

MODULO 2 W8D4 – esercizio finale – TRACCIA E REQUISITI

Personalmente ho avviato una nuova macchina virtuale Kali Linux su VirtualBox configurando le impostazioni di rete in modo tale che possa usare la connessione dell'host con IP dinamico seguendo questi step:

- sudo nano /etc/network/interfaces

(modifico il file di configurazione di rete con editor nano → ctrl+O → ctrl+X)

```
GNU nano 7.2          /etc/network/interfaces
# This file describes the network interfaces available on your system
# and how to activate them. For more information, see interfaces(5).

source /etc/network/interfaces.d/*

# The loopback network interface
auto eth0
iface eth0 inet dhcp
```

- sudo service networking restart

(riavvio servizio per applicare modifiche)

- ifconfig

(verifico l'indirizzo IP assegnato tramite DHCP)

Prosegua installando il gioco seguendo le istruzioni della traccia, e lo avvio con il comando
bash gameshell.sh da terminale.

Nel gioco si possono visualizzare regole e comandi utili al completamento delle missioni.



Esercizio
Traccia e requisiti

Traccia:

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

Installazione:

Per installare il gioco GameShell, eseguire in ordine i seguenti comandi, assicurarsi di avere connettività ad Internet prima e di aver eseguito il comando **sudo apt update**

```
sudo apt install gettext man-db procps psmisc nano tree bsdmainutils x11-apps wget
wget https://github.com/phyver/GameShell/releases/download/latest/gameshell.sh
```

Una volta eseguiti i comandi, il gioco può essere lanciato con il comando **bash gameshell.sh**

COMPLETAMENTO DELLE MISSIONI:

```
kali@kali: ~
File Actions Edit View Help
| UPPERCASE words appearing in commands are meta-variables: you need to
| replace them by appropriate (string) values.
|
| Most filesystems treat uppercase and lowercase characters differently.
| Make sure you use the correct path.
+-----+
[mission 1] $ cd
[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!
```

```
[mission 2] $ ls
Castle Forest Garden Mountain Stall
[mission 2] $ cd Castle
[mission 2] $ ls
Cellar Great_hall Main_building Main_tower Observatory
[mission 2] $ cd Cellar
[mission 2] $ gsh check

Congratulations, mission 2 has been successfully completed!
```

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

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

```
[mission 4] $ ls
Kings_quarter

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

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

~
[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!
```

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

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

~/Castle
[mission 6] $ cd ..

~
[mission 6] $ ls
Castle  Forest  Garden  Mountain  Stall

~
[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 .. /Forest/Hut/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!
```

```
~/Garden
[mission 7] $ mv .17457_coin_2 .58597_coin_1 .62112_coin_3 .. /Forest/Hut/Ches
t

~/Garden
[mission 7] $ cd .. /Forest/Hut/Chest

~/Forest/Hut/Chest
[mission 7] $ ls
coin_1  coin_2  coin_3

~/Forest/Hut/Chest
[mission 7] $ ls -a
.  ..  .17457_coin_2  .58597_coin_1  .62112_coin_3  coin_1  coin_2  coin_3

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

Congratulations, mission 7 has been successfully completed!
```

```
~/Castle
[mission 8] $ ls
Cellar  Great_hall  Main_building  Main_tower  Observatory

~/Castle
[mission 8] $ cd Cellar

~/Castle/Cellar
[mission 8] $ ls
10663_spider_30  17499_spider_12  28651_spider_35  5203_spider_29
10872_spider_23  17548_spider_31  28678_spider_13  5301_spider_27
12775_spider_37  17825_spider_14  30114_spider_45  5581_spider_6
13340_spider_4   18380_bat_3    30161_spider_9   5709_spider_40
13426_spider_5   19122_spider_50  31302_spider_19  6714_bat_4
13835_spider_17  19663_spider_25  32038_spider_26  7008_spider_2
14105_bat_2     20205_spider_15  3764_spider_47   7158_spider_39
1504_spider_24   20978_spider_3   3826_spider_49   7525_spider_22
15105_spider_33  21789_spider_42  3920_spider_43   7707_spider_16
15337_spider_48  22050_spider_41  3987_spider_18   8074_spider_7
15880_spider_10  22446_spider_21  4168_spider_36   8224_bat_1
16001_spider_20  23941_bat_5    469_spider_46    9410_spider_8
16708_spider_11  26236_spider_32  497_spider_28   9544_spider_38
17497_spider_34  27102_spider_44  5005_spider_1    barrel_of_apples

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

he quieter you become, the more you can hear

```
~/Castle/Cellar
[mission 8] $ ls
14105_bat_2  23941_bat_5  8224_bat_1
18380_bat_3  6714_bat_4  barrel_of_apples

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

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

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

~/Castle/Cellar
[mission 9] $ ls -a
.          .16033_bat_3      .24617_spider_39  .6293_spider_25
..         .16291_spider_29   .24628_spider_22  .6952_spider_4
.10048_bat_4 .16713_spider_15 .24901_spider_26  .7045_spider_47
.11642_spider_36 .16902_spider_41 .25296_bat_2   .7468_spider_37
.12165_spider_48 .17459_bat_5   .25972_spider_16 .8803_spider_34
.12339_spider_11 .17539_spider_28 .26530_spider_21 .9150_spider_8
.13117_spider_43 .17812_spider_10 .2841_spider_3   .9224_spider_50
.13157_spider_40 .18594_spider_12 .28752_spider_13 .9249_spider_19
.13483_spider_1  .18909_spider_23 .29192_bat_1   .9456_spider_49
.13836_spider_24 .194_spider_35  .29628_spider_27 14105_bat_2
.14180_spider_14 .19812_spider_45 .30688_spider_42 18380_bat_3
.14338_spider_31 .20163_spider_7   .31210_spider_5  23941_bat_5
.15227_spider_6  .20654_spider_20  .31896_spider_18 6714_bat_4
.15801_spider_38 .21257_spider_30  .32204_spider_46 8224_bat_1
.1588_spider_44  .21536_spider_17  .32365_spider_2   barrel_of_apples
.1595_spider_9   .21712_spider_33  .5777_spider_32
```

```
~/Castle/Cellar  
[mission 9] $ rm .*sp*  
  
~/Castle/Cellar  
[mission 9] $ ls  
14105_bat_2  23941_bat_5  8224_bat_1  
18380_bat_3  6714_bat_4  barrel_of_apples  
  
~/Castle/Cellar  
[mission 9] $ gsh check  
  
Congratulations, mission 9 has been successfully completed!
```

```
~  
[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  
12697_decorative_shield  65330_suit_of_armour  standard_2  standard_4  
20567_stag_head          standard_1            standard_3  
  
~/Castle/Great_hall  
[mission 10] $ cp standard_1 standard_2 standard_3 standard_4 ..../.. /Forest/Hu  
t/Chest  
  
~/Castle/Great_hall  
[mission 10] $ gsh check  
  
Congratulations, mission 10 has been successfully completed!
```

```
~/Castle/Great_hall
[mission 11] $ pwd
/home/kali/gameshell/World/Castle/Great_hall

~/Castle/Great_hall
[mission 11] $ ls
12076_tapestry_10      30126_tapestry_03  53372_tapestry_06  standard_3
13956_suit_of_armour   38565_tapestry_01   56183_tapestry_08  standard_4
15401_tapestry_02      42903_stag_head    64183_tapestry_09
21042_decorative_shield 43059_tapestry_07  standard_1
22280_tapestry_04      50889_tapestry_05  standard_2

~/Castle/Great_hall
[mission 11] $ cp *tap* ../../Forest/Hut/Chest

~/Castle/Great_hall
[mission 11] $ cd ../../Forest/Hut/Chest

~/Forest/Hut/Chest
[mission 11] $ ls
12076_tapestry_10  43059_tapestry_07  coin_1      standard_3
15401_tapestry_02  50889_tapestry_05  coin_2      standard_4
22280_tapestry_04  53372_tapestry_06  coin_3
30126_tapestry_03  56183_tapestry_08  standard_1
38565_tapestry_01  64183_tapestry_09  standard_2

~/Forest/Hut/Chest
[mission 11] $ gsh check

Congratulations, mission 11 has been successfully completed!
```

```
kali@kali: ~
File Actions Edit View Help
[mission 12] $ ls
Castle/ Forest/ Garden/ Mountain/ Stall/
~

[mission 12] $ cd Castle

~/Castle
[mission 12] $ ls
Cellar/ Great_hall/ Main_building/ Main_tower/ Observatory/

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

~/Castle/Main_tower/First_floor
[mission 12] $ ls
Second_floor/ painting_HQfUNcQY  painting_IHNTgevQ  painting_wtHDfMqq

~/Castle/Main_tower/First_floor
[mission 12] $ ls -l
total 16
drwxr-xr-x 3 kali kali 4096 Dec 15 20:05 Second_floor/
-rw-r--r-- 1 kali kali 1054 Jan  8 1980 painting_HQfUNcQY
-rw-r--r-- 1 kali kali 1503 Jul 17 2003 painting_IHNTgevQ
-rw-r--r-- 1 kali kali 1453 Mar 27 2016 painting_wtHDfMqq
```

```
~/Castle/Main_tower/First_floor  
[mission 12] $ cat painting_HQfUNCQY  
04aca071dde0a8dfe95db877c8c375fd3aca90fc@8047
```



```
~/Castle/Main_tower/First_floor  
[mission 12] $ cp painting_HQfUNCQY ../../Forest/Hut/Chest
```

```
~/Castle/Main_tower/First_floor  
[mission 12] $ gsh check
```

```
Congratulations, mission 12 has been successfully completed!
```

```
~/Castle/Main_tower/First_floor  
[mission 13] $ cal 1956
```

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

```
~/Castle/Main_tower/First_floor  
[mission 13] $ gsh check  
What was the day of the week for the 04-23-1956?  
1 : Monday  
2 : Tuesday  
3 : Wednesday  
4 : Thursday  
5 : Friday  
6 : Saturday  
7 : Sunday  
Your answer: 1  
  
Congratulations, mission 13 has been successfully completed!
```

```
~/Castle/Main_tower/First_floor  
[mission 14] $ alias la='ls -A'  
  
~/Castle/Main_tower/First_floor  
[mission 14] $ la  
.nice_rock      painting_HQfUNcQY  painting_wtHDfMqq  
Second_floor/  painting_IHNTgevQ  
  
~/Castle/Main_tower/First_floor  
[mission 14] $ gsh check  
  
Congratulations, mission 14 has been successfully completed!
```

```
~/Castle/Main_tower/First_floor  
[mission 15] $ cd ../../Forest/Hut/Chest  
  
~/Forest/Hut/Chest  
[mission 15] $ touch journal.txt  
  
~/Forest/Hut/Chest  
[mission 15] $ sudo nano journal.txt  
gsh: sudo: command not found  
  
~/Forest/Hut/Chest  
[mission 15] $ nano journal.txt  
  
~/Forest/Hut/Chest  
[mission 15] $ gsh check  
  
Congratulations, mission 15 has been successfully completed!
```

```
~/Forest/Hut/Chest
[mission 16] $ cat journal.txt
Puts on glasses:

(*_*)
( *_*)>-@-@
(@-@)
```

```
~/Castle
[mission 16] $ ls
Cellar/ Great_hall/ Main_building/ Main_tower/ Observatory/

~/Castle
[mission 16] $ cd Cellar

~/Castle/Cellar
[mission 16] $ journal

~/Castle/Cellar
[mission 16] $ journal

~/Castle/Cellar
[mission 16] $ pwd
/home/kali/gameshell/World/Castle/Cellar

~/Castle/Cellar
[mission 16] $ cd ..

~/Castle
[mission 16] $ ls
Cellar/ Great_hall/ Main_building/ Main_tower/ Observatory/

~/Castle
[mission 16] $ gsh check

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

```
~/Castle/Cellar
[mission 17] $ ls -a
./          .Lair_of_the_spider_queen nvR0kYiyClazWXZN FsRuoEGRTkkLKSLG/
../         14105_bat_2
.10048_bat_4 18380_bat_3
.16033_bat_3 23941_bat_5
.17459_bat_5 6714_bat_4
.25296_bat_2 8224_bat_1
.29192_bat_1 barrel_of_apples

~/Castle/Cellar
[mission 17] $ cd .Lair_of_the_spider_queen\ nvR0kYiyClazWXZN FsRuoEGRTkkLKSLG/
[mission 17] $ ls
OVnzroVryhdwfVYZ_spider_queen_ZErfurPLtMyEvGab
UcSgLdnGYHcNPDzb_baby_bat_bFhMLtFQ0mKATdoS

~/Castle/Cellar/.Lair_of_the_spider_queen nvR0kYiyClazWXZN FsRuoEGRTkkLKSLG
[mission 17] $ rm OVnzroVryhdwfVYZ_spider_queen_ZErfurPLtMyEvGab

~/Castle/Cellar/.Lair_of_the_spider_queen nvR0kYiyClazWXZN FsRuoEGRTkkLKSLG
[mission 17] $ gsh check
Perfect, it took you only 14 seconds to complete this mission!

Congratulations, mission 17 has been successfully completed!
```

```
~
[mission 18] $ xeyes
^C

~
[mission 18] $ xeyes&
[2] 216133

~
[mission 18] $ gsh check
Congratulations, mission 18 has been successfully completed!
```

```
~/Garden/Maze
[mission 19] $ pwd
/home/kali/gameshell/World/Garden/Maze

~/Garden/Maze
[mission 19] $ ls
973f3faffca6381ef8ba3e4e91b/  f2b0abd22c8b2ee6/

~/Garden/Maze
[mission 19] $ cd f2b0abd22c8b2ee6/

~/Garden/Maze/f2b0abd22c8b2ee6
[mission 19] $ ls
2311416b03b79710927b4a7e81cc2b2/  47c8fea7382005/

~/Garden/Maze/f2b0abd22c8b2ee6
[mission 19] $ cd 2311416b03b79710927b4a7e81cc2b2/

~/Garden/Maze/f2b0abd22c8b2ee6/2311416b03b79710927b4a7e81cc2b2
[mission 19] $ ls
6b5fe87296e/  82338210a32c08b/

~/Garden/Maze/f2b0abd22c8b2ee6/2311416b03b79710927b4a7e81cc2b2
[mission 19] $ cd 82338210a32c08b/

~/Garden/Maze/f2b0abd22c8b2ee6/2311416b03b79710927b4a7e81cc2b2/82338210a32c08
b
[mission 19] $ ls
00000_copper_coin_00000

~/Garden/Maze/f2b0abd22c8b2ee6/2311416b03b79710927b4a7e81cc2b2/82338210a32c08
b
[mission 19] $ mv 00000_copper_coin_00000 ~/Forest/Hut/Chest

~/Garden/Maze/f2b0abd22c8b2ee6/2311416b03b79710927b4a7e81cc2b2/82338210a32c08
b
[mission 19] $ gsh check

Congratulations, mission 19 has been successfully completed!
```

```
~/Garden/Maze
[mission 20] $ pwd
/home/kali/gameshell/World/Garden/Maze

~/Garden/Maze
[mission 20] $ ls -R
::
0bef2a8c1cb6b86cd2632eab52546/ de7cecff8fa777bb8108de528/ e181b1a3/

./0bef2a8c1cb6b86cd2632eab52546:
49feba1bda2c60131af10/ 958f395e5da341cde9f69056b69295/ b46efe397037d3/

./0bef2a8c1cb6b86cd2632eab52546/49feba1bda2c60131af10:
238197a728/ cfdbcebf41e7cff35a7/ fb776be293d/

./0bef2a8c1cb6b86cd2632eab52546/49feba1bda2c60131af10/238197a728:
00000_silver_coin_00000
```

```
~/Garden/Maze
[mission 20] $ tree
.
└── 0bef2a8c1cb6b86cd2632eab52546
    ├── 49feba1bda2c60131af10
    │   ├── 238197a728
    │   │   └── 00000_silver_coin_00000
    │   ├── cfdbcebf41e7cff35a7
    │   └── fb776be293d
    ├── 958f395e5da341cde9f69056b69295
    │   ├── 7e11d8d432853eb9ae5113557502
    │   ├── d7a261726c853db
    │   └── d7fad61b86b728
    └── b46efe397037d3
        ├── 185dc8144dfa2d2b61d1d37834
        ├── 774918e99d560178dda
        └── 95cf5eb6
```

```
~/Garden/Maze
[mission 20] $ cd 0bef2a8c1cb6b86cd2632eab52546/49feba1bda2c60131af10/238197a728/
~/Garden/Maze/0bef2a8c1cb6b86cd2632eab52546/49feba1bda2c60131af10/238197a728
[mission 20] $ mv 00000_silver_coin_00000 ~/Forest/Hut/Chest
~/Garden/Maze/0bef2a8c1cb6b86cd2632eab52546/49feba1bda2c60131af10/238197a728
[mission 20] $ gsh check
Congratulations, mission 20 has been successfully completed!
You are back at the entrance of the maze ...
```

```
~/Forest/Hut/Chest
[mission 21] $ find ~/ -iname "*coin*"
/home/kali/gameshell/World/Forest/Hut/Chest/coin_1
/home/kali/gameshell/World/Forest/Hut/Chest/coin_3
/home/kali/gameshell/World/Forest/Hut/Chest/.17457_coin_2
/home/kali/gameshell/World/Forest/Hut/Chest/.62112_coin_3
/home/kali/gameshell/World/Forest/Hut/Chest/00000_silver_coin_00000
/home/kali/gameshell/World/Forest/Hut/Chest/coin_2
/home/kali/gameshell/World/Forest/Hut/Chest/Gold_CoiN_2
/home/kali/gameshell/World/Forest/Hut/Chest/.58597_coin_1
/home/kali/gameshell/World/Forest/Hut/Chest/00000_copper_coin_00000
/home/kali/gameshell/World/Garden/Maze/a98e57510464a83c1bc00d4410/689757181af
0c36a3c9df4d7c5962b/4409da527f81bf8c65b4327978/Gold_CoiN_2
/home/kali/gameshell/World/Garden/Maze/e6f2c2baef805370db913d1/18bdc7ddfa6b6c
318f6e4/69ab5de5/gold_coin_1

~/Forest/Hut/Chest
[mission 21] $ cd ../../..

~
[mission 21] $ cd Garden/Maze

~/Garden/Maze
[mission 21] $ cd e6f2c2baef805370db913d1/18bdc7ddfa6b6c318f6e4/69ab5de5/

~/Garden/Maze/e6f2c2baef805370db913d1/18bdc7ddfa6b6c318f6e4/69ab5de5
[mission 21] $ ls
gold_coin_1

~/Garden/Maze/e6f2c2baef805370db913d1/18bdc7ddfa6b6c318f6e4/69ab5de5
[mission 21] $ mv gold_coin_1 ~/Forest/Hut/Chest
```

```
~/Garden/Maze/e6f2c2baef805370db913d1/18bdc7ddfa6b6c318f6e4/69ab5de5
[mission 21] $ cd ../../..

~/Garden/Maze
[mission 21] $ cd a98e57510464a83c1bc00d4410/689757181af0c36a3c9df4d7c5962b/4
409da527f81bf8c65b4327978

~/Garden/Maze/a98e57510464a83c1bc00d4410/689757181af0c36a3c9df4d7c5962b/4409d
a527f81bf8c65b4327978
[mission 21] $ ls
Gold_CoiN_2

~/Garden/Maze/a98e57510464a83c1bc00d4410/689757181af0c36a3c9df4d7c5962b/4409d
a527f81bf8c65b4327978
[mission 21] $ mv Gold_CoiN_2 ~/Forest/Hut/Chest

~/Garden/Maze/a98e57510464a83c1bc00d4410/689757181af0c36a3c9df4d7c5962b/4409d
a527f81bf8c65b4327978
[mission 21] $ gsh check

Congratulations, mission 21 has been successfully completed!

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

```
~/Mountain/Cave
[mission 22] $ ls
Book_of_potions/ servillus

~/Mountain/Cave Edit View Help
[mission 22] $ ls Book_of_potions/
page_01 page_03 page_05 page_07 page_09 page_11 page_13
page_02 page_04 page_06 page_08 page_10 page_12 table_of_contents

~/Mountain/Cave
[mission 22] $ cat Book_of_potions/table_of_contents
1. Transformation potion ----- pages 1-2
2. Elixir of youth ----- pages 3-4
3. Philter of love ----- page 5
4. Bottled death (powerful poison) ----- page 6
5. Herbal tea ----- page 7
6. Draft of invisibility ----- pages 7-8
7. Homeopathic healing potion (part 1) ----- pages 8-9
8. Homeopathic healing potion (part 2) ----- page 10
9. Homeopathic healing potion (part 3) ----- page 11
10. Toadstool stew ----- page 12
11. Distilled water ----- page 13
12. King's ale ----- Page 13

~/Mountain/Cave
[mission 22] $ cat Book_of_potions/page_07
Herbal tea
_____
1) Boil water.
2) Add herbs from the forest.
3) Let it sit for five minutes and drink while hot.

Draft of invisibility (instruction in invisible ink)
_____
` .
'

~/Mountain/Cave
[mission 22] $ head -n 6 Book_of_potions/page_07
Herbal tea
_____
1) Boil water.
2) Add herbs from the forest.
3) Let it sit for five minutes and drink while hot.

~/Mountain/Cave
[mission 22] $ gsh check

Congratulations, mission 22 has been successfully completed!
```

```
~/Mountain/Cave
[mission 23] $ ls
kali㉿kali: ~
Book_of_potions/ servillus
File Actions Edit View Help
~/Mountain/Cave
[mission 23] $ ls Book_of_potions/
page_01 page_03 page_05 page_07 page_09 page_11 page_13
page_02 page_04 page_06 page_08 page_10 page_12 table_of_contents

~/Mountain/Cave
[mission 23] $ cat Book_of_potions/table_of_contents
1. Transformation potion _____ pages 1-2
2. Elixir of youth _____ pages 3-4
3. Philter of love _____ page 5
4. Bottled death (powerful poison) _____ page 6
5. Herbal tea _____ page 7
6. Draft of invisibility _____ pages 7-8
7. Homeopathic healing potion (part 1) _____ pages 8-9
8. Homeopathic healing potion (part 2) _____ page 10
9. Homeopathic healing potion (part 3) _____ page 11
10. Toadstool stew _____ page 12
11. Distilled water _____ page 13
12. King's ale _____ Page 13

~/Mountain/Cave
[mission 23] $ head -n 15 Book_of_potions/page_12
Toadstool stew
_____
1) Boil water in a cauldron.
2) Add in a few death caps (Amanita phalloides).
3) Also add a few fly agarics (Amanita muscaria).
4) And some destroying angels (Amanita virosa).
5) Mix in a few deadly webcaps (Cortinarius rubellus).
6) Feel free to add in any colourful fungi you have on hand.
7) Let half of the water evaporate.
8) Season with a pinch of salt and a few herbs.
9) Serve hot in a bowl.

~/Mountain/Cave
[mission 23] $ tail -n 9 Book_of_potions/page_12
1) Boil water in a cauldron.
2) Add in a few death caps (Amanita phalloides).
3) Also add a few fly agarics (Amanita muscaria).
4) And some destroying angels (Amanita virosa).
5) Mix in a few deadly webcaps (Cortinarius rubellus).
6) Feel free to add in any colourful fungi you have on hand.
7) Let half of the water evaporate.
8) Season with a pinch of salt and a few herbs.
9) Serve hot in a bowl.

~/Mountain/Cave
[mission 23] $ gsh check

Congratulations, mission 23 has been successfully completed!
```

```
~/Mountain/Cave
[mission 24] $ cat Book_of_potions/table_of_contents
1. Transformation potion ----- pages 1-2
2. Elixir of youth ----- pages 3-4
3. Philter of love ----- page 5
4. Bottled death (powerful poison) ----- page 6
5. Herbal tea ----- page 7
6. Draft of invisibility ----- pages 7-8
7. Homeopathic healing potion (part 1) ----- pages 8-9
8. Homeopathic healing potion (part 2) ----- page 10
9. Homeopathic healing potion (part 3) ----- page 11
10. Toadstool stew ----- page 12
11. Distilled water ----- page 13
12. King's ale ----- Page 13

~/Mountain/Cave
[mission 24] $ la Book_of_potions/
page_01  page_03  page_05  page_07  page_09  page_11  page_13
page_02  page_04  page_06  page_08  page_10  page_12  table_of_contents

~/Mountain/Cave
[mission 24] $ cat Book_of_potions/page_01 Book_of_potions/page_02
Transformation potion
_____
1) Boil water in a cauldron.
2) Add 3 measures of fluxweed to the cauldron.
3) Add 2 bundles of knotgrass to the cauldron.
4) Stir 4 times, clockwise.
5) Wave your wand then let potion brew for 80 minutes.
6) Add 4 leeches to the cauldron.
7) Crush 2 scoops of lacewing flies to a fine paste.
8) Add 2 measures of the crushed lacewings to the cauldron.
9) Heat for 30 seconds on a low heat.
10) Add 3 measures of boomslang skin to the cauldron.
11) Crush a bicorn horn into a fine powder.
12) Add 1 measure of the crushed horn to the cauldron.
13) Heat for 20 seconds at a high temperature.
14) Wave your wand then let potion brew for 24 hours.
15) Add 1 additional scoop of lacewings to the cauldron.
16) Stir 3 times, counter-clockwise.
17) Split potion into multiple doses, if desired.
18) Add a pieces of the person you wish to become.
19) Wave your wand to complete the potion.

~/Mountain/Cave
[mission 24] $ gsh check

Congratulations, mission 24 has been successfully completed!
```

```
~/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!
```

```
~/Mountain/Cave                               kati@kati-OptiPlex-5090:~
```

```
[mission 26] $ ls
```

```
Book_of_potions/ servillus
```

```
~/Mountain/Cave
```

```
[mission 26] $ ls Book_of_potions/
```

```
page_01  page_03  page_05  page_07  page_09  page_11  page_13  
page_02  page_04  page_06  page_08  page_10  page_12  table_of_contents
```

```
~/Mountain/Cave
```

```
[mission 26] $ cat Book_of_potions/table_of_contents
```

1. Transformation potion	pages 1-2
2. Elixir of youth	pages 3-4
3. Philter of love	page 5
4. Bottled death (powerful poison)	page 6
5. Herbal tea	page 7
6. Draft of invisibility	pages 7-8
7. Homeopathic healing potion (part 1)	pages 8-9
8. Homeopathic healing potion (part 2)	page 10
9. Homeopathic healing potion (part 3)	page 11
10. Toadstool stew	page 12
11. Distilled water	page 13
12. King's ale	Page 13

```
~/Mountain/Cave
```

```
[mission 26] $ cat Book_of_potions/page_13
```

```
Distilled water
```

```
1) Boil water in a big pot.  
2) Condense the vapor in a fresh container.  
3) Add minerals for a better taste (optional).
```

```
King's ale
```

```
1) Go to the castle's cellar and grab a bottle.  
2) Serve cold, in a pint.
```

```
~/Mountain/Cave
```

```
[mission 26] $ head -n 6 Book_of_potions/page_13 | tail -n 3
```

```
1) Boil water in a big pot.  
2) Condense the vapor in a fresh container.  
3) Add minerals for a better taste (optional).
```

```
~/Mountain/Cave
```

```
[mission 26] $ gsh check
```

```
Congratulations, mission 26 has been successfully completed!
```

```
~/Mountain/Cave
[mission 27] $ ps -
          *#@*
&_**/~
!$-#


l
F S    UID      PID      PPID     C PRI  NI ADDR SZ WCHAN   TTY             TIME CMD
0 S    1000    255934  255919  0  80    0 - 2624  sigsus pts/1  00:00:00 zsh
0 S    1000    256149  255934  0  80    0 - 1870  do_wai pts/1  00:00:00 bash
0 S    1000    256212  256149  0  80    0 - 2109  do_wai pts/1  00:00:01 bash
0 S    1000    326369  256212  0  80    0 -   616  hrttime pts/1  00:00:00 spell
0 R    1000    328453  256212  99  80    0 - 2821 -       pts/1  00:00:00 ps

~/Mountain/Cave
[mission 27] $
          *#@*
&_**/~
!$-#


kill 326369

~/Mountain/Cave
[mission 27] $ ghs check
Command 'ghs' not found, did you mean:
  command 'gh' from deb gh
  command 'gss' from deb libgss-dev
  command 'ghc' from deb ghc
  command 'gs' from deb ghostscript
  command 'gjs' from deb gjs
  command 'ghb' from deb handbrake
Try: sudo apt install <deb name>

~/Mountain/Cave
[mission 27] $ gsh check

Congratulations, mission 27 has been successfully completed!
```

```
-l
F S   UID      PID      PPID     C PRI  NI ADDR SZ WCHAN TTY          TIME CMD
0 S  1000  255934  255919  0 80    0 -  2624  sigsus pts/1  00:00:00 zsh
0 S  1000  256149  255934  0 80    0 -  1870  do_wai pts/1  00:00:00 bash
0 S  1000  256212  256149  0 80    0 -  2142  do_wai pts/1  00:00:01 bash
0 S  1000  328978  256212  0 80    0 -  1470  hrtime pts/1  00:00:00 spell
1 Z  1000  329660  328978  0 80    0 -      0 -      pts/1  00:00:00 spell
0 R  1000  330465  256212  99 80   0 -  2821 -      pts/1  00:00:00 ps
```

```
~/Mountain/Cave
[mission 28] $ kill -9
*#0*
&_**/~
!$-#
```

329660

```
~/Mountain/Cave
[mission 28] $ kill -9
*#0*
&_**/~
!$-#
```

328978

```
~/Mountain/Cave
[mission 28] $ ps -l
F S   UID      PID      PPID     C PRI  NI ADDR SZ WCHAN TTY          TIME CMD
0 S  1000  255934  255919  0 80    0 -  2624  sigsus pts/1  00:00:00 zsh
0 S  1000  256149  255934  0 80    0 -  1870  do_wai pts/1  00:00:00 bash
0 S  1000  256212  256149  0 80    0 -  2142  do_wai pts/1  00:00:01 bash
0 R  1000  330730  256212  99 80   0 -  2821 -      pts/1  00:00:00 ps
```

```
~/Mountain/Cave
[mission 28] $ gsh check
```

Congratulations, mission 28 has been successfully completed!

```

~/Castle/Cellar
[mission 29] $ ps -l
F S  UID   PID  PPID C PRI NI ADDR SZ WCHAN TTY      TIME CMD
0 S  1000  255934  255919  0 80  0 - 2624 sigsus pts/1  00:00:00 zsh
0 S  1000  256149  255934  0 80  0 - 1870 do_wai pts/1  00:00:00 bash
0 S  1000  256212  256149  0 80  0 - 2142 do_wai pts/1  00:00:02 bash
0 S  1000  487346  256212  0 80  0 - 645 do_wai pts/1  00:00:00 nice_fairy
0 S  1000  487347  256212  0 80  0 - 645 do_wai pts/1  00:00:00 mischievous_imp
0 S  1000  487357  487347  0 80  0 - 645 sigsus pts/1  00:00:00 spell
0 S  1000  487358  487347  0 80  0 - 645 sigsus pts/1  00:00:00 spell
0 S  1000  487359  487347  0 80  0 - 645 sigsus pts/1  00:00:00 spell
0 S  1000  487360  487347  0 80  0 - 1482 hrttime pts/1  00:00:00 tail
0 S  1000  487364  487346  0 80  0 - 645 sigsus pts/1  00:00:00 spell
0 S  1000  487365  487346  0 80  0 - 645 sigsus pts/1  00:00:00 spell
0 S  1000  487366  487346  0 80  0 - 645 sigsus pts/1  00:00:00 spell
0 S  1000  487367  487346  0 80  0 - 1482 hrttime pts/1  00:00:00 tail
0 S  1000  591138  487359  0 80  0 - 1474 hrttime pts/1  00:00:00 sleep
0 S  1000  591139  487357  0 80  0 - 1474 hrttime pts/1  00:00:00 sleep
0 S  1000  591143  487366  0 80  0 - 1474 hrttime pts/1  00:00:00 sleep
0 S  1000  591193  487365  0 80  0 - 1474 hrttime pts/1  00:00:00 sleep
0 S  1000  591237  487364  0 80  0 - 1474 hrttime pts/1  00:00:00 sleep
0 S  1000  591250  487358  0 80  0 - 1474 hrttime pts/1  00:00:00 sleep
0 R  1000  591259  256212  99 80  0 - 2821 -  pts/1  00:00:00 ps

~/Castle/Cellar
[mission 29] $ pstree -p -s 487347
systemd(1)---qterminal(255919)---zsh(256149)---bash(256212)---mischievous_imp(487347)---spell(487357)---sleep(592943)
                                         |---spell(487358)---sleep(593051)
                                         |---spell(487359)---sleep(592942)
                                         |---tail(487360)

~/Castle/Cellar
[mission 29] $ kill 592943 593051 592942
bash: kill: (592943) - No such process
bash: kill: (593051) - No such process
bash: kill: (592942) - No such process

~/Castle/Cellar
[mission 29] $ kill 487357 487358 487359

~/Castle/Cellar
[mission 29] $ rm *coal*
ls

~/Castle/Cellar
[mission 29] $ ls
1000_snowflake  18014_snowflake  2530_snowflake  32734_snowflake  40165_snowflake  47029_snowflake  54400_snowflake  61705_snowflake
10039_snowflake  1806_snowflake  2533_snowflake  3274_snowflake  40182_snowflake  47055_snowflake  54449_snowflake  61749_snowflake
10054_snowflake  1813_snowflake  25342_snowflake  32773_snowflake  40184_snowflake  47081_snowflake  54460_snowflake  61787_snowflake
10070_snowflake  18162_snowflake  25351_snowflake  32795_snowflake  40260_snowflake  4708_snowflake  54503_snowflake  61797_snowflake
1007_snowflake  18180_snowflake  2537_snowflake  32806_snowflake  40267_snowflake  47104_snowflake  54606_snowflake  6179_snowflake
1013_snowflake  18268_snowflake  25385_snowflake  32842_snowflake  40268_snowflake  47158_snowflake  54662_snowflake  61803_snowflake
10150_snowflake  18286_snowflake  25401_snowflake  3286_snowflake  40281_snowflake  47239_snowflake  54691_snowflake  61812_snowflake
10162_snowflake  18295_snowflake  25418_snowflake  3287_snowflake  40334_snowflake  47254_snowflake  54697_snowflake  61826_snowflake
10175_snowflake  18341_snowflake  25458_snowflake  32889_snowflake  40347_snowflake  47273_snowflake  54709_snowflake  61846_snowflake
10214_snowflake  18343_snowflake  25469_snowflake  32907_snowflake  40356_snowflake  47287_snowflake  54741_snowflake  61870_snowflake
10258_snowflake  18348_snowflake  25480_snowflake  33002_snowflake  40358_snowflake  47296_snowflake  5474_snowflake  61894_snowflake
10261_snowflake  18380_bat_3  25514_snowflake  33036_snowflake  40377_snowflake  47303_snowflake  5475_snowflake  61899_snowflake
10326_snowflake  18381_snowflake  25573_snowflake  3304_snowflake  40393_snowflake  47321_snowflake  54831_snowflake  61950_snowflake
1037_snowflake  18469_snowflake  2557_snowflake  33086_snowflake  40403_snowflake  47322_snowflake  54861_snowflake  61951_snowflake
10385_snowflake  18487_snowflake  25590_snowflake  33120_snowflake  40423_snowflake  47329_snowflake  54880_snowflake  6195_snowflake
10451_snowflake  18530_snowflake  25626_snowflake  33136_snowflake  40427_snowflake  47353_snowflake  54890_snowflake  62020_snowflake
10483_snowflake  18547_snowflake  25649_snowflake  3313_snowflake  40451_snowflake  47361_snowflake  54891_snowflake  62043_snowflake
10498_snowflake  18562_snowflake  25651_snowflake  3315_snowflake  40480_snowflake  47410_snowflake  54946_snowflake  62045_snowflake
1053_snowflake  18577_snowflake  25686_snowflake  33214_snowflake  40481_snowflake  47533_snowflake  54977_snowflake  62112_snowflake
1056_snowflake  18601_snowflake  25700_snowflake  33248_snowflake  40498_snowflake  47549_snowflake  54990_snowflake  62155_snowflake
10592_snowflake  18664_snowflake  25746_snowflake  33332_snowflake  40499_snowflake  47568_snowflake  54997_snowflake  62162_snowflake
10625_snowflake  18722_snowflake  25768_snowflake  33361_snowflake  40511_snowflake  47574_snowflake  54998_snowflake  62206_snowflake
10647_snowflake  18745_snowflake  25769_snowflake  33379_snowflake  40527_snowflake  47592_snowflake  55011_snowflake  62222_snowflake
10653_snowflake  18746_snowflake  25779_snowflake  33402_snowflake  40564_snowflake  47635_snowflake  5502_snowflake  62223_snowflake
10654_snowflake  18760_snowflake  25835_snowflake  33411_snowflake  40581_snowflake  47673_snowflake  55032_snowflake  62225_snowflake

17721_snowflake  21781_snowflake  32145_snowflake  39217_snowflake  46705_snowflake  54107_snowflake  61167_snowflake  9055_snowflake
17772_snowflake  25123_snowflake  3216_snowflake  39646_snowflake  46716_snowflake  5404_snowflake  61235_snowflake  9659_snowflake
17775_snowflake  25138_snowflake  32181_snowflake  39658_snowflake  46730_snowflake  54131_snowflake  61245_snowflake  965_snowflake
17782_snowflake  2514_snowflake  32238_snowflake  39681_snowflake  46753_snowflake  54138_snowflake  61312_snowflake  9677_snowflake
17792_snowflake  25154_snowflake  32239_snowflake  39712_snowflake  46756_snowflake  5416_snowflake  61370_snowflake  9709_snowflake
17850_snowflake  25181_snowflake  32439_snowflake  3976_snowflake  4678_snowflake  54183_snowflake  61476_snowflake  9734_snowflake
17855_snowflake  25184_snowflake  32479_snowflake  39784_snowflake  46797_snowflake  54218_snowflake  61481_snowflake  9766_snowflake
17858_snowflake  25207_snowflake  32480_snowflake  39824_snowflake  4679_snowflake  54251_snowflake  61497_snowflake  9826_snowflake
17878_snowflake  25217_snowflake  32512_snowflake  39850_snowflake  46885_snowflake  54256_snowflake  61520_snowflake  991_snowflake
17900_snowflake  25265_snowflake  32559_snowflake  39869_snowflake  46916_snowflake  54340_snowflake  61579_snowflake  barrel_of_apples
17964_snowflake  25269_snowflake  3258_snowflake  39898_snowflake  46933_snowflake  54346_snowflake  61591_snowflake
17999_snowflake  25280_snowflake  32621_snowflake  39941_snowflake  46935_snowflake  54364_snowflake  61594_snowflake
17_snowflake  25293_snowflake  32659_snowflake  39983_snowflake  46969_snowflake  54392_snowflake  61607_snowflake
18000_snowflake  25296_snowflake  32683_snowflake  40029_snowflake  46973_snowflake  54395_snowflake  61639_snowflake
18011_snowflake  252_snowflake  32684_snowflake  40079_snowflake  46980_snowflake  54396_snowflake  61697_snowflake

~/Castle/Cellar
[mission 29] $

~/Castle/Cellar
[mission 29] $ gsh check

Congratulations, mission 29 has been successfully completed!

```

```
~/Castle/Cellar  
[mission 30] $ gsh check  
57 + 80 = ?? 137  
46 + 76 = ?? 122  
84 + 24 = ?? 108  
14 + 17 = ?? 31  
39 + 35 = ?? 74
```

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

```
~/Castle/Main_building/Library  
[mission 31] $ ls  
Greek_Latin_and_other_modern_languages Mathematics_101 Merlin_s_office/  
  
~/Castle/Main_building/Library  
[mission 31] $ ls -a  
./ .How_to_cheat_for_exams Mathematics_101  
.. Greek_Latin_and_other_modern_languages Merlin_s_office/
```

```
~/Castle/Main_building/Library  
[mission 31] $ cat .How_to_cheat_for_exams  
The book 'Mathematics_101' contains all the answers.  
Just copy all its lines to get perfect score.
```

```
~/Castle/Main_building/Library  
[mission 31] $ cp < Mathematics_101  
cp: missing file operand  
Try 'cp --help' for more information.
```

```
~/Castle/Main_building/Library  
[mission 31] $ gsh check < Mathematics_101  
51 * 32 = ?? 39 * 93 = ?? 32 * 69 = ?? 83 * 12 = ?? 45 * 2 = ?? 77 * 9 = ?? 19 *  
6 = ?? 92 * 82 = ?? 4 * 32 = ?? 50 * 96 = ?? 98 * 85 = ?? 95 * 17 = ?? 6 * 17 =  
81 * 1 = ?? 60 * 50 = ?? 34 * 71 = ?? 12 * 65 = ?? 50 * 16 = ?? 10 * 85 = ?? 96  
81 = ?? 45 * 51 = ?? 29 * 12 = ?? 27 * 43 = ?? 75 * 100 = ?? 29 * 71 = ?? 72 * 6  
= ?? 97 * 35 = ?? 77 * 90 = ?? 44 * 50 = ?? 9 * 19 = ?? 61 * 1 = ?? 18 * 56 = ??  
96 * 85 = ?? 46 * 71 = ?? 16 * 44 = ?? 27 * 17 = ?? 80 * 57 = ?? 64 * 10 = ?? 20  
6 = ?? 43 * 19 = ?? 72 * 27 = ?? 64 * 28 = ?? 31 * 99 = ?? 54 * 53 = ?? 47 * 57  
?? 69 * 28 = ?? 5 * 77 = ?? 26 * 22 = ?? 64 * 16 = ?? 69 * 99 = ?? 61 * 1 = ?? 8  
* 34 = ?? 91 * 29 = ?? 94 * 28 = ?? 58 * 14 = ?? 67 * 93 = ?? 26 * 67 = ?? 30 *  
5 = ?? 51 * 83 = ?? 47 * 40 = ?? 94 * 2 = ?? 92 * 1 = ?? 52 * 41 = ?? 74 * 86 =  
75 * 42 = ?? 10 * 34 = ?? 76 * 27 = ?? 76 * 98 = ?? 20 * 86 = ?? 64 * 71 = ?? 1  
39 = ?? 60 * 59 = ?? 92 * 29 = ?? 77 * 81 = ?? 55 * 93 = ?? 44 * 25 = ?? 8 * 46  
?? 95 * 70 = ?? 71 * 27 = ?? 18 * 29 = ?? 74 * 69 = ?? 73 * 85 = ?? 14 * 74 = ??  
37 * 28 = ?? 23 * 60 = ?? 61 * 38 = ?? 80 * 61 = ?? 6 * 47 = ?? 45 * 34 = ?? 17 *  
58 = ?? 84 * 89 = ?? 9 * 86 = ?? 57 * 29 = ?? 79 * 59 = ?? 60 * 10 = ?? 78 * 91 =  
?? 22 * 91 = ?? 28 * 38 = ?? 84 * 34 = ?? 48 * 45 = ??
```

```
Congratulations, mission 31 has been successfully completed!
```

```
While you are waiting, a bat flies by ...
```

```
~/Castle/Main_building/Library/Merlin_s_office
[mission 32] $ cd Drawer

~/Castle/Main_building/Library/Merlin_s_office/Drawer
[mission 32] $ touch inventory.txt

~/Castle/Main_building/Library/Merlin_s_office/Drawer
[mission 32] $ cd ..

~/Castle/Main_building/Library/Merlin_s_office
[mission 32] $ ls
Drawer/      grimoire_15020  grimoire_21416  grimoire_28558  grimoire_3911
candle       grimoire_15121  grimoire_21700  grimoire_28736  grimoire_4664
grimoire_10274  grimoire_15962  grimoire_2184   grimoire_29459  grimoire_4777
grimoire_10580  grimoire_16019  grimoire_22285  grimoire_29582  grimoire_4858
grimoire_10609  grimoire_16212  grimoire_22591  grimoire_29839  grimoire_5182
grimoire_1096   grimoire_16932  grimoire_23124  grimoire_30452  grimoire_5698
grimoire_11373  grimoire_16937  grimoire_23674  grimoire_3117   grimoire_5805
grimoire_114    grimoire_16977  grimoire_23693  grimoire_31186  grimoire_5839
```

```
~/Castle/Main_building/Library/Merlin_s_office
[mission 32] $ ls grimoire* > Drawer/inventory.txt
```

```
~/Castle/Main_building/Library/Merlin_s_office
[mission 32] $ cat Drawer/inventory.txt
grimoire_10100
grimoire_10136
grimoire_10857
grimoire_11635
grimoire_1203
grimoire_12034
grimoire_12049
grimoire_12197
grimoire_12593
grimoire_12603
```

```
grimoire_7509
grimoire_7607
grimoire_7806
grimoire_787
grimoire_8146
grimoire_8206
grimoire_8213
grimoire_8464
grimoire_8563
grimoire_8735
grimoire_8788
grimoire_8994
grimoire_9497

~/Castle/Main_building/Library/Merlin_s_office
[mission 32] $ gsh check
```

```
Congratulations, mission 32 has been successfully completed!
```

```
~/Castle/Main_building/Library/Merlin_s_office
[mission 33] $ ls
Drawer/
candle
error.txt
grimoire_ABmRkfpEzybVWBISwl
grimoire_AQdwkfCMDNPSmlpkYdYMKmIymS
grimoire_BbBQasfqbIAkyCwGShdHVDL
grimoire_CdvSyHht
grimoire_DSnUzrxMbZrxnRyIBoS
[ ] kali@kali: ~
File Actions Edit View Help
~/Castle/Main_building/Library/Merlin_s_office
[mission 33] $ grep "GSH" -l -i grimoire*
grimoire_ABmRkfpEzybVWBISwl
grep: grimoire_AQdwkfCMDNPSmlpkYdYMKmIymS: Permission denied
grep: grimoire_BbBQasfqbIAkyCwGShdHVDL: Permission denied
grep: grimoire_CdvSyHht: Permission denied
grep: grimoire_DSnUzrxMbZrxnRyIBoS
grep: grimoire_EoPROKIVItVHCxRggPK
grep: grimoire_ExgpoViZLAEWfvyywLHFMPUbz: Permission denied
grep: grimoire_GKoMzBEhhVUGkPDmERpqOU: Permission denied
```

```
~/Castle/Main_building/Library/Merlin_s_office
[mission 33] $ grep "GSH" -l -i grimoir* 2>/dev/null
grimoire_ABmRkfpEzybVWBISwl
grimoire_DSnUzrxMbZrxnRyIBoS
grimoire_EoPROKIVItVHCxRggPK
grimoire_IKAsqriVKnIKYzfhcOODUaYn
grimoire_MkWzwcgwBIvKhBBuMynCdBOhFMxbcl
grimoire_MwrbikGxGJfBgxHIkJRuepEtv
grimoire_PMhFieudhQCeJyRuRZBC
grimoire_PpvVupUnPFvIQPMdPFgyzSRzilObE
grimoire_TWJibMFdKNj
grimoire_UmWoKAsTkvSWPoqfnAdLSoPRti
grimoire_Wr0pkOvNQuHuAV
grimoire_cQhuRiXwlnNZ
grimoire_cpDMSUQabcx
grimoire_gPonFpODNcszdXGJuutEEdGnohB
grimoire_glAyJDIPzAfiksiBsvibrPMOMztd0S
grimoire_lAvHtJlSgmdiPKdeinI
grimoire_mLAuoMZUykNlmpRevceWelhSea
grimoire_nHRJLicluGIRlePSGljIaBhk
grimoire_olrTsegrAixpLHHtaAGZaMQkS
grimoire_oudwLoAoRaQGG
grimoire_pQtqyMVVpXviboINDklEoArozdvYkN
grimoire_qhZsEcyOXEYqSkSsTMvv
grimoire_rzTVyWcKqWgGqeOFqPt
grimoire_swgnHYTgrMLcOcsDTsrVl
grimoire_uXtwZqdScMEfrcMVSsMdwWho
grimoire_wzmyrRhhvnfLBQp
grimoire_xvxtQRRJuoYblcpksqiINbON
grimoire_yMMxQuKZsFXfeSiXTz
~/Castle/Main_building/Library/Merlin_s_office
[mission 33] $ gsh check
```

Congratulations, mission 33 has been successfully completed!

```
~/Castle/Observatory
[mission 34] $ ls
merlin star_chart stderr.txt stdout.txt

~/Castle/Observatory
[mission 34] $ ./merlin 2>stderr.txt
THESECRETKEYISONSTDERR

~/Castle/Observatory
[mission 34] $ ./merlin 1>stdout.txt
sIFWOKAYGraFAUsFxFnrvTUEjxSaArPiMnuOqfjuVVahWyFvPQRMnzjHDpwhmToyZpguRwluzGzcMPIzs
I1YYGvlIabTLCgNMBWeZlZmsQRdFyMjLpMJAaviQCYtblwMFEkjHumjExUGAnQLyFpVocGwTngPSyGsmb
qfTKFrLFuDctWivzSgKlJeRrOMOzdqvGDWF1

~/Castle/Observatory
[mission 34] $ cat stderr.txt
sIFWOKAYGraFAUsFxFnrvTUEjxSaArPiMnuOqfjuVVahWyFvPQRMnzjHDpwhmToyZpguRwluzGzcMPIzs
I1YYGvlIabTLCgNMBWeZlZmsQRdFyMjLpMJAaviQCYtblwMFEkjHumjExUGAnQLyFpVocGwTngPSyGsmb
qfTKFrLFuDctWivzSgKlJeRrOMOzdqvGDWF1

~/Castle/Observatory
[mission 34] $ ls
merlin star_chart stderr.txt stdout.txt

~/Castle/Observatory
[mission 34] $ ./merlin < star_chart 2>key.txt
THESECRETKEYISONSTDERR

~/Castle/Observatory
[mission 34] $ cat key.txt
sIFWOKAYGraFAUsFxFnrvTUEjxSaArPiMnuOqfjuVVahWyFvPQRMnzjHDpwhmToyZpguRwluzGzcMPIzs
I1YYGvlIabTLCgNMBWeZlZmsQRdFyMjLpMJAaviQCYtblwMFEkjHumjExUGAnQLyFpVocGwTngPSyGsmb
qfTKFrLFuDctWivzSgKlJeRrOMOzdqvGDWF1

~/Castle/Observatory
[mission 34] $ gsh check < stderr.txt
What is the secret key?
Congratulations, mission 34 has been successfully completed!
```

```
└── Throne_room
    └── Kings_quarter
Main_tower
└── First_floor
    ├── Second_floor
    │   └── Top_of_the_tower
    ├── painting_HQfUNcQY
    ├── painting_IHNTgevQ
    └── painting_wtHDfMqq
Observatory
├── key.txt
├── merlin
├── star_chart
└── stderr.txt
    └── stdout.txt

14 directories, 98 files

~/Castle
[mission 35] $ pwd
/home/kali/gameshell/World/Castle

~/Castle
[mission 35] $ cd Main_building/Trone_room
bash: cd: Main_building/Trone_room: No such file or directory

~/Castle
[mission 35] $ cd Main_building/Throne_room

~/Castle/Main_building/Throne_room
[mission 35] $ ls
Kings_quarter/

~/Castle/Main_building/Throne_room
[mission 35] $ ls -l
total 4
drw-r--r-- 2 kali kali 4096 Dec 15 20:05 Kings_quarter/

~/Castle/Main_building/Throne_room
[mission 35] $ chmod u+x Kings_quarter/

~/Castle/Main_building/Throne_room
[mission 35] $ cd Kings_quarter/

~/Castle/Main_building/Throne_room/Kings_quarter
[mission 35] $ gsh check

Congratulations, mission 35 has been successfully completed!
```

```
~/Castle/Main_building/Throne_room/Kings_quarter
[mission 36] $ ls -a
./ ../.secret_note note

~/Castle/Main_building/Throne_room/Kings_quarter
[mission 36] $ ls -l .secret_note
--w----- 1 kali kali 11 Dec 17 19:26 .secret_note

~/Castle/Main_building/Throne_room/Kings_quarter
[mission 36] $ chmod u+r .
./ ../.secret_note

~/Castle/Main_building/Throne_room/Kings_quarter
[mission 36] $ chmod u+r .secret_note

~/Castle/Main_building/Throne_room/Kings_quarter
[mission 36] $ cat .secret_note
3496162931

~/Castle/Main_building/Throne_room/Kings_quarter
[mission 36] $ gsh check
What's the combination to open the King's safe? 3496162931

Congratulations, mission 36 has been successfully completed!
```

```
~/Castle/Main_building/Throne_room/Kings_quarter
[mission 37] $ ls -l
total 4
-rw-r--r-- 1 kali kali 11 Dec 17 19:26 note

~/Castle/Main_building/Throne_room/Kings_quarter
[mission 37] $ cd ..

~/Castle/Main_building/Throne_room
[mission 37] $ ls -l
total 8
drwxr-xr-x 2 kali kali 4096 Dec 17 19:24 Kings_quarter/
d----- 2 kali kali 4096 Dec 17 19:27 Safe/

~/Castle/Main_building/Throne_room
[mission 37] $ ls -l Safe/
ls: cannot open directory 'Safe/': Permission denied

~/Castle/Main_building/Throne_room
[mission 37] $ chmod u+xr Safe/

~/Castle/Main_building/Throne_room
[mission 37] $ ls -l Safe/
total 4
----- 1 kali kali 48 Dec 17 19:27 crown

~/Castle/Main_building/Throne_room
[mission 37] $ chmod u+wx Safe/crown

~/Castle/Main_building/Throne_room
[mission 37] $ cat Safe/crown
jgs
(^~.^.-)
(^~.^~^)
\@*\@*\@/
{_946_}
```

```
~/Castle/Main_building/Throne_room/Safe
[mission 37] $ cd ..

~/Castle/Main_building/Throne_room
[mission 37] $ chmod ugo+rwx Safe/

~/Castle/Main_building/Throne_room
[mission 37] $ mv Safe/crown ~/Forest/Hut/Chest

~/Castle/Main_building/Throne_room
[mission 37] $ gsh check
What are the 3 digits inscribed on the base of the crown? 946

Congratulations, mission 37 has been successfully completed!
```

```
~/Garden/Maze
[mission 38] $ ls
1fdafbf07d974b408a4e07d1f56c/ 9ffbfd75838d9fde197/
3d515f52240b96009b/ aecc1afe785eebc0ef57540/
3eb2ba8a12c79c8af20c98034a/ cb1cfb098917/
5dc96e819f/ de7ef82d8f2f66590b014498bbf97/
9491d5c3/ fe4eff2a79ab7/

~/Garden/Maze
[mission 38] $ find -type f
./3eb2ba8a12c79c8af20c98034a/cc108ebfb18eadc89d5/03b3029b45f5e39f17589e1fc83/38672
./aecc1afe785eebc0ef57540/8d0bb3db02d8dfb3fb614a0e0bdb/cd5c393e52b94d1b39e96646/386
78
./9491d5c3/1c88f53c0d2f439fdb/b7db7a00155883c0c/64477
./9491d5c3/6eb14a1d5e5de/52f01620cf7ff2b8e/3326
./9491d5c3/16f586b83488452345af0958a14ce/a8c5f1f74911e16ce75a3fba68ce69/18550
./9491d5c3/91c3b132c21feb3e4d40a744eee829/3a127307a4411a7fb6cc6e7803/5025

~/Garden/Maze
[mission 38] $ cat 9491d5c3/6eb14a1d5e5de/52f01620cf7ff2b8e/3326
3326 stone f50899bf669fa82d6f5228e964b0d3e1854522f1

~/Garden/Maze
[mission 38] $ cat 9491d5c3/91c3b132c21feb3e4d40a744eee829/3a127307a4411a7fb6cc6e78
03/5025
5025 stone 94a2af7b6198bfc531ad7727565cee6c311a5bd3

~/Garden/Maze
[mission 38] $ cat 9491d5c3/16f586b83488452345af0958a14ce/a8c5f1f74911e16ce75a3fba6
8ce69/18550
18550 stone 52e150322bb41f3b4e74bf6540a7f192e5a33b94

~/Garden/Maze
[mission 38] $ cat 9491d5c3/1c88f53c0d2f439fdb/b7db7a00155883c0c/64477
64477 stone af8954fe9e0db95db15325feb20d81ea436c83bc

~/Garden/Maze
[mission 38] $ cat aecc1afe785eebc0ef57540/8d0bb3db02d8dfb3fb614a0e0bdb/cd5c393e52b
94d1b39e96646/38678
38678 ruby 82ce2a4f3d65c7786ce5166bc2392a3eb2e533eb

~/Garden/Maze
[mission 38] $ mv aecc1afe785eebc0ef57540/8d0bb3db02d8dfb3fb614a0e0bdb/cd5c393e52b9
4d1b39e96646/38678 ~/Forest/Hut/Chest

~/Garden/Maze
[mission 38] $ gsh check

Congratulations, mission 38 has been successfully completed!
```

```
~/Garden/Maze
[mission 39] $ find -type f | xargs grep -l diamond
./23a404f18a/c78af5b684536bf3911058a7/8d3c00d57d1e5bd9b6435f827e260

~/Garden/Maze
[mission 39] $ cat 23a404f18a/c78af5b684536bf3911058a7/8d3c00d57d1e5bd9b6435f827e260
0
8d3c00d57d1e5bd9b6435f827e260 diamond 99daaf4467d77adf1525181c8ffa86d5c4bb8652

~/Garden/Maze
[mission 39] $ mv 23a404f18a/c78af5b684536bf3911058a7/8d3c00d57d1e5bd9b6435f827e260
~/Forest/Hut/Chest

~/Garden/Maze
[mission 39] $ gsh check

Congratulations, mission 39 has been successfully completed!
```

```
(0)
~/Stall
[mission 40] $ find -type f | xargs grep -l king
./034b98ea91bbf_s_c_r_o_l_l_034b98ea91bbfa38
(1)
~/Stall
[mission 40] $ cat 034b98ea91bbf_s_c_r_o_l_l_034b98ea91bbfa38 | grep -v PAID
Sylvia Anglais bought a bag flour for 3 coppers.
Tiphaine Messonnier bought a blanket for 4 coppers.
Bertrand Marchand bought a cow for 2 coppers.
Hassan Lenain bought a knife for 5 coppers.
Julien Poudevigne bought a piece of soap for 3 coppers.
Paulin Roux bought a ruby for 5 coppers.
Clodomir Marchand bought a ruby for 6 coppers.
Gildas Métivier bought a leather bag for 6 coppers.
Margaux Alamartine bought a shiny rock for 6 coppers.
Tiphaine Rabier bought a piece of soap for 4 coppers.
Gregoire Ageorges bought a pick for 2 coppers.
Philippe Larsonneur bought a leather ball for 2 coppers.
Catherine Métivier bought a horse for 5 coppers.
Thierry Chauvin bought a pin for 4 coppers.
Boniface Lenain bought a piece of soap for 6 coppers.
Hussein Langlois bought a dented helmet for 2 coppers.
Hermance Larsonneur bought a chicken for 3 coppers.
the King bought a leather bag for 6 coppers.
```

```
the King bought a wooden spoon for 2 coppers.
Philibert Poudevigne bought a leather bag for 4 coppers.
Romaric Chauvin bought a bottle of cider for 5 coppers.
Paul Boulanger bought a wooden spoon for 2 coppers.
Romain Duchesne bought a belt for 4 coppers.
the King bought a bag flour for 3 coppers.
Constantin Ageorges bought a chicken for 5 coppers.
(2)
~/Stall
[mission 40] $ gsh check
How much does the king owe? 17
```

```
Congratulations, mission 40 has been successfully completed!
```

```
(0)
~/Stall
[mission 41] $ find . -type f | xargs grep -v PAID | wc -l
55
(1)
~/Stall
[mission 41] $ gsh check
How many unpaid items are there? 55
```

Congratulations, mission 41 has been successfully completed!

```
~/Castle/Main_building/Library/Merlin_s_office/Drawer/
~/Castle/Main_building/Library/Merlin_s_office/Drawer
[mission 42] $ ls
ink_and_scroll inventory.txt secret_message

~/Castle/Main_building/Library/Merlin_s_office/Drawer
[mission 42] $ cat secret_message
urer vf zl jvyy:
lbh jvyy trg zl purfg, naq rirelguvat vg pbagnvaf.
guvf purfg vf va gur pryne, naq gur jbeq gb znxr
vg er-nccrne vf: uphz
zreyva gur rapunagre

~/Castle/Main_building/Library/Merlin_s_office/Drawer
[mission 42] $ tr "a-z" "l-za-k" < secret_message
fcpc gq kw ugjj:
wms ugjj ecr kw afcqr, ylb ctcpwrfgle gr amlryglq.
rgqq afcqr gq gl rfc acjjyp, ylb rfc umpb rm kyic
gr pc-ynncyp gq: fask
kcpjgl rfc clafylrcp

~/Castle/Main_building/Library/Merlin_s_office/Drawer
[mission 42] $ tr "a-z" "m-za-l" < secret_message
gdqd hr lx vhkk:
xnt vhkk fds lx bgdrs, zmc dudqxsghmf hs bnmszhmr.
sghr bgdrs hr hm sgd bdkkzq, zmc sgd vnqc sn lzjd
hs qd-zoodzq hr: gbt
ldqkhm sgd dmbgzmsdq

~/Castle/Main_building/Library/Merlin_s_office/Drawer
[mission 42] $ tr "a-z" "n-za-m" < secret_message
here is my will:
you will get my chest, and everything it contains.
this chest is in the cellar, and the word to make
it re-appear is: hcum
merlin the enchanter

~/Castle/Main_building/Library/Merlin_s_office/Drawer
[mission 42] $ gsh check
What's the key that will make Merlin's chest to appear?
hcum
```

Congratulations, mission 42 has been successfully completed!

CONGRATULATIONS!

You have finished all the missions.