

Game Shell

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La traccia di oggi, ci invita a giocare a Game Shell, un gioco che ci propone un'avventura testuale fantasy con lo scopo di insegnarci la struttura del File System di Linux e i comandi del terminale che servono per interagire con l'ambiente.

Una volta scaricato ed installato, il gioco ci fornisce un rapido glossario con i primi comandi utili per iniziare la partita e una premessa.

Viene fornito anche un comando che permette di visualizzare la legenda di alcuni comandi

```
Commands specific to GameShell

gsh check
check whether the current mission's goal has been achieved or not

gsh exit / Control-d
quit GameShell
(you can start from the current mission by running GameShell with the "-C" flag)

gsh goal
show the current mission's goal

gsh help
shorter help message

gsh reset
reset the current mission
```

I primi livelli sono molto semplici e di tutorial. Come possiamo vedere nella Missione n 5.

```
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".

~/Forest/Hut
[mission 5] $ cd /home/kali/gameshell/World
~
[mission 5] $ cd Castle
~/Castle
[mission 5] $ cd cellar
bash: cd: cellar: No such file or directory
~/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] $ gsh check
Congratulations, mission 5 has been successfully completed!
```

La 5ª missione ci farà infatti apprendere come eliminare più file (in questo caso ragni) contemporaneamente.

Gradualmente, missione dopo missione, il gioco ci farà apprendere più sfaccettature di questa modalità.

La stessa cosa accadrà con il comando cp nella missione 10.

```

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".

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

~/Castle
[mission 10] $ la
la: command not found

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

~/Castle
[mission 10] $ cd Great_hall

~/Castle/Great_hall
[mission 10] $ ls
25666_suit_of_armour 47424_decorative_shield 62758_stag_head standard_1 standard_2 standard_3 standard_4

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

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

Congratulations, mission 10 has been successfully completed!
```

Quindi ci dovremo recare nella Great_hall e copiare i 4 standards nella directory Chest creata precedentemente.

Nella Missione 15 la quest che ci viene proposta è di creare un file chiamato "journal.txt" nella nostra Chest.

```

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

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!

~/Castle/Main_tower/First_floor
[mission 15] $ cd ..

~/Castle/Main_tower
[mission 15] $ cd ..

~/Castle
```

Quindi una volta che ci siamo spostati nella directory Chest...

```
~
[mission 15] $ cd Forest
~/Forest
[mission 15] $ ls
Hut/
~/Forest
[mission 15] $ cd Hut
~/Forest/Hut
[mission 15] $ cd Chest
~/Forest/Hut/Chest
[mission 15] $ nano journal.txt
~/Forest/Hut/Chest
[mission 15] $ ls
15456_tapestry_06 28004_tapestry_02 49249_tapestry_09 55080_tapestry_01 61010_tapestry_07 coin_1 coin_3 painting_hmjGPRAM standard_2 standard_4
26045_tapestry_05 40269_tapestry_08 49407_tapestry_03 5648_tapestry_04 9868_tapestry_10 coin_2 journal.txt standard_1 standard_3
~/Forest/Hut/Chest
[mission 15] $ gsh check
Congratulations, mission 15 has been successfully completed!
```

... creiamo il file "journal.txt" con l'editor nano.

Nella missione 20 lo scopo è di trovare una moneta d'argento nel labirinto e spostarla con il comando mv nella nostra Chest.

```
( )
/ | Mission goal
/ |
/ |
/ | Find the silver coin in the maze in the garden and move it to your chest using the shell.
/ |
/ | Useful commands
/ |
/ |
/ | ls -R
/ | Print the list of all files / directory, including those in sub-directories (recursively).
/ |
/ | tree
/ | Print the tree of files and directories, starting from the current working directory.
( )
```

La quest ci insegna a stampare a video uno schema delle directory tramite il comando tree.

```
~/Garden/Maze
[mission 20] $ tree
.
├── 5523ba23ae6128faa9a
│   ├── 11f11c1627baa
│   │   ├── 55821ec0024fc856b11253242b7
│   │   ├── 8379f736
│   │   └── ed82e7d386bf8ae442afabf03
│   ├── 5de5c1f672b569bae3fd0aec894
│   │   ├── 1e7e7312777ac33368f1b0efd40206
│   │   ├── 91c95e4507607bb00045957
│   │   └── 00000_silver_coin_00000
│   └── 9328569520
├── 8877ecddaefe6e974ed1e2308a6ce80
│   ├── 0f44a0b4e08
│   ├── 58dfd2bbd11c67f3df5e5
│   └── b90f27ef007934a7a21402bf6b6
├── 8f0d363eff01590402c62a06a17
│   ├── 19f9b8a5c647332a
│   │   ├── 757c9095b22cebf1d335ab307c
│   │   ├── 835b9bd23bec49efe1ff3271ff54da6
│   │   └── b91cb4284c
│   ├── 525b3048814cb68cc3b5ae1109
│   │   ├── 48aa9b6db8ef6dd84833f38
│   │   ├── 5303581b7d16810413bee3300962b
│   │   └── 8ae50d22db4eb66b40c63bf2cf251da
│   ├── cb782456435cae37462aa99ef130
│   │   ├── 58515797d09bb3271f86
│   │   ├── e1531653584de94
│   │   └── f1a3802167fce94f99e3
│   └── a84afd3188856645deb493
│       ├── 359ae38ff6
│       │   ├── 3b6f40d78b
│       │   ├── 3c94a53e2f3f055ff01b3e80f8df
│       │   └── 8e872a63a19ad8b579b8532
│       ├── d4d3c6e70ca00f0b7cc91f
│       │   ├── 129e710ccd2120d7839937d5b8177
│       │   ├── c3e2cd30368a66c1b7ad843c32
│       │   └── cebf03cea167
│       └── edb3792c6f6f
│           ├── 60b440fcb7bcf2d34ce
│           ├── 8ff63ebb0470f865f
│           └── d38b65c3b181b37beb94e74e
└── 40 directories, 1 file
```

Una volta che ci siamo spostati nella giusta directory possiamo spostare la moneta nella Chest con mv.

```
├── cebf03cea167
├── edb3792c6f6f
├── 60b440fcb7bcf2d34ce
├── 8ff63ebb0470f865f
└── d38b65c3b181b37beb94e74e

40 directories, 1 file
File System: quantenesc.c
~/Garden/Maze
[mission 20] $ la
5523ba23ae6128faa9a/  8f0d363eff01590402c62a06a17/  a84afd3188856645deb493/

~/Garden/Maze
[mission 20] $ cd 5523ba23ae6128faa9a/

~/Garden/Maze/5523ba23ae6128faa9a
[mission 20] $ la
11f11c1627baa/  5de5c1f672b569bae3fd0aec894/  8877ecddaefe6e974ed1e2308a6ce80/

~/Garden/Maze/5523ba23ae6128faa9a
[mission 20] $ cd 5de5c1f672b569bae3fd0aec894/

~/Garden/Maze/5523ba23ae6128faa9a/5de5c1f672b569bae3fd0aec894
[mission 20] $ la
1e7e7312777ac33368f1b0efd40206/  91c95e4507607bb00045957/  9328569520/

~/Garden/Maze/5523ba23ae6128faa9a/5de5c1f672b569bae3fd0aec894
[mission 20] $ cd 91c95e4507607bb00045957/

~/Garden/Maze/5523ba23ae6128faa9a/5de5c1f672b569bae3fd0aec894/91c95e4507607bb00045957
[mission 20] $ la
00000_silver_coin_00000

~/Garden/Maze/5523ba23ae6128faa9a/5de5c1f672b569bae3fd0aec894/91c95e4507607bb00045957
[mission 20] $ mv *_silver_coin_* /home/kali/gameshell/World/Forest/Hut/Chest

~/Garden/Maze/5523ba23ae6128faa9a/5de5c1f672b569bae3fd0aec894/91c95e4507607bb00045957
[mission 20] $ gsh check

Congratulations, mission 20 has been successfully completed!

You are back at the entrance of the maze...
```


Dopo aver conosciuto il mago Servillus la nostra missione (n.25) sarà quella di mostrare al mago la ricetta dell'elisir della giovinezza, però dovremo mostrare solo i passaggi e nient'altro.

```
~/Mountain/Cave
[mission 25] $ gsh goal

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 "I" 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.

~/Mountain/Cave
[mission 25] $ cat /home/kali/gameshell/World/Mountain/Cave/Book_of_potions/page_03 /home/kali/gameshell/World/Mountain/Cave/Book_of_potions/page_04 | tail -n 16
```

Quindi dopo aver appreso come usare i comandi head e tail concatenati, possiamo mostrare al mago i procedimenti.

```
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.

~/Mountain/Cave
[mission 25] $ cat /home/kali/gameshell/World/Mountain/Cave/Book_of_potions/page_03 /home/kali/gameshell/World/Mountain/Cave/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] $
```

Arrivati alla missione 30 (saltando la 29) il gioco metterà alla prova la nostra abilità mentali proponendoci alcune somme...

```
[mission 28] $ gsh check
Congratulations, mission 28 has been successfully completed!

Process names should be equal to the corresponding filename for mission processes/03_pstree_kill/deps.sh.
Error: mission 29 is cancelled because some dependencies are not met.

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

~/Mountain/Cave
[mission 30] $ gsh goal

()=(
Mission goal

To get better in the magical art, one needs to know mental math.

Get ready, because Merlin is about to test your precision with sums.

Run the command ``gsh check`` to start.

()=(

~/Mountain/Cave
[mission 30] $ gsh check
83 + 15 = ?? 98
22 + 99 = ?? 121
9 + 56 = ?? 65
85 + 5 = ?? 90
38 + 63 = ?? 101

Congratulations, mission 30 has been successfully completed!
```

... e alla missione 31 metterà alla prova la nostra abilità nel barare facendoci unire il comando gsh check con il file contenente le soluzioni ai prodotti che ci vengono proposti.

```
~/Mountain/Cave
[mission 31] $ gsh check
91 * 57 = ?? ^C

~/Mountain/Cave
[mission 31] $ gsh check < /home/kali/gameshell/World/Castle/Main_building/Library/Mathematics_101
91 * 57 = ?? 58 * 42 = ?? 46 * 95 = ?? 72 * 85 = ?? 86 * 18 = ?? 27 * 91 = ?? 14 * 27 = ?? 7 * 36 = ?? 16 * 82 = ?? 68 * 63 = ?? 27 * 37 = ?? 29 * 29 = ?? 89 * 55 = ?? 41 * 87 = ?? 53 * 11 = ?? 57 * 99 = ?? 6 * 88 = ?? 81 * 37 = ?? 9 * 6 = ?? 77 * 10 = ?? 41 * 57 = ?? 22 * 88 = ?? 89 * 74 = ?? 96 * 100 = ?? 73 * 17 = ?? 97 * 54 = ?? 98 * 60 = ?? 29 * 16 = ?? 48 * 15 = ?? 97 * 34 = ?? 70 * 20 = ?? 56 * 73 = ?? 83 * 35 = ?? 7 * 47 = ?? 16 * 57 = ?? 48 * 73 = ?? 47 * 28 = ?? 53 * 2 = ?? 72 * 42 = ?? 37 * 24 = ?? 6 * 41 = ?? 14 * 83 = ?? 8 * 19 = ?? 98 * 78 = ?? 81 * 37 = ?? 93 * 76 = ?? 47 * 41 = ?? 30 * 54 = ?? 68 * 9 = ?? 83 * 82 = ?? 22 * 13 = ?? 79 * 48 = ?? 54 * 98 = ?? 77 * 82 = ?? 30 * 66 = ?? 57 * 21 = ?? 97 * 58 = ?? 50 * 81 = ?? 37 * 63 = ?? 1 * 12 = ?? 79 * 71 = ?? 4 * 66 = ?? 98 * 61 = ?? 3 * 50 = ?? 28 * 48 = ?? 26 * 5 = ?? 85 * 24 = ?? 56 * 39 = ?? 60 * 59 = ?? 80 * 52 = ?? 68 * 9 = ?? 76 * 9 = ?? 19 * 62 = ?? 3 * 29 = ?? 71 * 87 = ?? 57 * 5 = ?? 87 * 45 = ?? 4 * 31 = ?? 80 * 5 = ?? 11 * 43 = ?? 62 * 29 = ?? 29 * 90 = ?? 1 * 54 = ?? 45 * 62 = ?? 83 * 68 = ?? 13 * 28 = ?? 1 * 48 = ?? 87 * 80 = ?? 3 * 6 = ?? 76 * 62 = ?? 56 * 78 = ?? 1 * 52 = ?? 2 * 95 = ?? 38 * 43 = ?? 51 * 81 = ?? 36 * 48 = ?? 70 * 55 = ?? 29 * 28 = ?? 35 * 90 = ?? 83 * 61 = ??

Congratulations, mission 31 has been successfully completed!

While you are waiting, a spider crawls by...

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

Purtroppo ho avuto poco tempo ma finirò il gioco.