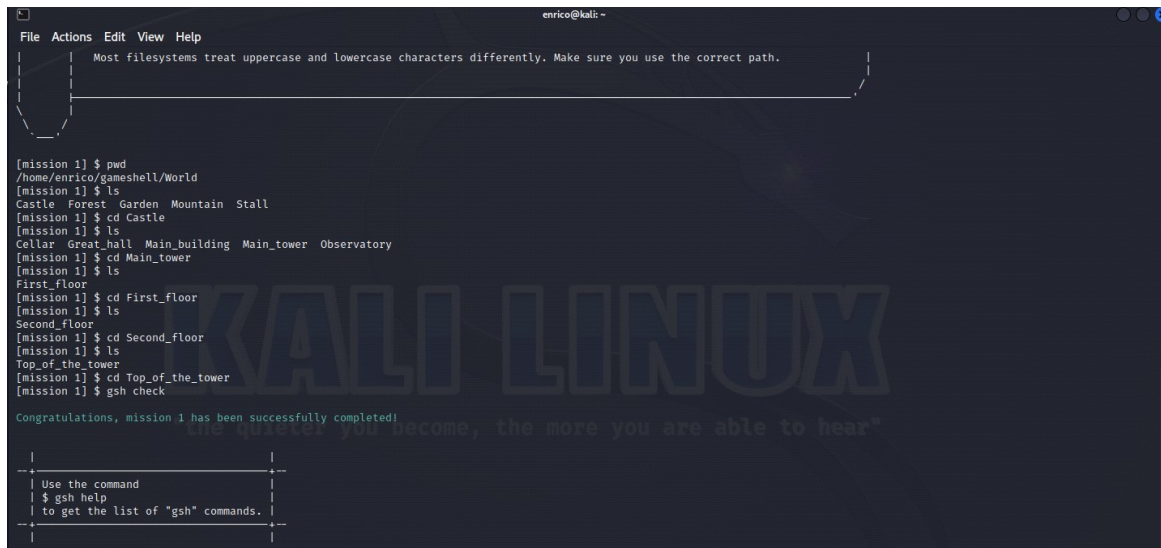


Il progetto di oggi richiedeva di installare il gioco **GameShell**, utile per familiarizzare con i comandi di Kali Linux. Dopo averlo installato correttamente, ho avviato il gioco con il comando **bash gameshell.sh**.

Il gioco presenta un gran numero di livelli, ognuno con una sua "missione" da completare utilizzando i comandi del terminale per arrivare al livello successivo. La traccia del progetto richiedeva di raggiungere il **livello 10**.

\*\*\*\*\*

## Livello 1:



```
enrico@kali: ~  
File Actions Edit View Help  
Most filesystems treat uppercase and lowercase characters differently. Make sure you use the correct path.  
[mission 1] $ pwd  
/home/enrico/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 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!  
"The quieter you become, the more you are able to hear"  
+-----+  
| Use the command |  
| $ gsh help      |  
| to get the list of "gsh" commands. |  
+-----+
```

Veniva richiesto di raggiungere la cima della torre principale del castello, spostandosi all' interno delle varie directory con il comando **cd** e verificando con il comando **ls** quali fossero le altre directory presenti all' interno di quella selezionata. Il comando **pwd** serve a controllare all' interno di quale directory ci troviamo.

## Livello 2:

```
Second_floor
[mission 2] $ cd
[mission 2] $ ls
Castle Forest Garden Mountain Stall
[mission 2] $ pwd
/home/enrico/gameshell/World
[mission 2] $ cd Castle
[mission 2] $ ls
Cellar Great_hall Main_building Main_tower Observatory
[mission 2] $ cd Cellar
[mission 2] $ pwd
/home/enrico/gameshell/World/Castle/Cellar
[mission 2] $ ls
barrel_of_apples
[mission 2] $ gsh check

Congratulations, mission 2 has been successfully completed!

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

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

[mission 3] $ █
```

Il livello 2 richiedeva di spostarsi nuovamente nella directory principale da quella dove eravamo arrivati nel livello uno, e di raggiungere poi la directory "**Cellar**".

## Livello 3:

```
enrico@kali: ~
File Actions Edit View Help

[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.

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

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

Nel terzo livello bisognava raggiungere la **Throne Room** utilizzando due soli comandi, uno per tornare nella directory principale (**World**) con il comando **cd** e uno per raggiungere la stanza del trono passando attraverso le directory **Castle - Main\_Building**.

## Livello 4:

```
enrico@kali: ~  
File Actions Edit View Help  
[mission 4] $ pwd  
/home/enrico/gameshell/World  
~  
[mission 4] $ ls  
Castle Forest Garden Mountain Stall  
~  
[mission 4] $ cd Forest  
~/Forest  
[mission 4] $ pwd  
/home/enrico/gameshell/World/Forest  
~  
[mission 4] $ mkdir Hut  
~/Forest  
[mission 4] $ ls  
Hut  
~/Forest  
[mission 4] $ cd Hut  
~/Forest/Hut  
[mission 4] $ mkdir Chest  
~/Forest/Hut  
[mission 4] $ ls  
Chest  
~/Forest/Hut  
[mission 4] $ cd Chest  
~/Forest/Hut/Chest  
[mission 4] $ gsh check  
Congratulations, mission 4 has been successfully completed!
```

Il livello 4 richiedeva di spostarsi nella directory **Forest** e da qui creare una nuova directory (utilizzando il comando **mkdir**) con il nome **Hut**. Spostarci poi all'interno di questa nuova directory e creare al suo interno un'altra directory con il nome **Chest**.

## Livello 5:

```
enrico@kali: ~  
File Actions Edit View Help  
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".  
( )=(  
~  
[mission 5] $ pwd  
/home/enrico/gameshell/World  
~  
[mission 5] $ cd Castle  
~/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
```

La missione 5 chiedeva di spostarsi nella directory **Cellar** ed eliminare tutti i file "**spider**" lasciando esistenti i file "**bats**".

```
[mission 5] $ cd Castle
~/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!

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

Ho rimosso tutti i file spider con il comando remove (**rm**) e con il comando **ls** ho controllato che fossero stati eliminati e che fossero rimasti solo i file bat.

## Livello 6:

```
enrico@kali: ~
File Actions Edit View Help
~/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.
|
|()=(
```

Il sesto livello chiedeva di prendere tutti i file monete presenti nella directory **garden** e spostarli nella directory che abbiamo creato prima (**Chest**).



```
enrico@kali: ~  
File Actions Edit View Help  
[mission 6] $ cd  
~  
[mission 6] $ pwd  
/home/enrico/gameshell/World  
~  
[mission 6] $ ls  
Castle Forest Garden Mountain Stall coin_1 coin_2 coin_3  
~  
[mission 6] $ mv coin_1 coin_2 coin_3 ~/Forest/Hut/Chest  
~  
[mission 6] $ cd Forest  
~/Forest  
[mission 6] $ ls  
Hut  
~/Forest  
[mission 6] $ cd Hut  
~/Forest/Hut  
[mission 6] $ ls  
Chest  
~/Forest/Hut  
[mission 6] $ cd Chest  
~/Forest/Hut/Chest  
[mission 6] $ ls  
coin_1 coin_2 coin_3  
~/Forest/Hut/Chest  
[mission 6] $ gsh check  
Congratulations, mission 6 has been successfully completed!
```

Ho spostato i file coin nella directory world con il comando "**mv coin\_1 coin\_2 coin\_3 ../**" e poi da lì con il comando "**mv coin\_1 coin\_2 coin\_3 ~/Forest/Hut/Chest**" ho spostato i file direttamente nella category richiesta dalla missione.

## Livello 7:

```
enrico@kali: ~  
File Actions Edit View Help  
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.  
~/Forest/Hut/Chest  
[mission 7] $ cd
```

La missione 7 chiede di prendere tutti i file coin nascosti nella directory **Garden** e spostarli ancora nella directory creata da noi **Chest**.

```
Kali [in esecuzione] - Oracle VM VirtualBox
File Macchine Visualizza Strumenti Dispositivi Auto

enrico@kali ~
File Actions Edit View Help

~/Garden
[mission 7] $ ls -A
. .14281_coin_1 .27845_coin_3 .35492_coin_2 Flower_garden Maze Shed

~/Garden
[mission 7] $
Display all 3934 possibilities? (y or n)

~/Garden
[mission 7] $
Display all 3934 possibilities? (y or n)

~/Garden
[mission 7] $ mv .14281_coin_1 .27845_coin_3 .35492_coin_2 ./

~/Garden
[mission 7] $ ls -A
Flower_garden Maze Shed

~/Garden
[mission 7] $ cd
-

[mission 7] $ ls -A
. .14281_coin_1 .27845_coin_3 .35492_coin_2 .bashrc .lesshst Castle Forest Garden Mountain Stall

[mission 7] $ mv .14281_coin_1 .27845_coin_3 .35492_coin_2 ~/Forest/Hut/Chest

[mission 7] $ cd Forest/Hut/Chest
~/Forest/Hut/Chest
[mission 7] $ ls -A
.14281_coin_1 .27845_coin_3 .35492_coin_2 coin_1 coin_2 coin_3

~/Forest/Hut/Chest
[mission 7] $ gsh check

Congratulations, mission 7 has been successfully completed!

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

~/Forest/Hut/Chest
[mission 8] $
```

Con il comando **ls -A** si vanno a visualizzare i file nascosti (hidden) all' interno della category. Questi sono contrassegnati dal "." prima del nome. Come prima con il comando **mv** ho spostato le monete nella directory principale (**World**), poi con la riga di codice **~/Forest/Hut/Chest** le ho portate nella directory **Chest**.

## Livello 8:

```
Kali [in esecuzione] - Oracle VM VirtualBox
File Macchine Visualizza Strumenti Dispositivi Auto

enrico@kali ~
File Actions Edit View Help

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-1a potato |
| then |
| * -> file-1 Folder-1 file-1a potato |
| *? -> file-1 Folder-1 |
| *a* -> Folder-1 potato |
| *a -> error, no matching file |
| *? -> file-1 Folder-1 |
| * -> file-1a |
|-----|

()=()

~/
[mission 8] $ pwd
/home/enrico/gamshell/world

~/
[mission 8] $ ls
Castle Forest Garden Mountain Stall

~/
[mission 8] $ cd Castle/Cellar

~/Castle/Cellar
[mission 8] $ ls
18938_spider_26 13584_spider_7 16848_spider_4 19419_spider_18 28581_spider_43 2173_bat_5 22857_bat_3 24198_spider_22 2772_spider_1 29822_spider_45 32238_spider_42 4862_spider_13 7885_spider_17 9882_spider_24
18744_spider_25 13912_spider_16 1688_spider_47 19847_spider_48 28845_spider_23 21875_spider_36 23437_spider_5 25296_spider_38 27936_bat_2 29824_spider_46 32782_spider_20 4932_spider_8 8425_spider_19 9188_spider_35
11419_spider_11 13722_spider_36 16592_spider_41 24888_spider_3 28821_spider_29 22782_spider_2 23681_spider_40 25822_spider_32 28235_spider_34 29227_spider_12 382_spider_9 6371_spider_11 8749_spider_15 9122_bat_1
12838_spider_6 15763_spider_14 18866_spider_28 20187_spider_48 21179_spider_38 22849_spider_18 24174_spider_37 26349_spider_44 2898_spider_21 31591_bat_4 4668_spider_31 6992_spider_27 8932_spider_58 barrel_of_apples

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

Qui si richiedeva di rimuovere i file "spider" presenti nella category Cellar.

```
~/Castle/Cellar
[mission 8] $ ls
2173_bat_5 2287_bat_3 27936_bat_2 31591_bat_4 9122_bat_1 barrel_of_apples

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

Congratulations, mission 8 has been successfully completed!

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

~/Castle/Cellar
[mission 8] $
```

Siccome erano troppi per essere eliminati scrivendoli uno ad uno, ho utilizzato il comando **rm \*spider\***, che elimina solo i file che hanno quel nominativo. Poi con il comando **ls** ho controllato che nella category fossero rimasti solo i file che non si chiamavano spider.

## Livello 9:

```
Kali Linux
File Machine Viewports Downloads Diskspace Auto

File Actions Edit View Help

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
.11792_spider_17 .13186_spider_16 .18331_spider_15 .1888_spider_42 .23252_spider_21 .2545_spider_58 .26538_spider_25 .29855_spider_3 .32388_spider_38 .4224_spider_24 .5788_spider_7 2173_bat_5 2287_bat_3 27936_bat_2 31591_bat_4 9122_bat_1 barrel_of_apples

~/Castle/Cellar
[mission 9] $ rm -r *.spider*

~/Castle/Cellar
[mission 9] $ ls -A
.11792_spider_17 .13186_spider_16 .18331_spider_15 .1888_spider_42 .23252_spider_21 .2545_spider_58 .26538_spider_25 .29855_spider_3 .32388_spider_38 .4224_spider_24 .5788_spider_7 2173_bat_5 2287_bat_3 27936_bat_2 31591_bat_4 9122_bat_1 barrel_of_apples

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

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

Uguale al livello 8, con la differenza che qui i file spider erano nascosti. Per trovarli utilizzo il comando **ls -A**, per cancellarli il comando **rm \*.spider\***, dove il "." identifica i file nascosti.

## Livello 10:

```
Kali [in esecuzione] - Oracle VM VirtualBox
File Actions Edit View Help
[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 DIRECTION |
| Copy the file to the directory. |
| Remark: cp is an abbreviation of "copy". |
+-----+

~/Castle/Cellar
[mission 10] $ cd

[mission 10] $ ls
Castle/ Forest/ Garden/ Mountain/ Stall/

[mission 10] $ cd Castle

~/Castle
[mission 10] $ ls
Cellar/ Great_hall/ Main_building/ Main_tower/ Observatory/

~/Castle
[mission 10] $ cd Great_hall

~/Castle/Great_hall
[mission 10] $ ls
3750_decorative_shield 51935_suit_of_armour 53725_stag_head standard_1 standard_2 standard_3 standard_4
```

L' ultimo livello chiedeva di copiare all' interno della nostra category **Chest** i file "standards" presenti nella directory **Great\_hall**.

```
~/Castle
[mission 10] $ cp *standard* ../

~/Castle
[mission 10] $ ls
Cellar/ Great_hall/ Main_building/ Main_tower/ Observatory/ standard_1 standard_2 standard_3 standard_4

~/Castle
[mission 10] $ cd -
/home/enrico/gameshell/World

~/World
[mission 10] $ ls
Castle/ Forest/ Garden/ Mountain/ Stall/ standard_1 standard_2 standard_3 standard_4

~/World
[mission 10] $ cp *standard* ~/Forest/Hut/Chest

~/Forest/Hut/Chest
[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!

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

Utilizzando il comando "**cp\*standard\* ../**" ho copiato i file "standards" nella directory principale, visualizzandoli poi con il comando **ls**. Poi con il comando **cp \*standard\* ~/Forest/Hut/Chest** li ho messi all' interno della category **Chest**.