

# Progetto S3 L5

## Game Shell su Kali Linux

KALI LINUX

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

sudo -u Daniele Morabito

```
~
[mission 1] $ cd Castle/Main_tower/First_floor/Second_floor/Top_of_the_tower/
```

```
~/Castle/Main_tower/First_floor/Second_floor/Top_of_the_tower
[mission 1] $ gsh check
```

Congratulations, mission 1 has been successfully completed!

```

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

```
~/Castle/Main_tower/First_floor/Second_floor/Top_of_the_tower
[mission 2] $ cd
```

```
~
[mission 2] $ cd Castle/Cellar
```

```
~/Castle/Cellar
[mission 2] $ gsh check
```

Congratulations, mission 2 has been successfully completed!

```

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

```
~/Castle/Cellar
[mission 3] $ cd
```

```
~
[mission 3] $ cd Castle/Main_building/Throne_room
```

```
~/Castle/Main_building/Throne_room
[mission 3] $ gsh check
```

Congratulations, mission 3 has been successfully completed!

In questo esercizio andiamo ad utilizzare un gioco GameShell su Linux.

L'obiettivo del gioco è di superare vari livelli con degli obiettivi, utilizzando svariati comandi in Linux.

E' ottimo soprattutto per prendere familiarità con questo ambiente.

Nel gioco, quando si completa un obiettivo, si prosegue subito al prossimo livello, con un obiettivo diverso.

Ci sono dei comandi aggiuntivi che servono al proposito del gioco, per esempio:

- gsh goal (serve per capire qual è l'obiettivo)
- gsh check (serve per passare al prossimo livello qualora l'obiettivo sia stato completato correttamente)
- gsh help (mette a schermo una legenda dei comandi)

Ci sono anche due comandi "segreti", che vedremo nelle prossime slide.



```
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".
```

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

```
~/Forest  
[mission 4] $ mkdir Hut
```

```
~/Forest/Hut
[mission 4] $ mkdir Chest
```

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

Ciò permette di prendere confidenza con i comandi e di impararne di nuovi senza sentirsi troppo in difficoltà.

I primi 10 livelli sono quelli più semplici, un po' introduttivi, ma comunque interessanti.

In totale ci sono ben 43 livelli.

```
File Actions Edit View Help
=====
Task
rm FILE1 FILE2 ... FILEn
Delete the files (permanently).
Remark: ``rm`` is an abbreviation for "remove".

~/Forest/Hut
[mission 5] $ cd

~
[mission 5] $ cd Castle/Cellar

~/Castle/Cellar
[mission 5] $ rm Spiders
rm: cannot remove 'Spiders': No such file or directory

~/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] $ gsh check

Congratulations, mission 5 has been successfully completed!

Mission 5
-----
| Use the command |
| $ gsh help      |
| to get the list of "gsh" commands. |
|                 |
|                 |
|                 |

~/Castle/Cellar
[mission 6] $ gsh goal

Mission goal
=====
Collect all the coins that you can find in the garden in front of the
```

```
dan@Kali: ~
File Actions Edit View Help
Example: wherever you are, ``~/Tavern`` denotes the directory (or file) "Tavern" in the initial directory.

~/Castle/Cellar
[mission 6] $ cd

~/
[mission 6] $ cd Castle/Garden
bash: cd: Castle/Garden: No such file or directory

~/
[mission 6] $ cd Castle

~/Castle
[mission 6] $ ls
Cellar  Great_hall  Main_building  Main_tower  Observatory

~/Castle
[mission 6] $ cd

~/Garden
[mission 6] $ cd Garden

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

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

~/Garden
[mission 6] $ cd

~
[mission 6] $ cd /Forest/Hut/Chest
bash: cd: /Forest/Hut/Chest: No such file or directory

~
[mission 6] $ gsh check

Congratulations, mission 6 has been successfully completed!

Mission 6
-----
| Use the command |
| $ gsh help      |
| to get the list of "gsh" commands. |
|                 |
|                 |
|                 |
```

```
~/Garden
[mission 7] $ mv .42543_coin_2 .55049_coin_1 .8307_coin_3 ~/
.bashrc .lessht Castle/ Forest/ Garden/ Mountain/ Stall/
```

```
~/Garden
[mission 7] $ mv .42543_coin_2 .55049_coin_1 .8307_coin_3 ~/
.bashrc .lessht Castle/ Forest/ Garden/ Mountain/ Stall/
```

```
~/Garden  
[mission 7] $ mv .42543 coin 2 .55049 coin 1 .8307 coin 3 ~/Forest/Hut/Chest
```

```
~/Garden
[mission 7] $ gsh check
```

Congratulations, mission 7 has been successfully completed!

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

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





Nella missione 8, dobbiamo cancellare più file contemporaneamente (in questo caso, dei ragni, o spider in inglese). Per farlo, ci viene consigliato di utilizzare le "wildcards", ovvero dei caratteri (\* ad esempio) che ci permettono di selezionare una determinata categoria di file, in base ai nostri criteri. Senza dover eliminare ogni "ragno/spider" manualmente, ho usato "rm \*i\*", sostanzialmente rimuovendo qualsiasi file avesse una "i" al suo interno. (ho usato il comando "touch" per ricreare il file "barrel\_of\_apples", l'avevo cancellato per sbaglio in precedenza).

```

File Actions Edit View Help

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
.10388_spider_13 .12912_spider_39 .15616_spider_35 .19537_spider_26 .22045_spider_2 .22838_spider_5 .25538_spider_9 .29465_spider_29 .32181_spider_45 .6067_bat_4 .8311_spider_10 11477_bat_2 barrel_of_apples
.11108_spider_48 .13418_bat_5 .18034_spider_38 .21103_spider_25 .22193_spider_46 .23371_spider_15 .26184_spider_42 .30543_spider_41 .3455_spider_43 .654_spider_6 .8470_bat_3 20851_bat_4
.11507_spider_11 .13554_spider_34 .18252_spider_30 .2139_spider_33 .22503_spider_16 .23720_spider_32 .2824_spider_12 .30864_spider_47 .4514_spider_49 .6930_spider_22 .8690_spider_31 27949_bat_1
.11592_spider_24 .14050_bat_1 .1834_spider_37 .21490_spider_17 .22550_spider_4 .23960_spider_36 .28366_spider_8 .31382_spider_19 .5186_spider_50 .7434_spider_23 .9245_spider_28 30139_bat_3
.12719_spider_1 .14869_bat_2 .19511_spider_44 .2170_spider_27 .22561_spider_18 .25452_spider_3 .28818_spider_7 .32100_spider_20 .5615_spider_40 .7809_spider_14 .9936_spider_21 5222_bat_5

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

~/Castle/Cellar
[mission 9] $ ls -A
.13418_bat_5 .14050_bat_1 .14869_bat_2 .6067_bat_4 .8470_bat_3 11477_bat_2 20851_bat_4 27949_bat_1 30139_bat_3 5222_bat_5 barrel_of_apples

~/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.

jgs |
  
```

In questo livello si applica la stessa logica di prima, solo che in questo caso i file sono nascosti (da notare il punto . prima del file).

Per vedere i file nascosti utilizziamo "ls -A", per cancellarli basta aggiungere il punto prima del file (o della sequenza) da cancellare.

```
dan@Kali: ~  
File Actions Edit View Help  
| to get the list of "gsh" commands. |  
--+-----+--  
|  
~/Castle/Main_building/Throne_room  
[mission 4] $ gsh goto 10  
password:  
|  
--+-----+--  
| Use the command  
| $ gsh help  
| to get the list of "gsh" commands. |  
--+-----+--  
|  
~/Castle/Main_building/Throne_room  
[mission 10] $ cd  
~  
[mission 10] $ cd Castle/Great_hall/  
~/Castle/Great_hall  
[mission 10] $ la  
./ 13706_tapestry_10 21341_tapestry_08 33362_tapestry_03 39023_tapestry_01 44129_suit_of_armour 48356_decorative_shield 6610_tapestry_04 standard_2 standard_4  
../ 14375_tapestry_02 31320_tapestry_09 36086_tapestry_07 4157_tapestry_06 44144_stag_head 64122_tapestry_05 standard_1 standard_3  
~/Castle/Great_hall  
[mission 10] $ cp *standard* ~/Forest/Hut/Chest  
~/Castle/Great_hall  
[mission 10] $ gsh Check  
Error: unknown gsh command 'Check'.  
Use one of the following commands: check, goal, help, reset  
~/Castle/Great_hall  
[mission 10] $ gsh check  
Congratulations, mission 10 has been successfully completed!  
|  
--+-----+--  
| Use the command  
| $ gsh help  
| to get the list of "gsh" commands. |  
--+-----+--  
|  
~/Castle/Great_hall  
[mission 11] $
```



```
File Actions Edit View Help
--+-----+--
| Trash |
--+-----+--

~/Mountain/Cave
[mission 25] $ 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 25] $ gsh check

Congratulations, mission 25 has been successfully completed!

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

~/Mountain/Cave
[mission 26] $ gsh goal

Mission goal
=====

The old hermit is thirsty and he would like you lookup the recipe for distilled water.

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
```

Il massimo livello che sono riuscito a raggiungere è stato il 25, più che altro, raggiungere i livelli più alti richiede parecchio tempo.

Ma non è necessariamente un problema, perché il gioco può essere salvato per esser rigiocato in un secondo momento.

Inserendo il comando "gsh exit" il gioco si chiuderà, salvando i progressi.

Invece, col comando "./gameshell-save.sh", il gioco avvierà l'ultima partita giocata.

```

File Actions Edit View Help
| to get the list of "gsh" commands. |
--+-----+--
|
|

~/Forest/Hut/Chest
[mission 26] $ gsh index
1 basic/01_cd_tower (completed)
2 basic/02_cd.._cellar (completed)
3 basic/03_cd_HOME_throne (completed)
4 basic/04_mkdir_chest (completed)
5 basic/05_rm_spiders_cellar (completed)
6 basic/06_mv_coins_garden (completed)
7 basic/07_mv_hidden_coins_garden (completed)
8 basic/08_rm_wildcard_spiders_cellar (completed)
9 basic/09_rm_wildcard_hidden_spiders_cellar (completed)
10 basic/10_cp_standard_great_hall (completed)
11 basic/11_cp_wildcards_tapestries_great_hall (completed)
12 basic/12_cp_ls_mtime_paintings_tower (completed)
13 misc/01_cal_nostradamus (completed)
14 intermediate/01_alias_la (completed)
15 misc/02_nano_journal (completed)
16 intermediate/02_alias_journal (completed)
17 intermediate/03_tab_spider_lair (completed)
18 intermediate/04_bg_xeyes (completed)
19 finding_files_maze/01_ls_cd (completed)
20 finding_files_maze/02_tree (completed)
21 finding_files_maze/03_find_1 (completed)
22 pipe_intro_book_of_potions/01_head (completed)
23 pipe_intro_book_of_potions/02_tail (completed)
24 pipe_intro_book_of_potions/03_cat (completed)
25 pipe_intro_book_of_potions/04_pipe (completed)
→ 26 pipe_intro_book_of_potions/05_pipe_head_tail
27 processes/01_ps_kill
28 processes/02_ps_kill_signal
29 processes/03_pstree_kill
30 stdin_stdout_stderr/01_stdin_additions
31 stdin_stdout_stderr/02_stdin_redirection_multiplications
32 stdin_stdout_stderr/03_stdout_redirection_inventory
33 stdin_stdout_stderr/04_stderr_dev-null_grimoires
34 stdin_stdout_stderr/05_stdout_stderr_redirection_merlin
35 permissions/01_chmod_x_dir_king_quarter
36 permissions/02_chmod_r_file_king_quarter
37 permissions/03_chmod_rw_file_dir_throne_room
38 finding_files_maze/04_find_2
39 finding_files_maze/05_find_xargs_grep
40 pipes_merchant_stall/01_pipe_1
41 pipes_merchant_stall/02_pipe_2
42 misc/03_tr_caesar_shift
43 FINAL_MISSION

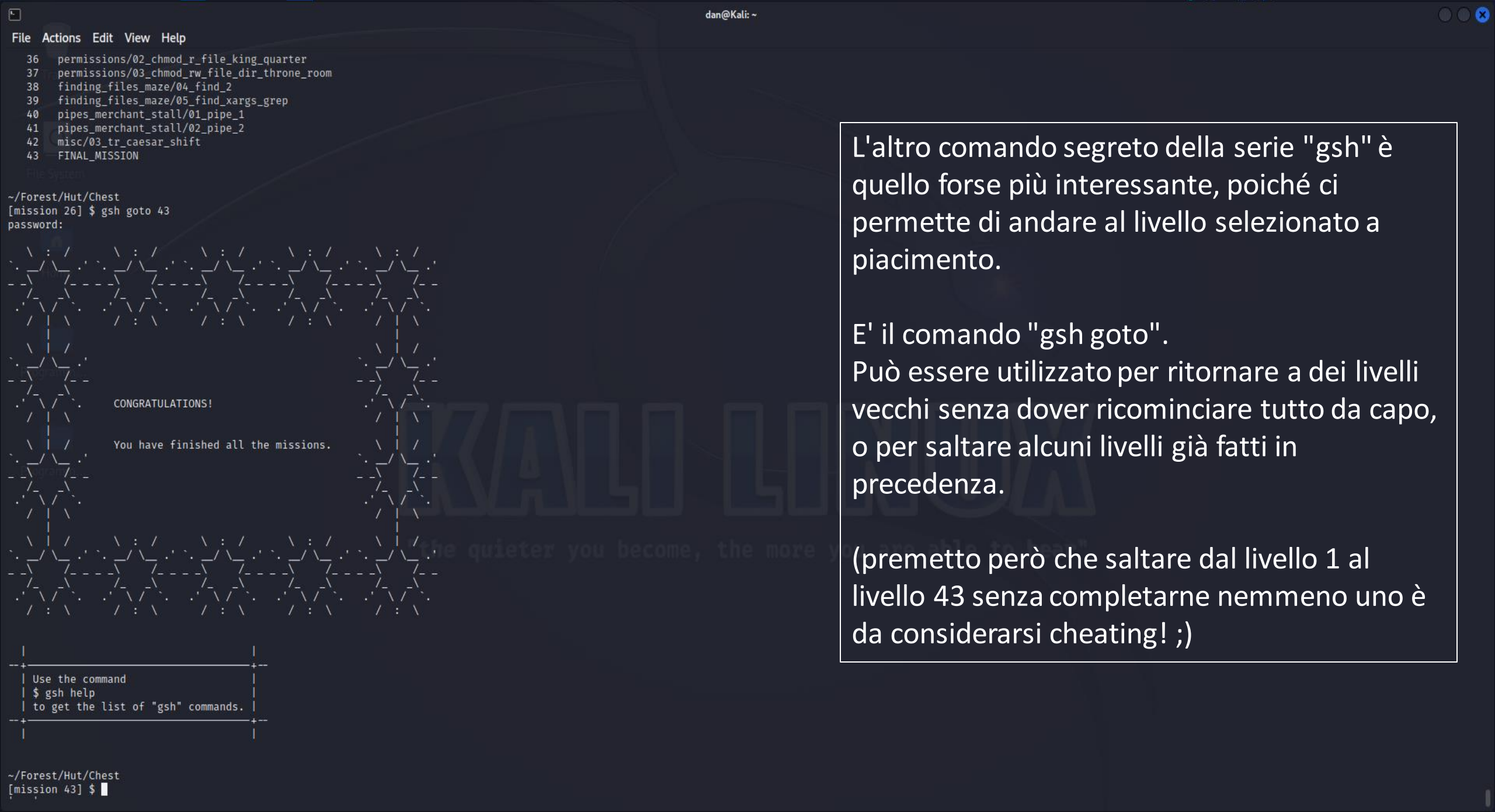
~/Forest/Hut/Chest
[mission 26] $

```

Come anticipato nella prima slide, all'interno del gioco ci sono un paio di comandi segreti, che possono essere sbloccati (o meglio, rivelati) completando con successo tutti i livelli.

Il primo tra questi è "gsh index" che stampa a schermo la lista completa dei livelli presenti nel gioco, specificando eventualmente quelli completati o meno.

(come detto prima, sono riuscito a completare fino al 25esimo livello).



L'altro comando segreto della serie "gsh" è quello forse più interessante, poiché ci permette di andare al livello selezionato a piacimento.

E' il comando "gsh goto".  
 Può essere utilizzato per ritornare a dei livelli vecchi senza dover ricominciare tutto da capo, o per saltare alcuni livelli già fatti in precedenza.

(premetto però che saltare dal livello 1 al livello 43 senza completarne nemmeno uno è da considerarsi cheating! ;)