ad usare il simbolo tilde perchè esso farà sempre partire dalla prima directory
(world nel nostro caso) quindi se metteremo `~/chest` ci dirà che non c'è un file perchè la cassa è

nella nostra capanna, nella foresta. La precisione è la chiave per questi sistemi.

LIVELLO 7

```
~/Garden
[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.
_____|_____
~/Garden
[mission 7] $ █
```

Qui le cose iniziano a complicarsi perchè dobbiamo trovare delle monete nascoste.

```
~/Garden
[mission 7] $ ls -A
.29090_coin_1 .38069_coin_2 .39485_coin_3 Flower_garden Maze Shed

~/Garden
[mission 7] $ mv .29090_coin_1 .38069_coin_2 .39485_coin_3 ~/Forest/Hut/Chest

~/Garden
[mission 7] $ ls ~/Forest/Hut/Chest
coin_1 coin_2 coin_3

~/Garden
[mission 7] $ ls -A ~/Forest/Hut/Chest
.29090_coin_1 .38069_coin_2 .39485_coin_3 coin_1 coin_2 coin_3

~/Garden
[mission 7] $ gsh check

Congratulations, mission 7 has been successfully completed!

[ progress was saved in /home/kali/gameshell-save.sh ]
```

Usando il nuovo comando troviamo le monete nascoste e, come abbiamo fatto prima, le trasferiamo nella nostra cassa.

ATTENZIONE: anche quando sono state trasferite bisogna usare ls -A per visualizzarle perchè rimangono nascoste (come nell'esempio).

LIVELLO 8

```
~/Garden  
[mission 8] $ gsh goal

'` Home
(`\ Mission goal
=====

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

`\ Sockets
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
    *o*   → Folder-1 potato
    x*    → error, no matching file
    *-?  → file-1 Folder-1
    *- ?? → file-14

`/` (*)\\))
```

La missione è facile con le conoscenze appena acquisite: uccidiamo tutti i ragni senza distrubare i pipistrelli

```
-~/Garden
[mission 8] $ cd ~/Castle/Cellar

~/Castle/Cellar
[mission 8] $ ls -A
11470_spider_11 13566_spider_29 18181_spider_24 20381_spider_16 23380_spider_35 24753_spider_5 27456_spider_42 29738_spider_45 32065_bat_3 4989_spider_22 6778_spider_40 barrel_of_apples
12282_bat_1 16689_spider_36 18220_spider_14 20911_spider_47 23392_spider_28 25033_spider_12 27668_spider_30 29986_spider_4 32090_spider_20 5289_spider_17 7982_spider_15
12338_spider_21 17512_spider_3 193_spider_32 21106_spider_43 23729_bat_4 25226_spider_13 28170_spider_33 30562_spider_10 3534_spider_7 5442_spider_41 8803_spider_49
12590_spider_9 17913_bat_5 19612_spider_27 21265_spider_18 24436_bat_2 26612_spider_19 28626_spider_39 31318_spider_31 4635_spider_38 5716_spider_25 9554_spider_44
13198_spider_26 18051_spider_50 20334_spider_37 22201_spider_34 24463_spider_48 27335_spider_6 29018_spider_2 31847_spider_23 4747_spider_1 5738_spider_8 982_spider_46

~/Castle/Cellar
[mission 8] $ rm *spider*
rm: cannot remove '*spider': No such file or directory

~/Castle/Cellar
[mission 8] $ rm *_spider_
rm: cannot remove '_spider_': No such file or directory

~/Castle/Cellar
[mission 8] $ rm *spider*

~/Castle/Cellar
[mission 8] $ ls -A
12282_bat_1 17913_bat_5 23729_bat_4 24436_bat_2 32065_bat_3 barrel_of_apples

~/Castle/Cellar
[mission 8] $ gsh check

Congratulations, mission 8 has been successfully completed!

[ progress was saved in /home/kali/gameshell-save.sh ]
```

Rm è un metodo molto efficace ma è anche il più rischioso. Nel caso ci fosse stato un file chiamato batspider (a tutti gli effetti magari un pipistrello) esso sarebbe stato cancellato lo stesso. Per gli inizi, però, è un metodo più che sufficiente.

LIVELLO 9

```
~/Castle/Cellar  
[mission 9] $ gsh goal

()=(_____, pocket_____, ()=()

| 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.
| )_____
| _____, ()=()

()=(_____, ()=()
```

Ora invece dobbiamo vedercela con dei file nascosti. La procedura (usando anche la legenda che stiamo compilando) la sappiamo già.

```
| Trash
+-- Use the command
|   $ gsh help
|   to get the list of "gsh" commands.
+-- File System
~/Castle/Cellar
[mission 9] $ rm .????_spider*
~/Castle/Cellar
[mission 9] $ rm .????_spider*
~/Castle/Cellar
[mission 9] $ rm .????_spider*
rm: cannot remove '.????_spider*': No such file or directory
~/Castle/Cellar
[mission 9] $ rm .??????_spider*
rm: cannot remove '.??????_spider*': No such file or directory
~/Castle/Cellar
[mission 9] $ ls -A
.10949_bat_4 12282_bat_1 17913_bat_5 .19388_bat_3 .21479_bat_2 23729_bat_4 24436_bat_2 .27116_bat_1 .28916_bat_5 32065_bat_3 .64_spider_5 barrel_of_apples
~/Castle/Cellar
[mission 9] $ rm ?.*_spider*
~/Castle/Cellar
[mission 9] $ gsh check

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

Usando i ? possiamo eliminarli dopo aver scoperto i loro nomi nascosti.

LIVELLO 10

Adesso dobbiamo copia incollare dei file usando il nuovo comando cp.

```
~/Castle/Great_hall
[mission 10] $ ls
15261_stag_head 15526_decorative_shield 1984_suit_of_armour standard_1 standard_2 standard_3 standard_4

~/Castle/Great_hall
[mission 10] $ cp standard_1 standard_2 standard_3 standard_4 ~/Forest/Hut/Chest

~/Castle/Great_hall
[mission 10] $ ~/Forest/Hut/Chest
bash: /home/kali/gameshell.4/World/Forest/Hut/Chest: Is a directory

~/Castle/Great_hall
[mission 10] $ cd ~/Forest/Hut/Chest

~/Forest/Hut/Chest
[mission 10] $ ls
coin_1 coin_2 coin_3 standard_1 standard_2 standard_3 standard_4

~/Forest/Hut/Chest
[mission 10] $ gsh check

Congratulations, mission 10 has been successfully completed!

[ progress was saved in /home/kali/gameshell-save.sh ]
```

Non c'è molto da spiegare, prestare sempre attenzione al percorso che si vuole far fare ai documenti.

LIVELLO 11

```
(\_\\
Mission goal
_____
The tapestries in the castle's great hall are also particularly beautiful. Put a copy of each in your chest.

()_
Useful commands
_____
cp FILE1 FILE2 ... FILEn DIRNAME
Copy the files to the directory.
Remark: ``cp'' is an abbreviation of "copy".

()_
Shell patterns
_____
*
The "*" character stands in for any sequence of characters
(including an empty sequence).

?
The "?" character stands in for any single character.

()_
(*\`)/
^

-/Forest/Hut/Chest
[mission 11] $ cd ~/Castle/Great_hall

-/Castle/Great_hall
[mission 11] $ ls
23138_decorative_shield 27234_tapestry_05 34190_tapestry_02 44961_tapestry_10 50650_stag_head 53935_tapestry_03 65200_tapestry_06 standard_2 standard_4
23519_tapestry_04 328_suit_of_armour 38143_tapestry_07 45272_tapestry_01 52054_tapestry_08 61218_tapestry_09 standard_1 standard_3

-/Castle/Great_hall
[mission 11] $ cp tapestry* ~/Forest/Hut/Chest
cp: cannot stat 'tapestry*': No such file or directory

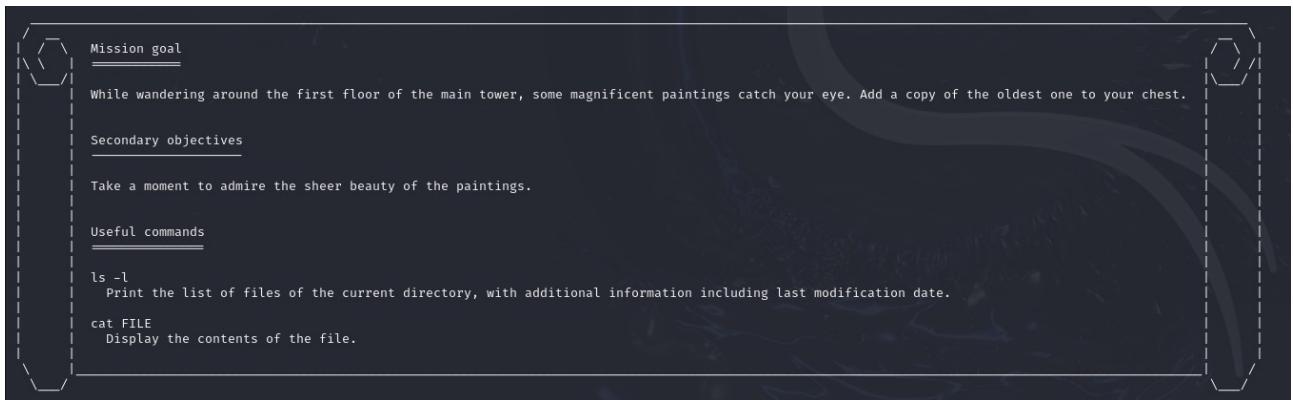
-/Castle/Great_hall
[mission 11] $ cp *tapestry* ~/Forest/Hut/Chest

-/Castle/Great_hall
[mission 11] $ gsh check

Congratulations, mission 11 has been successfully completed!
[ progress was saved in /home/kali/gameshell-save.sh ]
```

Ormai andiamo veloci, niente di nuovo, abbiamo comandi che già conosciamo.

LIVELLO 12



Ora abbiamo 2 obiettivi, copiare in base alla modifica più vecchia e ammirare usando i nuovi comandi: -l e cat. Vediamoli nello specifico.

Usando ls -l possiamo vedere che ci sono 3 dipinti (ricordarsi di andare nel grande corridoio con i rispettivi comandi). Ci accorgiamo che il più vecchio è il secondo e con il comando cat lo apriamo per ammirarne la bellezza (bisogna copiare il nome del file, non altro). Ora non ci resta che copiarlo e il livello è finito.

```
~/Castle/Main_tower/First_floor
[mission 12] $ cp painting_rtzwLbAu ~/Forest/Hut/Chest

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

Congratulations, mission 12 has been successfully completed!

[ progress was saved in /home/kali/gameshell-save.sh ]
```

```
Home | Help | Log Out | Logout | Logout  
society  
  
Mission goal  
=====
```

Nostradamus predicted a spectacular star conjunction on the 02-18-1984.
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.

Lasciamo indietro castello e mondo e passiamo a un nuovo comando cal, vediamolo.

```
[mission 13] $ cal 1984
```

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

April							May							June						
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	6	7			1	2	3	4	5			1	2			
8	9	10	11	12	13	14	6	7	8	9	10	11	12	3	4	5	6	7	8	9
15	16	17	18	19	20	21	13	14	15	16	17	18	19	10	11	12	13	14	15	16
22	23	24	25	26	27	28	20	21	22	23	24	25	26	17	18	19	20	21	22	23
29	30						27	28	29	30	31			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	4	5	6	7			1	2	3	4								1
8	9	10	11	12	13	14	5	6	7	8	9	10	11	2	3	4	5	6	7	8
15	16	17	18	19	20	21	12	13	14	15	16	17	18	9	10	11	12	13	14	15
22	23	24	25	26	27	28	19	20	21	22	23	24	25	16	17	18	19	20	21	22
29	30	31					26	27	28	29	30	31		23	24	25	26	27	28	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	6				1	2	3									1
7	8	9	10	11	12	13	4	5	6	7	8	9	10	2	3	4	5	6	7	8
14	15	16	17	18	19	20	11	12	13	14	15	16	17	9	10	11	12	13	14	15
21	22	23	24	25	26	27	18	19	20	21	22	23	24	16	17	18	19	20	21	22
28	29	30	31				25	26	27	28	29	30		23	24	25	26	27	28	29
													30	31						

```
~/Castle/Main_tower/First_floor
```

```
[mission 13] $ gsh check
```

```
What was the day of the week for the 02-18-1984?
```

- 1 : Monday
- 2 : Tuesday
- 3 : Wednesday
- 4 : Thursday
- 5 : Friday
- 6 : Saturday
- 7 : Sunday

```
Your answer: 6
```

```
Congratulations, mission 13 has been successfully completed!
```

Molto intuitivo, ora che abbiamo aperto il calendario non ci resta che cercare il giorno della settimana richiesto.

LIVELLO 14

```
home
└── 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.
```

Ora dobbiamo “semplificarci la vita” sostituendo un comando con un alias. Vediamo come.

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

~/Castle/Main_tower/First_floor
[mission 14] $ la
.nice_rock painting_gpYEuNis painting_rtzwLbAu painting_XgvFUvBx Second_floor/

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

Congratulations, mission 14 has been successfully completed!

[ progress was saved in /home/kali/gameshell-save.sh ]
```

```
Use the command
$ gsh help
to get the list of "gsh" commands.
```

Molto veloce, bisogna come sempre prestare attenzione alla dicitura, segue esempio:

```
~/Castle/Main_tower/First_floor
[mission 14] $ alias la= ls -A
alias ls='ls --literal -p'
bash: alias: -A: not found

~/Castle/Main_tower/First_floor
[mission 14] $ gsh check
The alias 'la' doesn't exist ...
```

Come si può notare se non si mette bene la punteggiatura (in questo caso le ") il programma non riconosce.

LIVELLO 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

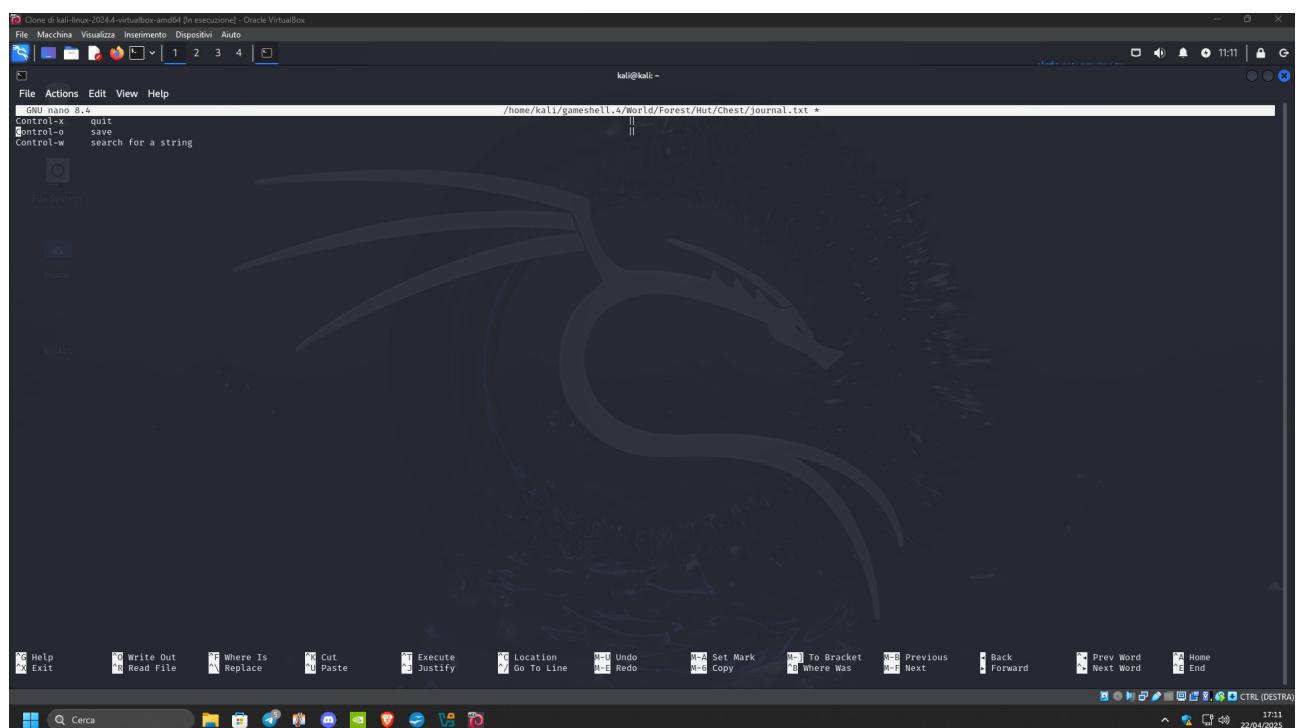
nano FILE
Edit the file from the shell.
(If the file does not exist, it will be created.)

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!

Dobbiamo creare un file di testo usando il comando nano. Vediamolo nello specifico.



Questo è lo schermata che deve uscire per l'editor di testo. Poi facciamo **ctrl x** e poi **y** per salvare il documento.

```
~/Castle/Main_tower/First_floor
[mission 15] $ nano ~/Forest/Hut/Chest/journal.txt

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

~/Castle/Main_tower/First_floor
[mission 15] $ gsh check

Congratulations, mission 15 has been successfully completed!

[ progress was saved in /home/kali/gameshell-save.sh ]
```

Livello superato.

LIVELLO 16



Anche questo molto facile perchè sappiamo già che strumenti usare.

```
\_/_\

~/Castle/Main_tower/First_floor
[mission 16] $ alias journal='nano ~/Forest/Hut/Chest/journal.txt'

~/Castle/Main_tower/First_floor
[mission 16] $ journal

~/Castle/Main_tower/First_floor
[mission 16] $ gsh check

Congratulations, mission 16 has been successfully completed!
```

Molto facile passiamo al prossimo.

LIVELLO 17

```

\` 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.
\` (*) \`
```

Adesso abbiamo una missione a tempo. Gli strumenti li abbiamo e le conoscenze pure.

```

SOCKET
~/Castle/Cellar
[mission 17] $ cd .Lair_of_the_spider_queen\ KtNzryyVGLKKuBgr XDQlqtDgHUsxMUUX/
~/Castle/Cellar/.Lair_of_the_spider_queen KtNzryyVGLKKuBgr XDQlqtDgHUsxMUUX
[mission 17] $ ls -A
BgdgSwPGBaVdDHRH_spider_queen_WDVsbOdnmStHthfl  UbbbybKXAMfGYPjMf_baby_bat_iURLsPdDJmyABkjj
~/Castle/Cellar/.Lair_of_the_spider_queen KtNzryyVGLKKuBgr XDQlqtDgHUsxMUUX
[mission 17] $ rm BgdgSwPGBaVdDHRH_spider_queen_WDVsbOdnmStHthfl
~/Castle/Cellar/.Lair_of_the_spider_queen KtNzryyVGLKKuBgr XDQlqtDgHUsxMUUX
[mission 17] $ gsh check
Perfect, it took you only 17 seconds to complete this mission!

Congratulations, mission 17 has been successfully completed!

[ progress was saved in /home/kali/gameshell-save.sh ]
```

L'unica difficoltà è prendere dimestichezza con la tastiera.

LIVELLO 18

```

\` 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 &
Run the command in the background.

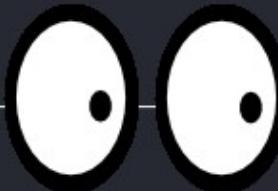
Control-c (also written ^c)
Pressing Control and c at the same times interrupts the current command by sending the INT ("INTerrupt") signal to the process.
\`
```

Adesso dobbiamo “vedere con il mouse”.

```

+-----+
| This mission is optionnal. You can skip it and go to the next one with the
| command
|
| $ gsh skip
+-----+

```



```

~/Castle/Cellar/.Lair_of_the_spider_queen KtNzryyVGLKKuBgr XDQlqtDgHUsxMUUX
[mission 18] $ xeyes

```

Molto semplice e intuitivo, per la seconda parte usiamo l'altro comando.

```

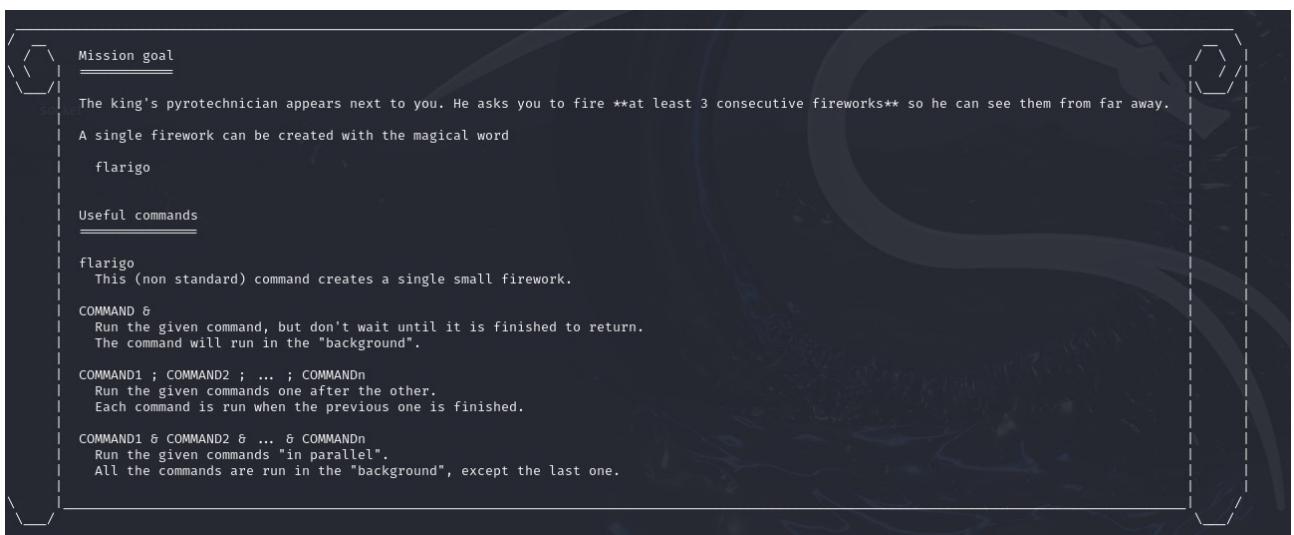
~/Castle/Cellar/.Lair_of_the_spider_queen KtNzryyVGLKKuBgr XDQlqtDgHUsxMUUX
[mission 18] $ xeyes
~/Castle/Cellar/.Lair_of_the_spider_queen KtNzryyVGLKKuBgr XDQlqtDgHUsxMUUX
[mission 18] $ xeyes &
[1] 14355
~/Castle/Cellar/.Lair_of_the_spider_queen KtNzryyVGLKKuBgr XDQlqtDgHUsxMUUX
[mission 18] $ gsh check

Congratulations, mission 18 has been successfully completed!

[ progress was saved in /home/kali/gameshell-save.sh ]

```

LIVELLO 19



Adesso dobbiamo dedicarci a lanciare in sequenza dei comandi. Il miglior metodo è usare la combinazione con COMMAND.

ATTENZIONE: ricordarsi gli spazi e la giusta scrittura.

LIVELLO 20

Mission goal

The king's pyrotechnician is trying to remember the magical incantation for creating the grand finale for his fireworks. This incantation starts with the word charmiglio and must be followed by four random letters, as in

```
$ charmiglio abcd  
or  
$ charmiglio oops
```

Help the pyrotechnician by finding 4 letters producing appropriate fireworks.

NOTE: when the four letters are incorrect, the magical reaction can take a very long time. You need to interrupt it!

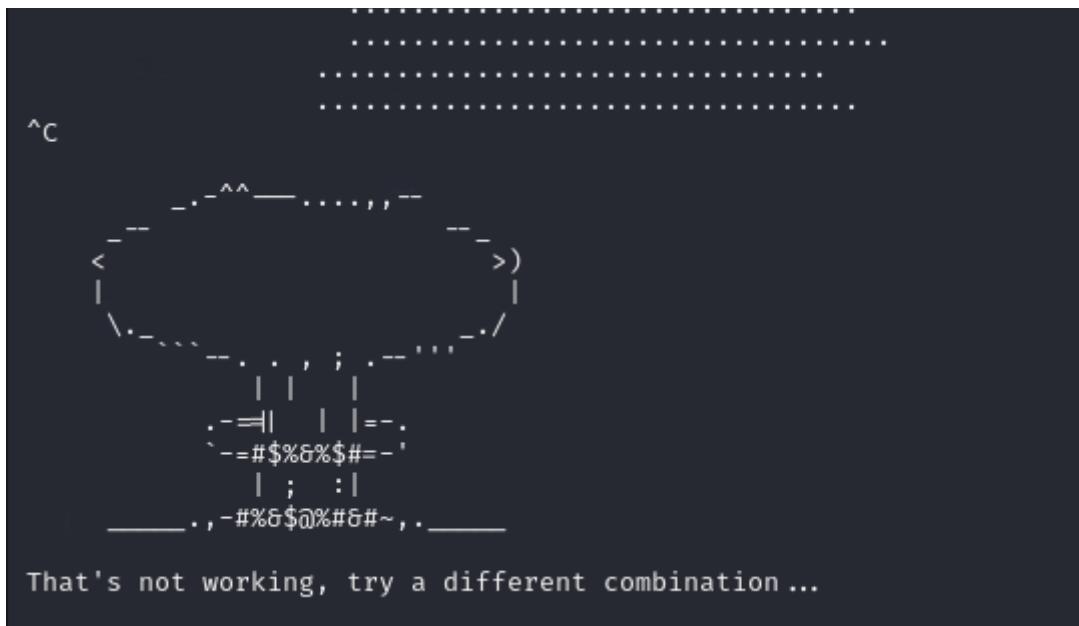
It will probably take several tries before finding a combination of letters that works.

Useful commands

```
charmiglio CCCC  
This (non standard) command creates some fireworks:  
- if the four letters are valid, the fireworks will start after a few seconds,  
- if the four letters are not valid, the whole magical reaction will go on for a long time.
```

Control-c (also written ^c)
Pressing Control and c at the same times interrupts the current command by sending the INT ("INTerrupt") signal to the process.

Adesso dobbiamo trovare le parti mancanti. Ci vorranno un po' di tentativi ma è solo pazienza.

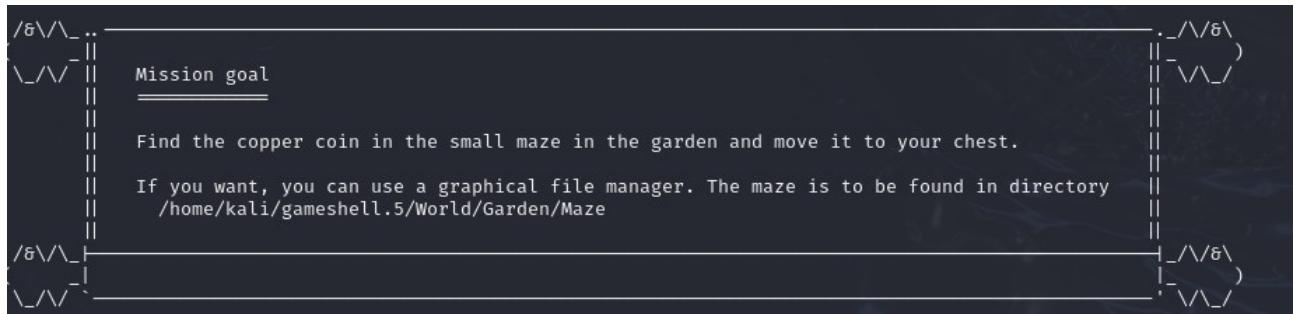


Con Ctrl + c interrompiamo in caso di errore e ci esce questo messaggio.

```
_#(.#(:::-:.  
.__(.:%:-  
  
It works! The special incantation is oops  
socket  
    .'. .'. *' * : \ / : .'. .'.  
    :\ / : . / ) \ : ' * ^ : ' .. ' - =:o:= -  
    :\ / : ' . :: . ' *' * * ' \ / . \ / : ' . :: .  
    : ^ : :: :: : * \ / * - = o - = / ) \ : ' *  
    ' .. ' :: :: : * ^ * . / . \ . ' *  
    * * .. * :  
    *  
    *  
  
~/Castle/Cellar/.Lair_of_the_spider_queen KtNzryyVGLKKuBgr XDQlqtDgHUsxMUUX  
[mission 20] $ gsh check  
What's a valid 4 letters sequence? oops  
  
Congratulations, mission 20 has been successfully completed!
```

Una volta superato vi darà questo messaggio. Attenzione ogni sequenza è diversa da esercizio a esercizio. Buona fortuna e abbiate tanta pazienza.

LIVELLO 21



Adesso non dobbiamo fare altro che una caccia al tesoro. I comandi da usare li sappiamo non ci resta che trovare la moneta di rame.

```
~/Garden/Maze/f3e35a503/821f6f0f0d3da48f9a/66912e81
[mission 21] $ ls
00000_copper_coin_00000

~/Garden/Maze/f3e35a503/821f6f0f0d3da48f9a/66912e81
[mission 21] $ mv 00000_copper_coin_00000 ~/Forest/Hut/Chest

~/Garden/Maze/f3e35a503/821f6f0f0d3da48f9a/66912e81
[mission 21] $ gsh check

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

Anche questo è un esercizio di pazienza, volendo potete usare l'interfaccia grafica per aiutarvi o, se volete prendere dimestichezza, potete scrivere i passaggi mano a mano.

LIVELLO 22



Esercizio uguale a prima ma dobbiamo usare nuovi comandi: ls -r e tree

```

~/Garden/Maze
[mission 22] $ tree
.
+-- 7e8a21ccc5bbd6f98928d4a
|   +-- 6177c3bd5407854450f385e5e6132
|       +-- 1d8cdbcab
|           +-- 2d53d88f904d8d167482fad
|               +-- c086a8be0ef88166
|       +-- 6495054225e80ee8bf69abd3ed58
|           +-- ba3ce7236
|               +-- e2e23e1da145f6839c5f6d5d4f
|                   +-- fd7043d4cef5e130b
|                       +-- 00000_silver_coin_00000
|       +-- ae849eaed
|           +-- 55b5378e
|               +-- 79c015d4c1c69e822e9e53c
|                   +-- b22775abfb7c705c168b7fb68f749
+-- 8b468d979c5b208f49d58
    +-- 7a6ec9a147c16a7e95054829
        +-- 12946400
        +-- 435fef309da2b17dc559c
        +-- 8c7a689c06a
    +-- ade0670563dc
        +-- 08106b876ea54fdd0e89287d
        +-- 71ce84f94c73efca4396aica0152
        +-- f6c2abf38c1776388e80
    +-- fb4f99c0b90
        +-- 4282009d4a70d6cd035081afe9
        +-- 5e2f37e3855e13c83cc25a251adaa0
        +-- ad6189745dec363525a43290a0aa
+-- b9ff5bf3e4ddda9fc4d2da2f7af34
    +-- 98200a747d789af9042
        +-- 1472ceaa0a4c99196e416a2d09c3092
        +-- da424c9470a0177bfd7ca1f0
        +-- fc49a2e13516847dba7d3c706814b0
    +-- a0c783b4d1621dfb18a527739c2e
        +-- 65220a77088f552403f15fa9a6
    +-- b6ea96cb1d
        +-- c7ef9812d5307280645bd182ab5a
    +-- e5cb7fe801c
        +-- 11a60af3f531b4a628da8b0753a66d7
        +-- b64ee356eed9cba6fc
        +-- fcabdbf2

40 directories, 1 file

~/Garden/Maze
[mission 22] $ mv 7e8a21ccc5bbd6f98928d4a/6495054225e80ee8bf69abd3ed58/fd7043d4cef5e130b/00000_silver_coin_00000 ~/Forest/Hut/Chest

~/Garden/Maze
[mission 22] $ gsh check

Congratulations, mission 22 has been successfully completed!

```

Per avere più ordine ho prefetiro usare il comando tree. L'esercizio è così risolto

LIVELLO 23

```

C:\ 
  +-- 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"
                  +-- -iname "PATTERN"
                  +-- 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.)

C:\                                     (*)\```

```

Adesso possiamo usare un nuovo metodo molto più veloce grazie al comanda find. Uniamo le parti che abbiamo già imparato e il gioco è fatto

```

~/Garden/Maze
[mission 23] $ find . -name "*coin*"
./aaa510735a6cabe8f5e33eb68c6ce/ce123def8832bbf562c3a/a12381ed1d19d6e5c7b5ea/gold_coin_1
~/Garden/Maze
[mission 23] $ find . -iname "*coin*"
./aaa510735a6cabe8f5e33eb68c6ce/ce123def8832bbf562c3a/a12381ed1d19d6e5c7b5ea/gold_coin_1
./c533f0903a13c/a072a9e92ee902f1f51f1af80e/2b7877c0bdaf15b5af095/Gold_Coin_2
~/Garden/Maze
[mission 23] $ mv ./aaa510735a6cabe8f5e33eb68c6ce/ce123def8832bbf562c3a/a12381ed1d19d6e5c7b5ea/gold_coin_1 ./c533f0903a13c/a072a9e92ee902f1f51f1af80e/2b7877c0bdaf15b5af095/Gold_Coin_2 ~/Forest/Hut/Chest
~/Garden/Maze
[mission 23] $ gsh check
Congratulations, mission 23 has been successfully completed!

```

ATTENZIONE: l'uso di iname ci permette di trovare ciò che cerchiamo anche se avesse maiuscole o minuscole (MA non caratteri diversi).

LIVELLO 24



Ora dobbiamo aiutare Servillus a ricordare una ricetta. Vengono aggiunto un nuovo comando head. Cat lo sappiamo già usare.

Per prima cosa rechiamoci nella caverna, poi apriamo il libro. Ora sorge il problema, l'inchiostro invisibile. Per superarl basterà stampare senza quest'ultimo (ovvero iniziando dalla riga successiva). Ora che abbiamo la soluzione non ci resta che soddisfare le condizioni di vittoria.

```
~/Mountain/Cave
[mission 24] $ head -n 6 Book_of_potions/page_07
vvvvvvvvvv
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 24] $ gsh check

Congratulations, mission 24 has been successfully completed!

[ progress was saved in /home/kali/gameshell-save.sh ]
```

LIVELLO 25

```
(=)=[  

  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.  

  tail FILE  

  Print the last 10 lines of the file.  

  tail -n K FILE  

  Print the last K lines of the file.  

(=)=
```

Ora dobbiamo fare come prima ma senza includere il titolo, quindi anziché head dobbiamo usare tail.

```
~/Mountain/Cave  

[mission 25] $ cat Book_of_potions/page_12  

vvvvvvvvvvvvvv  

Toadstool stew  

^^^^^^^^^^^^^  

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.  

socket  

~/Mountain/Cave  

[mission 25] $ head -n 9 Book_of_potions/page_12  

vvvvvvvvvvvvvv  

Toadstool stew  

^^^^^^^^^^^^^  

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.  

~/Mountain/Cave  

[mission 25] $ 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 25] $ gsh check  

Congratulations, mission 25 has been successfully completed!
```

LIVELLO 26



Adesso dobbiamo stampare 2 pagine contemporaneamente usando il comando cat.

```
File system
~/Mountain/Cave
[mission 26] $ cat Book_of_potions/page_01 Book_of_potions/page_02
vvvvvvvvvvvvvvvvvvvvvvvvv
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 26] $ gsh check

Congratulations, mission 26 has been successfully completed!
```

Molto facile e veloce usando il concatenato.

LIVELLO 27

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.

`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".

Explanations

Many of Unix commands process text: they receive text as input and produce text as output.

It is common for those commands to write their output to their "standard output", which means that (by default) the output is written into the terminal.

Most of those commands can receive input either through files (given as arguments) or from their "standard input". For example:

- `'head FILE'` reads its input from the file,
- `'head'` reads its input on the standard input.

By default, data from the standard input is read from the keyboard, but a pipe can change that.

Adesso dobbiamo trovare la pozione della giovinezza ma solo con i passaggi della ricetta. Abbiamo già visto come fare con le combinazioni cat e tail

```
~/Mountain/Cave
[mission 27] $ 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 27] $ gsh check
```

Congratulations, mission 27 has been successfully completed!

LIVELLO 28



Come l'esercizio precedente ma stavolta dobbiamo usare le combinazioni head e tail.

```
~/Mountain/Cave
[mission 28] $ 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 28] $ gsh check
```

Congratulations, mission 28 has been successfully completed!

LIVELLO 29

~/Mountain/Cave
[mission 29] \$

#@
E_**/~
!\$-#

Come possiamo vedere si è attivato un processo che continua, dobbiamo fermarlo con i nuovi comandi: ps, kill e clear. Usando ps ci darà una lista di comandi in esecuzione selezioniamo il nome di quello denominato spell e poi usiamo kill per terminarlo. Clear pulisce tutto lo schermo. Attenzione, se devi fare un report con annesso screenshot ricordati di farlo prima del comando clear, altrimenti non ti rimarrà niente da mostrare sul procedimento.

```
~/Mountain/Cave
[mission 29] $ gsh check

Congratulations, mission 29 has been successfully completed!

[ progress was saved in /home/kali/gameshell-save.sh ]

+-----+
| File System
+-----+
| Use the command
|   $ gsh help
| to get the list of "gsh" commands.
+-----+
```

LIVELLO 30

```
(o)====>ooooooooooooooooooooooo
\.....^.....(o)
(
) Mission goal
( =====
)
( The mischievous imp has more than one trick up his sleeve. He managed to protect his spell against most tampering.
) You need to find this spell and try to remove it with standard signal. If it doesn't work, use a more brutal signal.
(
)
( Remark
) _____
( ) The spell is a process.
(
)
( Useful commands
) =====
(
) ps
( List the processes that are currently executed by the shell.
)
( kill [OPTIONS] N
) Send the termination signal to process number N.
(
)
( Useful options:
(   -s SIGNAL choose the signal name
)   -NUMBER    choose the signal number
(   -l         list available signals
)
( clear
) Clear the screen.
( The keybinding "Control-L" does the same and is often quicker to use in the terminal.
)
( Details
) _____
( ) By default ``kill`` sends the "TERM" signal to the processes (TERM stands for "termination").
( Processes may ignore some signals, but the "KILL" signal cannot be ignored!
)
(
\.....^.....(o)
\.....(o)
```

L'imp è tornato e noi dobbiamo fermarlo. Stavolta usando una combinazione più forte.

```
~/Mountain/Cave
[mission 30] $ gsh check

Congratulations, mission 30 has been successfully completed!

[ progress was saved in /home/kali/gameshell-save.sh ]

+-----+-----+
| File System | |
+-----+-----+
| Use the command | |
|   $ gsh help | |
| to get the list of "gsh" commands. | |
+-----+-----+
| Home |
```