<h1 style="text-align:center">GameShell</h1>

Traccia:

Familiarizzazione con OS linux, shell e Command Prompt: installeremo su Kali Linux un gioco per familiarizzare con i comandi linux: GameShell.

Obiettivo:

L'obiettivo dell'esercizio GameShell era dimostrare una buona padronanza dei comandi base di Linux, fondamentali per muoversi in ambiente terminale e gestire file, cartelle e contenuti in maniera efficiente. Attraverso una serie di missioni ambientate in un gioco a tappe, ci siamo trovati a dover navigare tra directory, leggere file, modificarli e compiere operazioni logiche utilizzando soltanto il terminale.

Svolgimento dell'esercizio:

```
[mission 1] $ pwd
/home/kali/gameshell/World

[use 'gsh help' to get a list of available commands]
[mission 1] $ cd Castle

[use 'gsh help' to get a list of available commands]
[mission 1] $ cd Main_tower/

[use 'gsh help' to get a list of available commands]
[mission 1] $ cd First_floor

[use 'gsh help' to get a list of available commands]
[mission 1] $ cd Second_floor/

[use 'gsh help' to get a list of available commands]
[mission 1] $ cd Top_of_the_tower/

[use 'gsh help' to get a list of available commands]
[mission 1] $ gsh check

Congratulations, mission 1 has been successfully completed!

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

2.

```
[mission 2] $ cd

[use 'gsh help' to get a list of available commands]
[mission 2] $ cd Castle/Cellar

[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 ]
```

3.

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

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```

4.

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

~
[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!

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

5.

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

~
[mission 6] $ cd Garden

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

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

~/Garden
[mission 6] $ gsh check

Congratulations, mission 6 has been successfully completed!

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

   |                              |
```

6.

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


~
[mission 6] $ cd Garden

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

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

~/Garden
[mission 6] $ gsh check

Congratulations, mission 6 has been successfully completed!

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

7.

```
~/Garden
[mission 7] $ ls -A
.21622_coin_3   .42390_coin_2   .55503_coin_1   Flower_garden   Maze   Shed

~/Garden
[mission 7] $ mv .21622_coin_3 .42390_coin_2 .55503_coin_1 ~/Forest/Hut/Chest

~/Garden
[mission 7] $ gsh check

Congratulations, mission 7 has been successfully completed!

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

8.

```
~/Garden
[mission 8] $ cd

~
[mission 8] $ cd Castle/Cellar

~/Castle/Cellar
[mission 8] $ ls
11281_spider_26   1512_bat_1       20173_spider_6    21952_spider_19   27404_spider_4    4724_spider_40
11442_spider_17   15472_spider_31  20278_spider_49   22159_spider_27   28017_spider_7    5191_bat_5
11653_spider_35   15748_spider_43  20284_spider_9    22539_spider_23   28485_spider_2    6400_bat_2
12368_spider_10   17574_spider_20  2049_spider_46    23679_bat_3       28727_spider_30   7802_spider_36
12763_spider_39   18185_spider_34  20814_spider_25   23781_spider_47   28832_spider_24   9871_spider_15
13272_spider_5    18239_spider_11  20923_spider_29   23879_bat_4       29928_spider_33   barrel_of_apples
13662_spider_28   18735_spider_37  209_spider_18     25761_spider_38   31140_spider_45
14259_spider_14   18923_spider_3   21089_spider_50   2595_spider_41    3710_spider_32
14351_spider_16   19621_spider_44  21453_spider_48   2630_spider_12    3820_spider_8
14366_spider_1    19948_spider_42  21570_spider_22   2661_spider_41    43_spider_21

~/Castle/Cellar
[mission 8] $ rm *spider*
l
~/Castle/Cellar
[mission 8] $ ls
1512_bat_1   23679_bat_3   23879_bat_4   5191_bat_5   6400_bat_2   barrel_of_apples

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

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

9.

```
~/Castle/Cellar
[mission 9] $ ls -A
.10040_spider_33   .14967_spider_5    .21878_spider_16   .27627_spider_2    5191_bat_5         .7737_spider_17
.10545_spider_41   1512_bat_1         .2302_spider_35    .28204_spider_39   .5350_spider_3     .8833_spider_10
.1152_spider_45    .15345_spider_28   .23122_spider_12   .28360_bat_2       .5676_spider_8     .9694_spider_1
.12428_spider_11   .1554_spider_32    23679_bat_3        .29113_spider_20   .5750_spider_26    .9818_spider_31
.12711_spider_29   .1669_spider_38    .23791_spider_30   .29250_bat_5       .6222_bat_3        .9900_spider_7
.13992_spider_24   .18085_spider_19   23879_bat_4        .30143_spider_4    6400_bat_2         barrel_of_apples
.14030_spider_15   .18520_spider_23   .25022_spider_9    .32467_spider_47   .659_spider_48
.14213_spider_50   .1867_spider_6     .25286_spider_36   .41_bat_1          .6648_spider_14
.14711_spider_43   .1985_spider_18    .26157_spider_22   .4388_spider_49    .6848_spider_25
.1473_spider_21    .20666_spider_13   .27140_spider_44   .5000_spider_42    .695_spider_27
.14757_bat_4       .21546_spider_46   .2743_spider_34    .5013_spider_40    .7706_spider_37

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

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

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


Congratulations !

From now on, the ``ls`` command will automatically show a "/" character at the end of directories.

10.

```
~/Castle/Cellar
[mission 10] $ cd ../Great_hall

~/Castle/Great_hall
[mission 10] $ ls
17589_suit_of_armour  52968_stag_head  53482_decorative_shield  standard_1  standard_2  standard_3  standard_4

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

~/Castle/Great_hall
[mission 10] $ gsh check

Congratulations, mission 10 has been successfully completed!

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

11.

```
~/Castle/Great_hall
[mission 11] $ ls
10658_tapestry_01  27270_decorative_shield  37086_stag_head      53174_tapestry_04  58883_tapestry_09  standard_3
18010_tapestry_05  29049_tapestry_02        48195_suit_of_armour  5476_tapestry_10   standard_1         standard_4
20887_tapestry_06  36096_tapestry_08        51563_tapestry_03    56170_tapestry_07  standard_2

~/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 ]

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

12.

```
~/Castle/Great_hall
[mission 12] $ cd

~
[mission 12] $ cd Castle/Main_tower/First_floor/

~/Castle/Main_tower/First_floor
[mission 12] $ ls
painting_FqPRQyuO  painting_ryCNzRkD  painting_WdTxFlKz  Second_floor/

~/Castle/Main_tower/First_floor
[mission 12] $ ls -l
total 16
-rw-rw-r-- 1 kali kali 1055 Feb 24  2017 painting_FqPRQyuO
-rw-rw-r-- 1 kali kali 1455 Jan  5  2004 painting_ryCNzRkD
-rw-rw-r-- 1 kali kali 1503 May 18  1988 painting_WdTxFlKz
drwxrwxr-x 3 kali kali 4096 Apr 22 16:02 Second_floor/

~/Castle/Main_tower/First_floor
[mission 12] $ cp painting_WdTxFlKz ~/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 ]
```

13.

```
~/Castle/Main_tower/First_floor
[mission 13] $ cal 1913
                              1913
        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                       1                        1
 5  6  7  8  9 10 11     2  3  4  5  6  7  8    2  3  4  5  6  7  8
12 13 14 15 16 17 18     9 10 11 12 13 14 15    9 10 11 12 13 14 15
19 20 21 22 23 24 25    16 17 18 19 20 21 22   16 17 18 19 20 21 22
26 27 28 29 30 31       23 24 25 26 27 28      23 24 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                1  2  3    1  2  3  4  5  6  7
 6  7  8  9 10 11 12     4  5  6  7  8  9 10    8  9 10 11 12 13 14
13 14 15 16 17 18 19    11 12 13 14 15 16 17   15 16 17 18 19 20 21
20 21 22 23 24 25 26    18 19 20 21 22 23 24   22 23 24 25 26 27 28
27 28 29 30             25 26 27 28 29 30 31   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                    1  2       1  2  3  4  5  6
 6  7  8  9 10 11 12     3  4  5  6  7  8  9    7  8  9 10 11 12 13
13 14 15 16 17 18 19    10 11 12 13 14 15 16   14 15 16 17 18 19 20
20 21 22 23 24 25 26    17 18 19 20 21 22 23   21 22 23 24 25 26 27
27 28 29 30 31          24 25 26 27 28 29 30   28 29 30
                        31

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

~/Castle/Main_tower/First_floor
[mission 13] $ gsh check
What was the day of the week for the 01-18-1913?
  1 : Monday
  2 : Tuesday
  3 : Wednesday
  4 : Thursday
  5 : Friday
  6 : Saturday
  7 : Sunday
Your answer: 6

Congratulations, mission 13 has been successfully completed!

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

14.

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

~/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 ]
```

15.

```
~/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!

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

16.

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

~/Forest/Hut/Chest
[mission 16] $ gsh check

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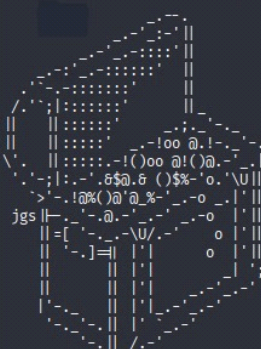
Congratulations!

From now on you can use the file
    "~/.gshrc"
to record aliases. More information can be found in the file (it has been created for you).

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

17.

```
~/Castle/Cellar
[mission 17] $ cd .Lair_of_the_spider_queen\ JXamgMwmQXYIriIO bwBnamlnMAdYPtUV/

~/Castle/Cellar/.Lair_of_the_spider_queen JXamgMwmQXYIriIO bwBnamlnMAdYPtUV
[mission 17] $ la
vwuWUtKECWhxxqus_spider_queen_jjIrglrhRWAnMGaN   xDoBhXIXXstLOhvY_baby_bat_xfNDrjRaLGLlnuGf

~/Castle/Cellar/.Lair_of_the_spider_queen JXamgMwmQXYIriIO bwBnamlnMAdYPtUV
[mission 17] $ rm vwuWUtKECWhxxqus_spider_queen_jjIrglrhRWAnMGaN ù
rm: cannot remove 'ù': No such file or directory

~/Castle/Cellar/.Lair_of_the_spider_queen JXamgMwmQXYIriIO bwBnamlnMAdYPtUV
[mission 17] $ gsh check
Perfect, it took you only 15 seconds to complete this mission!

Congratulations, mission 17 has been successfully completed!

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

18.


```
~/Castle/Cellar/.Lair_of_the_spider_queen JXamgMwmQXYIriIO bwBnamlnMAdYPtUV
[mission 18] $ xeyes
^C

~/Castle/Cellar/.Lair_of_the_spider_queen JXamgMwmQXYIriIO bwBnamlnMAdYPtUV
[mission 18] $ xeyes&
[1] 28484

~/Castle/Cellar/.Lair_of_the_spider_queen JXamgMwmQXYIriIO bwBnamlnMAdYPtUV
[mission 18] $ gsh check

Congratulations, mission 18 has been successfully completed!

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

19.

```
~/Castle/Cellar/.Lair_of_the_spider_queen JXamgMwmQXYIriIO bwBnamlnMAdYPtUV
[mission 19] $ flarigo & flarigo & flarigo & gsh check
[2] 29215
[3] 29216
[4] 29217
            *
                            *
                     *
[1]   Done                  xeyes
Let's have a look:
                            *
         *
                     *
                      *
         *
                     *
          *
                       *
                      *
         *
                       *
                     *
         *
                    . :::.
                    :::::
                    ':::'
         *
                     :
              .'.:.'.
              -=:o:=-
              '.';'.'
                 :
          *
          *
         *''*
        *_\/_*
        * /\ *
         *..*
[3]-  Done                  flarigo
[4]+  Done                  flarigo
Great, that looked good!

Congratulations, mission 19 has been successfully completed!

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

20.

```
~/Castle/Cellar/.Lair_of_the_spider_queen JXamgMwmQXYIriIO bwBnamlnMAdYPtUV
[mission 20] $ charmiglio kloi
        :(_.#*_**.--:.
      _:--.#*(*::)
        %%*.-%-..#*.(.
        -.*.(.#-.(_-.*
        _#:_..#%.(:_
         )).*-(%%.%:%-
          #._)-.:*::%_:(
           -(_-*.#%**)(_.
          _#.#*)*(%).%(
           .(#.*#:#*_%_.#%
          -##:)(.(*).#--#*(
           .:#%:._.*)*:.*.-
          )#*#(--.(_#%:*-#-*
        #._.:%#..*:__:%.*):
       ::)((-*...-#*%-%(-
        -_%#-.:-_-%:_*::#%)%
        #-_()..:(#%#_).. #(_

It works! The special incantation is kloi

                                         .'.
      .'.        .        *''*    :_\/_:     .
     :_\/_:   _\(/_  .:.*_\/_*   : /\ :  .'.:.'.
    .''.: /\ :   ./)\  ':'* /\ * :  '..'.  -=:o:=-
   :_\/_:'.:::.   ' *''*   * '.\'/.'_\(/_'.':'.'
   : /\ : :::::    *_\/_*   -= o =-  /)\    '  *
    '..'  ':::'    * /\ *   .'/.\'.   '
       *    *..*        :
       *
       *
```

Purtroppo per mancanza di tempo, devo fermarmi al livello 20, davvero un peccato, ho comunque dato il massimo sul task 2 (attacco brute-force SSH) e sul benchmark superato con 24 domande corrette su 25.

Durante l'esercizio abbiamo incontrato i seguenti comandi:

pwd: mostra il percorso completo della directory corrente, utile per orientarsi durante la navigazione.

cd: permette di cambiare directory, sia spostandosi all'interno di sottocartelle che tornando indietro (es. cd ..).

ls: elenca il contenuto di una cartella, mostrando file e sottodirectory.

mkdir: crea una nuova cartella.

touch: crea file vuoti o aggiorna la data di modifica di file esistenti.

mv: sposta o rinomina file e cartelle.

cp: copia file da una posizione all'altra.

rm: elimina file o directory.

echo: stampa messaggi a schermo o scrive testo dentro un file.

cat: visualizza il contenuto di un file.

head e tail: servono per leggere rispettivamente l'inizio o la fine di un file.

wc: conta righe, parole o caratteri all'interno di un file (es. wc -l per contare le righe).

grep: cerca stringhe o pattern all'interno di un file.

sort: ordina alfabeticamente o numericamente le righe di un file.

uniq: elimina righe duplicate consecutive, spesso usato con sort.

find: cerca file o cartelle all'interno del filesystem.

chmod: modifica i permessi di un file, ad esempio rendendolo eseguibile.

gsh check: comando specifico del gioco GameShell per verificare se la missione è stata completata correttamente.

Conclusione:
L'attività ha permesso di prendere confidenza con l'uso pratico della shell, allenando la logica e la precisione

Panagiotis Diamantopoulos

Comandi utilizzati nei livelli 1–20 di GameShell