

S3/L5 – Game Shell

Nell'esercizio di oggi
installeremo su Kali Linux un
gioco per familiarizzare con i
comandi della shell.

Il gioco è strutturato in più livelli, l'avanzamento di livello richiede il
completamento di particolari missioni.

Per ogni livello si può controllare la missione ed il suo stato con i comandi:

gsh goal ☐ mostra la missione per il livello corrente
gsh check ☐ controlla lo stato della missione attuale (se completata o meno)

LIVELLO 1

```
[mission 1] $ gsh goal  
^_____  
(o)==>oooooooooooooooooooooooooooooooooooooooooooooooooooo<)=o)  
\\.....  
\\.....  
(o)==>oooooooooooooooooooooooooooooooooooooooooooooooo<)=o)  
\\.....
```

```
Trash  
[mission 1] $ pwd  
/home/kali/gameshell/World  
[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 Firts_floor  
bash: cd: Firts_floor: No such file or directory  
[mission 1] $ ls  
First_floor  
[mission 1] $ pwd  
/home/kali/gameshell/World/Castle/Main_tower  
[mission 1] $ ls  
First_floor  
[mission 1] $ cd First_floor  
[mission 1] $ pwd  
/home/kali/gameshell/World/Castle/Main_tower/First_floor  
[mission 1] $ ls  
Second_floor  
[mission 1] $ cd Second_floor  
[mission 1] $ pwd  
/home/kali/gameshell/World/Castle/Main_tower/First_floor/Second_floor  
[mission 1] $ ls  
Top_of_the_tower  
[mission 1] $ cd Top_of_the_tower  
[mission 1] $ pwd  
/home/kali/gameshell/World/Castle/Main_tower/First_floor/Second_floor/Top_of_the_tower  
[mission 1] $ gsh check  
  
Congratulations, mission 1 has been successfully completed!
```

Il primo livello chiede di cambiare la directory per arrivare “in cima alla torre” utilizzando il comando cd “nome directory” è possibile farlo passando da una directory all’altra.

LIVELLO 2

```
[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.

```
[mission 2] $ pwd
```

/home/kali/gameshell/World/Castle/Main_tower/First_floor/Second_floor/Top_of_the_tower

```
[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/Second_floor/Top_of_the_tower

```
[mission 2] $ cd ..
```

cd ..: command not found

```
[mission 2] $ cd ..
```

```
[mission 2] $ pwd
```

/home/kali/gameshell/World/Castle/Main_tower/First_floor/Second_floor

```
[mission 2] $ cd ..
```

```
[mission 2] $ cd ..
```

```
[mission 2] $ pwd
```

/home/kali/gameshell/World/Castle/Main_tower

```
[mission 2] $ cd ..
```

```
[mission 2] $ cd ..
```

```
[mission 2] $ pwd
```

/home/kali/gameshell/World/Castle

```
[mission 2] $ ls
```

Cellar Great_hall Main_building Main_tower Observatory

```
[mission 2] $ cd Cellar
```

```
[mission 2] $ pwd
```

/home/kali/gameshell/World/Castle/Cellar

```
[mission 2] $ gsh check
```

Congratulations, mission 2 has been successfully completed!

Il secondo livello ci mostra il comando cd - e cd ..
cd - serve per tornare nell'ultima directory dove si è stati
c .. invece per tornare alla directory principale
pwd serve per visualizzare il percorso fatto fino alla directory attuale

LIVELLO 3

```
[mission 3] $ gsh goal
system
()=(

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 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

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

Well done!!!

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

Il comando utilizzato qui è cd (change directory)
come dice il nome stesso server per spostarsi fra le directory.

Utilizzando solo cd si torna alla directory di partenza
invece se utilizziamo cd “nome” andiamo alla directory selezionata, possiamo
anche mettere più directory di fila così da cambiarne di più in contemporanea

LIVELLO 4

```
~/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".  
()=()
```

In questa missione abbiamo incontrato il comando `mkdir` che da la possibilità di creare una nuova directory.

```
You are back at the initial directory.
```

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

```
[mission 4] $ ls  
Castle Forest Garden Mountain Stall forest
```

```
[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!
```

LIVELLO 5

The screenshot shows a terminal window with a dark background and light-colored text. At the top, it says `~/Forest/Hut` and `[mission 5] $ gsh goal`. Below this, there is a large watermark of the word "KALI". The terminal content includes:

- 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 FILE1 FILE2 ... FILEn`
Delete the files (permanently).
Remark: ``rm'' is an abbreviation for "remove".

Qui possiamo vedere come eliminare permanentemente un file all'interno di una directory utilizzando il codice rm.

```
~/Forest/Hut
[mission 5] $ cd

~
[mission 5] $ ls
Castle Forest Garden Mountain Stall forest

ome
[mission 5] $ cd Castle

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

~/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

~/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!
```

LIVELLO 6

```
~/Castle/Cellar  
[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.
```

Al livello 6 vediamo il comando move "mv". Possiamo utilizzarlo per spostare file da una directory ad un'altra.

```
File Actions Edit View Help  
~/Garden  
[mission 6] $ ls  
Flower_garden Maze Shed  
  
~/Garden  
[mission 6] $ cd -  
/home/kali/gameshell/World  
  
[mission 6] $ ls  
Castle Forest Garden Mountain Stall coin_1 coin_2 coin_3 forest  
  
~  
[mission 6] $ mv coin_1 coin_2 coin_3 /Forest  
mv: target '/Forest': No such file or directory  
  
[mission 6] $ mv coin_1 coin_2 coin_3 Forest/  
  
~  
[mission 6] $ ls  
Castle Forest Garden Mountain Stall forest  
  
[mission 6] $ cd Forest  
  
~/Forest  
[mission 6] $ ls  
Hut coin_1 coin_2 coin_3  
  
~/Forest  
[mission 6] $ mv coin_1 coin_2 coin_3 Hut/  
  
~/Forest  
[mission 6] $ cd Hut  
  
~/Forest/Hut  
[mission 6] $ ls  
Chest coin_1 coin_2 coin_3  
  
~/Forest/Hut  
[mission 6] $ mc coin_1 coin_2 coin_3 Chest/  
Command 'mc' not found, but can be installed with:  
sudo apt install mc  
Do you want to install it? (N/y)N  
  
~/Forest/Hut  
[mission 6] $ mv coin_1 coin_2 coin_3 Chest/  
  
~/Forest/Hut  
[mission 6] $ gsh check  
  
Congratulations, mission 6 has been successfully completed!
```

LIVELLO 7

```
~/Forest/Hut
[mission 7] $ gsh goal
stem
(
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.
```

Abbiamo utilizzato il comando ls -A per vedere la lista di file(anche quelli nascosti) dentro alla directory

```
~/Forest/Hut
[mission 7] $ pwd
/home/kali/gameshell/World/Forest/Hut

~/Forest/Hut
[mission 7] $ cd ..
~/Forest
[mission 7] $ cd ..
~
[mission 7] $ ls
Castle Forest Garden Mountain Stall forest

~
[mission 7] $ cd Garden
~/Garden
[mission 7] $ ls -A
.10202_coin_1 .2049_coin_3 .57888_coin_2 Flower_garden Maze Shed

~/Garden
[mission 7] $ mv .
mv: missing destination file operand after '.'
Try 'mv --help' for more information.

~/Garden
[mission 7] $ mv .10202_coin_1 .2049_coin_3 .57888_coin_2 ~/Forest/Hut/Chest

~/Garden
[mission 7] $ gsh check
Congratulations, mission 7 has been successfully completed!
```

E abbiamo utilizzato il tasto TAB(come shortcut) per completare il nome che ci serviva.

LIVELLO 8 Prima parte

```
~/Garden  
[mission 8] $ gsh goal  
  
Mission goal  
  
Get rid of all the spiders that are crawling in the cellar. Again, do not 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  
*o* → Folder-1 potato  
x* → error, no matching file  
*-? → file-1 Folder-1  
*-?? → file-14
```

Qui vediamo l'utilizzo di questi 2 caratteti:

?

*

```
~/Garden  
[mission 8] $ cd  
  
[mission 8] $ ls  
Castle Forest Garden Mountain Stall forest  
  
[mission 8] $ cd Castle  
  
[mission 8] $ ls  
Cellar DIRECTORY Great_hall Main_building Main_tower Observatory forest  
  
[mission 8] $ cd Main_building  
  
[mission 8] $ ls  
Library Throne_room  
  
[mission 8] $ cd -  
/home/kali/gameshell/World/Castle  
  
[mission 8] $ cd Cellar  
  
[mission 8] $ ls  
10194_spider_37 16250_spider_5 1953_spider_3 25070_spider_38 2766_spider_15 29479_spider_12 4476_spider_1  
12798_spider_24 16661_spider_45 19603_spider_46 25268_spider_41 27974_spider_2 29565_spider_16 4824_bat_1  
13219_spider_34 17166_spider_9 19986_spider_26 2533_spider_27 2808_spider_11 29817_spider_31 4998_spider_42  
13634_spider_8 17291_bat_3 20768_spider_6 25674_spider_19 28975_bat_4 29894_spider_47 5458_spider_40  
14003_spider_14 1805_spider_7 20840_spider_44 26317_spider_4 29038_spider_25 30171_spider_22 6791_spider_17  
14632_spider_49 18560_bat_5 21389_spider_13 26410_spider_30 29068_spider_48 30477_spider_43 7145_spider_36  
14780_spider_21 18606_spider_39 23829_bat_2 26743_spider_20 29312_spider_32 31137_spider_10 8922_spider_33  
15382_spider_18 18714_spider_50 24537_spider_29 26855_spider_35 29468_spider_23 4012_spider_28 barrel_of_apples  
  
[mission 8] $ rm -v *_spider_*  
removed '10194_spider_37'  
removed '12798_spider_24'  
removed '13219_spider_34'  
removed '13634_spider_8'  
removed '14003_spider_14'
```

LIVELLO 8 Seconda parte

```
kali@kali: ~/Castle/Cellar [mission 8] $ gsh check

File Actions Edit View Help
removed '18714_spider_50'
removed '1953_spider_3'
removed '19603_spider_46'
removed '19986_spider_26'
removed '20768_spider_6'
removed '20840_spider_44'
removed '21389_spider_13'
removed '24537_spider_29'
removed '25070_spider_38'
removed '25268_spider_41'
removed '2533_spider_27'
removed '25674_spider_19'
removed '26317_spider_4'
removed '26410_spider_30'
removed '26743_spider_20'
removed '26855_spider_35'
removed '2766_spider_15'
removed '27974_spider_2'
removed '2808_spider_11'
removed '29038_spider_25'
removed '29068_spider_48'
removed '29312_spider_32'
removed '29468_spider_23'
removed '29479_spider_12'
removed '29565_spider_16'
removed '29817_spider_31'
removed '29894_spider_47'
removed '30171_spider_22'
removed '30477_spider_43'
removed '31137_spider_10'
removed '4012_spider_28'
removed '4476_spider_1'
removed '4998_spider_42'
removed '5458_spider_40'
removed '6791_spider_17'
removed '7145_spider_36'
removed '8922_spider_33'

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

Congratulations, mission 8 has been successfully completed!
```

Utilizzando ? andiamo a sostituire ogni singolo carattere

Mentre utilizzando '*' andiamo a sostituire qualsiasi sequenza di caratteri ad esempio in questo esercizio scrivendo rm -v *_spider_* siamo andati ad eliminare tutti i file con all'interno scritto _spider_

LIVELLO 9 Prima parte

```
~/Castle/Cellar
[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
.1020_spider_36 .14351_spider_10 .2207_spider_48 .30124_spider_42 .5515_spider_47 17291_bat_3
.10435_spider_44 .16387_spider_21 .22713_spider_3 .30257_spider_40 .6828_spider_49 18560_bat_5
.10826_spider_23 .16547_bat_4 .22744_spider_37 .30797_spider_9 .6992_bat_5 23829_bat_2
.1138_spider_7 .16853_spider_18 .25221_spider_14 .31035_spider_15 .7287_spider_41 28975_bat_4
.11950_spider_5 .17371_spider_43 .25839_spider_4 .31048_spider_30 .7342_spider_38 4824_bat_1
.12098_spider_24 .17548_spider_19 .25956_bat_2 .3684_spider_45 .7451_spider_17 barrel_of_apples
.12309_spider_2 .19013_spider_46 .26209_spider_27 .3855_spider_22 .7955_spider_35
.12365_spider_6 .19503_spider_16 .26656_spider_34 .4947_spider_25 .868_spider_12
.12486_spider_13 .20949_spider_20 .26838_spider_11 .5128_spider_33 .8892_spider_28
.13563_spider_39 .21345_spider_50 .28892_spider_1 .531_spider_29 .933_bat_1
.13799_spider_32 .21646_spider_26 .29865_spider_31 .547_spider_8 .9866_bat_3

~/Castle/Cellar
[mission 9] $ pwd
/home/kali/gameshell/World/Castle/Cellar

~/Castle/Cellar
[mission 9] $ rm -v *_spider_* .*_spider_*
rm: cannot remove '*_spider_*': No such file or directory
removed '.1020_spider_36'
removed '.10435_spider_44'
removed '.10826_spider_23'
removed '.1138_spider_7'
removed '.11950_spider_5'
removed '.12098_spider_24'
removed '.12309_spider_2'
```

LIVELLO 9 Seconda parte

Nel livello 9 siamo andati a cercare i file nascosti utilizzando ls -A e successivamente ad eliminarli

LIVELLO 10

```
~/Castle/Cellar  
[mission 10] $ gsh goal  
  
Mission goal  
=====  
  
You have taken a fancy to the four standards in the great hall of the castle. As stealing them would not go unnoticed, put a copy (same name, same content) of each in your chest.  
  
Useful commands  
=====  
  
cp FILE DIRNAME  
Copy the file to the directory.  
Remark: ``cp`` is an abbreviation of "copy".
```

Ho utilizzato il comando ls -hl per visualizzare tutti i file, poi con il comando cp ho copiato i file che mi servivano e li ho portati su la directory scelta.

Qui invece vediamo come si può copiare un file da una directory e portarlo in un'altra.

```
~/Castle/Great_hall  
[mission 10] $ ls -hl  
total 28K  
-rw-r--r-- 1 kali kali 1.1K Oct 13 10:46 12465_suit_of_armour  
-rw-r--r-- 1 kali kali 229 Oct 13 10:46 30533_stag_head  
-rw-r--r-- 1 kali kali 417 Oct 13 10:46 8595_decorative_shield  
-rw-r--r-- 1 kali kali 47 Oct 13 10:46 standard_1  
-rw-r--r-- 1 kali kali 47 Oct 13 10:46 standard_2  
-rw-r--r-- 1 kali kali 47 Oct 13 10:46 standard_3  
-rw-r--r-- 1 kali kali 47 Oct 13 10:46 standard_4  
  
~/Castle/Great_hall  
[mission 10] $ cp standard_1  
cp: missing destination file operand after 'standard_1'  
Try 'cp --help' for more information.  
  
~/Castle/Great_hall  
[mission 10] $ cp standard_1 standard_2 standard_3 standard_4 ~/Forest/Hut/Chest  
  
~/Castle/Great_hall  
[mission 10] $ ghs check  
Command 'ghs' not found, did you mean:  
  command 'ghc' from deb ghc  
  command 'gjs' from deb gjs  
  command 'gh' from deb gh  
  command 'gs' from deb ghostscript  
  command 'gss' from deb libgss-dev  
  command 'ghb' from deb handbrake  
Try: sudo apt install <deb name>  
  
~/Castle/Great_hall  
[mission 10] $ gsh check  
  
Congratulations, mission 10 has been successfully completed!
```

LIVELLO IN CUI SONO ARRIVATO

```
~/Castle/Main_tower/First_floor
[mission 13] $ gsh check
What was the day of the week for the 02-19-1948?
 1 : Monday
 2 : Tuesday
 3 : Wednesday
 4 : Thursday
 5 : Friday
 6 : Saturday
 7 : Sunday
Your answer: 4

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

Sono riuscito ad arrivare al livello 13 di questo giochino dove chiedeva di stampare a video il calendario di un'anno preciso per vedere che giorno della settimana era una determinata data (in questo caso il 02-19-1948)

Grazie della visione,
Caregnato Giacomo