

1

```
jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:~/Q23010327 --INSERT--  
[~] $ pwd  
/home/jian  
[~] $ cd ~  
[~] $ mkdir Q23010327  
mkdir: cannot create directory 'Q23010327': File exists  
[~] $ cd Q23010327 --INSERT--  
[~/Q23010327] $ mkdir jianjiang  
[~/Q23010327] $ ls  
jianjiang Q23010327 --INSERT--  
[~/Q23010327] $ rmdir jianjiang --INSERT--  
[~/Q23010327] $ ls  
Q23010327 --INSERT--  
[~/Q23010327] $ --INSERT--  
  
jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:~/Q23010327 --INSERT--  
[~] $ cd ~  
[~] $ touch jianjiang.txt --INSERT--  
[~] $ ls  
Desktop Dotfiles jianjiang.txt Pictures Q23010327 Templates Videos  
Documents Downloads Music Public Snap tmp_dir --INSERT--  
[~] $ echo "hello word" > jianjiang.txt --INSERT--  
[~] $ cat jianjiang.txt --INSERT--  
hello word  
[~] $ cp jianjiang.txt jianjiang2.txt --INSERT--  
[~] $ mv jianjiang.txt Q23010327.txt --INSERT--  
[~] $ ls  
Desktop Downloads Pictures Q23010327.txt tmp_dir  
Documents jianjiang2.txt Public Snap Videos  
Dotfiles Music Q23010327 Templates --INSERT--  
[~] $ --NORMAL--
```

```
jianjian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:~$ whoami
jian
--INSERT--
[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:~]$ sudo su root
[sudo] password for jian:
root@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:/home/jian# groupadd student
root@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:/home/jian# whoami
root
root@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:/home/jian# adduser Q23010327
adduser: Please enter a username matching the regular expression configured
via the NAME_REGEX[_SYSTEM] configuration variable. Use the '--force-badname'
option to relax this check or reconfigure NAME_REGEX.
root@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:/home/jian# adduser jianjiang
Adding user `jianjiang' ...
Adding new group `jianjiang' (1002) ...
Adding new user `jianjiang' (1001) with group `jianjiang' ...
Creating home directory `/home/jianjiang' ...
Copying files from `/etc/skel' ...
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
Sorry, passwords do not match.
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: password updated successfully
Changing the user information for jianjiang
Enter the new value, or press ENTER for the default
      Full Name []:
      Room Number []:
      Work Phone []:
      Home Phone []:
      Other []:
root@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:/home/jian# whoami
root
root@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:/home/jian# adduser Q23010327
adduser: Please enter a username matching the regular expression configured
via the NAME_REGEX[_SYSTEM] configuration variable. Use the '--force-badname'
option to relax this check or reconfigure NAME_REGEX.
root@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:/home/jian# adduser jianjiang
Adding user `jianjiang' ...
Adding new group `jianjiang' (1002) ...
Adding new user `jianjiang' (1001) with group `jianjiang' ...
Creating home directory `/home/jianjiang' ...
Copying files from `/etc/skel' ...
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
Sorry, passwords do not match.
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: password updated successfully
Changing the user information for jianjiang
Enter the new value, or press ENTER for the default
      Full Name []:
      Room Number []:
      Work Phone []:
      Home Phone []:
      Other []:
Is the information correct? [Y/n] y
root@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:/home/jian# usermod -g student jianjiang
root@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:/home/jian# su jianjiang
jianjiang@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:/home/jian$ cd ~
jianjiang@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:~$ touch jianjiang.txt
jianjiang@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:~$ ls -l
total 0
-jianjiang@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:~$
```

```
Alacritty

[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~]
$ mkdir /home/jian/others
--INSERT--

[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~]
$ cd ~/others
--INSERT--

[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~/others]
$ touch 111.txt 222.txt
--INSERT--

[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~/others]
$ tar -czvf backup.tar.gz.others
--INSERT--
tar: Cowardly refusing to create an empty archive
Try 'tar --help' or 'tar --usage' for more information.

[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~/others]
$ ls -
--INSERT--
.rw-rw-r-- jian jian 0 B Mon Nov 10 08:45:22 2025 111.txt
.rw-rw-r-- jian jian 0 B Mon Nov 10 08:45:22 2025 222.txt

[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~/others]
$ tar -xvf backup.tar.gz
--INSERT--
tar (child): backup.tar.gz: Cannot open: No such file or directory
tar (child): Error is not recoverable: exiting now
tar: Child returned status 2
tar: Error is not recoverable: exiting now

[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~/others]
$ ls -
--INSERT--
.rw-rw-r-- jian jian 0 B Mon Nov 10 08:45:22 2025 111.txt
.rw-rw-r-- jian jian 0 B Mon Nov 10 08:45:22 2025 222.txt

[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~/others]
$ [REDACTED]
--INSERT--
```

```
Alacritty

[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~]
$ touch demo
--INSERT--

[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~]
$ chmod 777 demo
--INSERT--

[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~]
$ chmod a-x demo
--INSERT--

[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~]
$ ls -l demo
--INSERT--
.rw-rw-rw- jian jian 0 B Mon Nov 10 08:22:10 2025 demo

[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~]
$ chmod go-w demo
--INSERT--

[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~]
$ ls -l demo
--INSERT--
.rw-r--r-- jian jian 0 B Mon Nov 10 08:22:10 2025 demo

[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~]
$ chmod g+w demo
--INSERT--

[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~]
$ ls -l demo
--INSERT--
.rw-rw-r-- jian jian 0 B Mon Nov 10 08:22:10 2025 demo

[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~]
$ chmod a= demo
--INSERT--

[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~]
$ ls -l demo
--INSERT--
----- jian jian 0 B Mon Nov 10 08:22:10 2025 demo

[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~]
$ chmod +t demo
--INSERT--

[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~]
$ ls -l demo
--INSERT--
-----T jian jian 0 B Mon Nov 10 08:22:10 2025 demo

[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~]
$ chmod u+s demo
--INSERT--
```

```

(jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~]
$ chmod g+w demo --INSERT--
(jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~]
$ ls -l demo --INSERT--
.rw-rw-r-- jian jian 0 B Mon Nov 10 08:22:10 2025 demo
(jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~]
$ chmod a= demo --INSERT--
(jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~]
$ ls -l demo --INSERT--
.jian jian 0 B Mon Nov 10 08:22:10 2025 demo
(jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~]
$ chmod a+t demo --INSERT--
(jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~]
$ ls -l demo --INSERT--
..T jian jian 0 B Mon Nov 10 08:22:10 2025 demo
(jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~]
$ chmod u+s demo --INSERT--
(jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~]
$ ls -l demo --INSERT--
..S----T jian jian 0 B Mon Nov 10 08:22:10 2025 demo
(jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~]
$ chmod u+rwx demo --INSERT--
(jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~]
$ ls -l demo --INSERT--
..r-srws-T jian jian 0 B Mon Nov 10 08:22:10 2025 demo
(jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~]
$ chmod g+rws demo --INSERT--
(jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~]
$ ls -l demo --INSERT--
..r-srws-T jian jian 0 B Mon Nov 10 08:22:10 2025 demo
(jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~]
$ chmod g+rws demo --INSERT--
(jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~]
$ cat > myfile <<EOF --INSERT--
no, I study in njupt.
this line ends with 00
this line ends with .00
I am 25 years old.
He is 15. It is 16.00
wy is the short of my name.
EOF

(jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~]
$ grep '^' myfile --INSERT--
no, I study in njupt.

(jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~]
$ grep '\.00' myfile --INSERT--
this line ends with .00
He is 15. It is 16.00

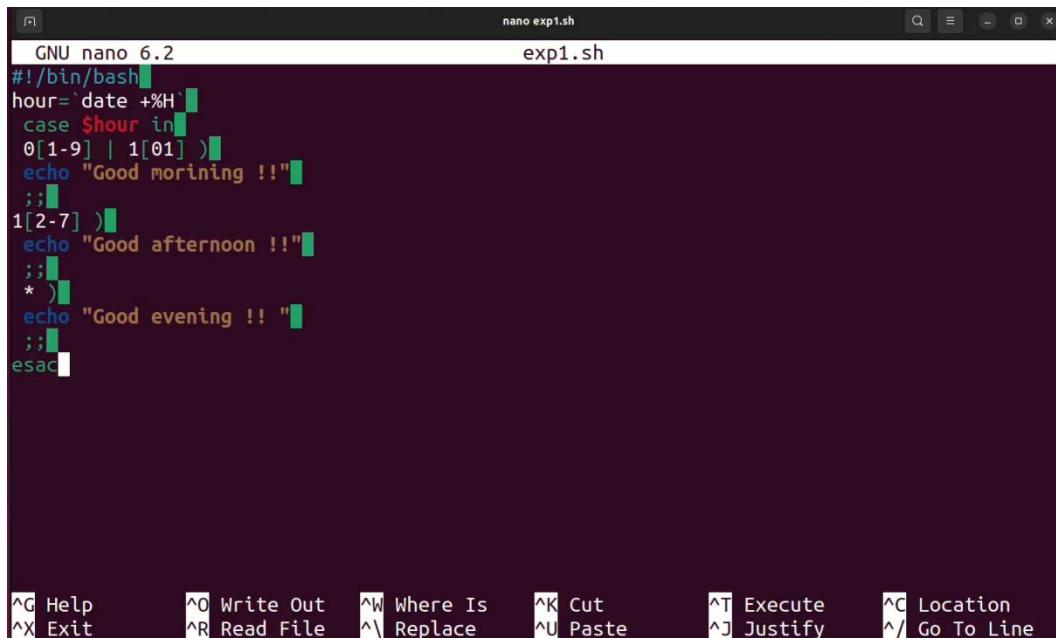
(jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~]
$ grep '5\..' myfile --INSERT--
He is 15. It is 16.00

(jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~]
$ grep '^wy' myfile --INSERT--
wy is the short of my name.

(jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)~]
$ --INSERT--

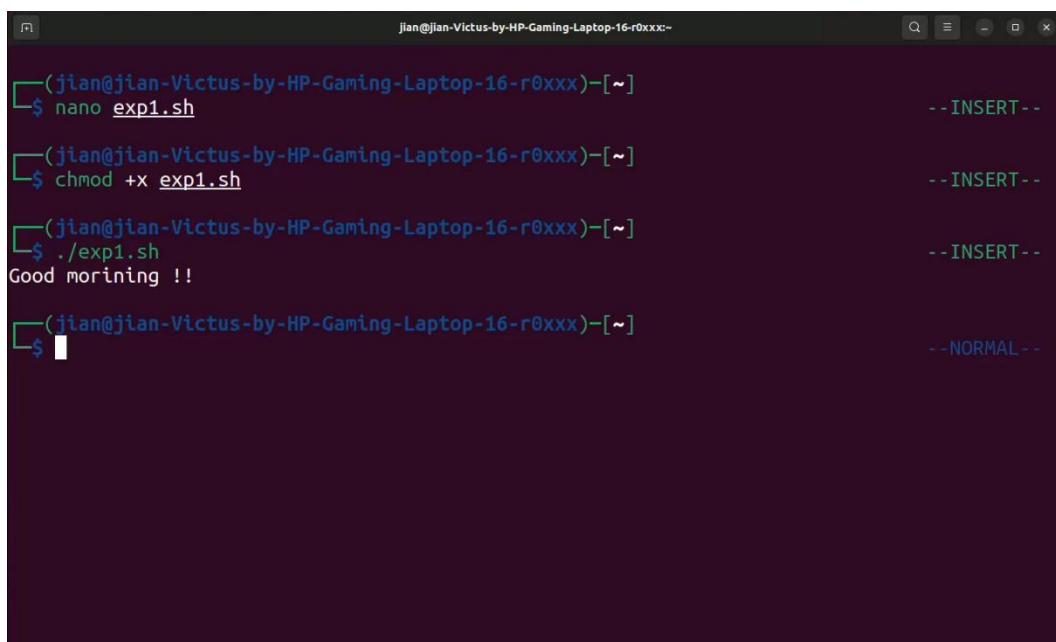
```

2-1



```
GNU nano 6.2                               nano exp1.sh
#!/bin/bash
hour=`date +%H`
case $hour in
0[1-9] | 1[01] )
echo "Good morining !!";;
;;
1[2-7] )
echo "Good afternoon !!";;
;;
* )
echo "Good evening !! "
;;
esac
```

^G Help ^O Write Out ^W Where Is ^K Cut ^T Execute ^C Location
^X Exit ^R Read File ^\ Replace ^U Paste ^J Justify ^/ Go To Line



```
jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:~
```

```
[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:~]
$ nano exp1.sh                                     --INSERT--
[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:~]
$ chmod +x exp1.sh                                --INSERT--
[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:~]
$ ./exp1.sh                                       --INSERT--
Good morining !!

[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:~]
$                                         --NORMAL--
```

2-2

A screenshot of a terminal window titled "jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:~". The terminal shows the following interaction:

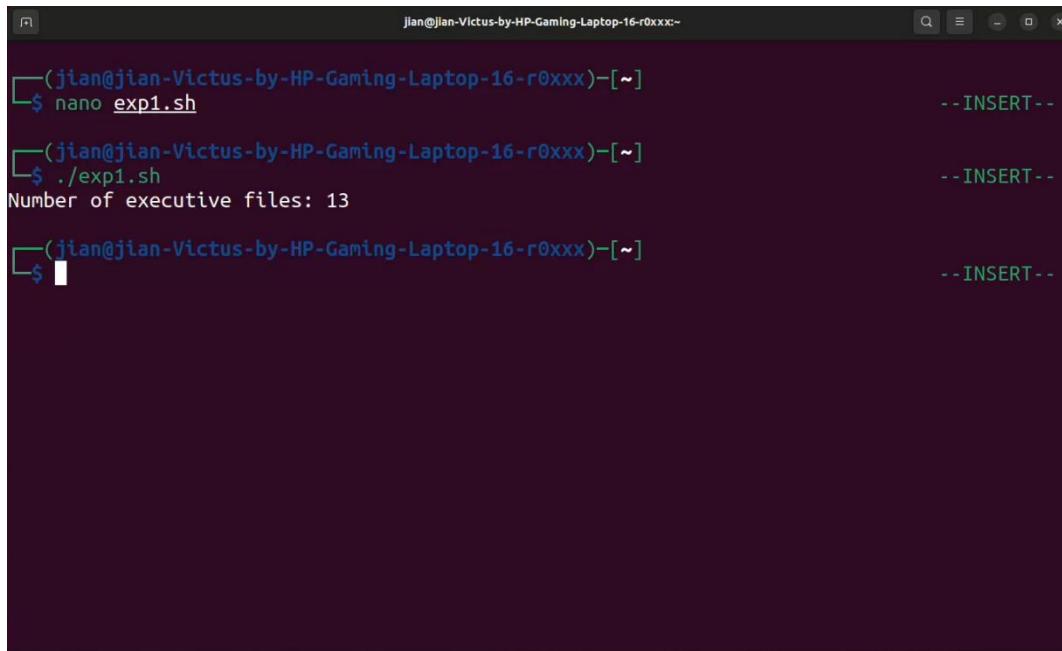
```
(jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx) [~]
$ ./exp1.sh
--INSERT--
Enter the first integer:
555
Enter the second integer:
666
555 is less than 666
--INSERT--
```

2-3

A screenshot of a terminal window titled "jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:~". The terminal shows the following interaction:

```
(jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx) [~]
$ nano exp1.sh
--INSERT--
(jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx) [~]
$ ./exp1.sh
--INSERT--
The minimal value is: -3
--INSERT--
```

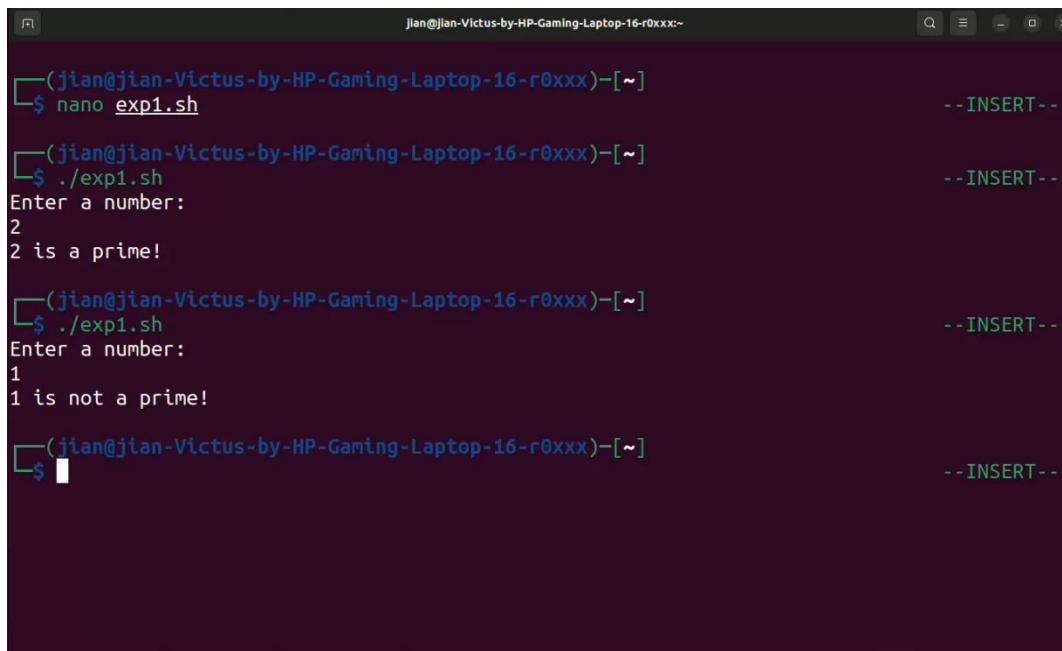
2-4



A terminal window titled "jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:~". The session shows the user running a script named "exp1.sh". The output indicates there are 13 executive files. The terminal has a dark background with light blue text.

```
[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:~]
$ nano exp1.sh
[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:~]
$ ./exp1.sh
Number of executive files: 13
[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:~]
$ [REDACTED]
```

2-5

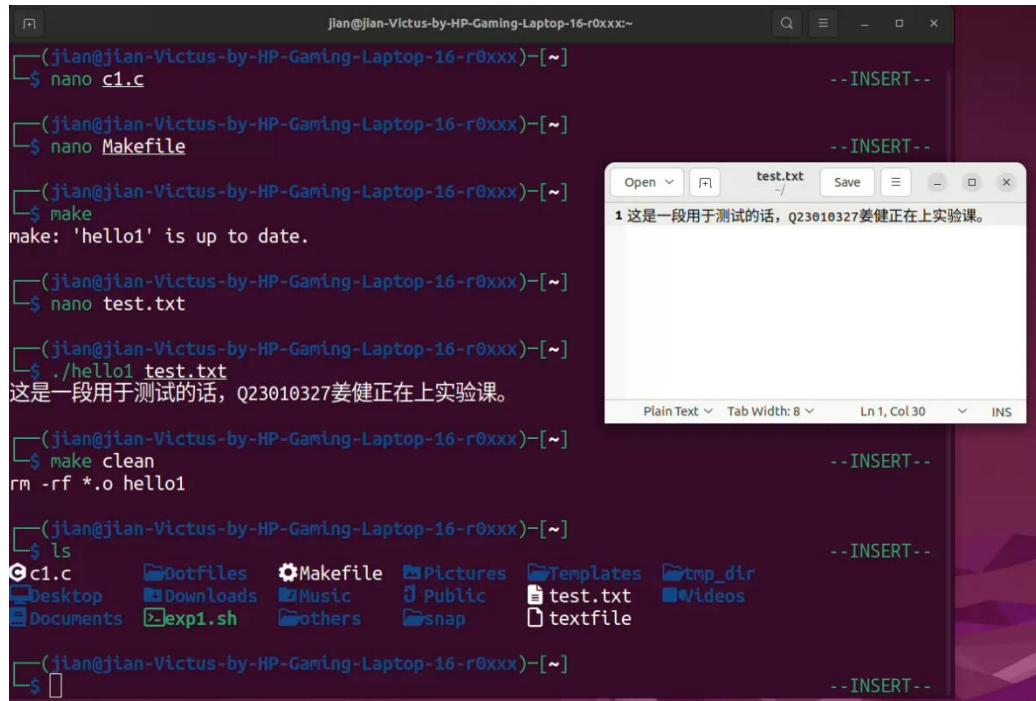


A terminal window titled "jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:~". The user runs "exp1.sh" and is prompted to enter a number. They type "2", which is identified as a prime number. They then type "1", which is identified as not a prime number. The terminal has a dark background with light blue text.

```
[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:~]
$ nano exp1.sh
[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:~]
$ ./exp1.sh
Enter a number:
2
2 is a prime!
[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:~]
$ ./exp1.sh
Enter a number:
1
1 is not a prime!
[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:~]
$ [REDACTED]
```

3-1

```
jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:~  
$ nano c1.c  
  
(jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)-[~]  
$ nano Makefile  
  
(jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)-[~]  
$ make  
make: 'hello1' is up to date.  
  
(jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)-[~]  
$ nano test.txt  
  
(jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)-[~]  
$ ./hello1 test.txt  
这是一段用于测试的话, Q23010327姜健正在上实验课。  
  
(jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)-[~]  
$ make clean  
rm -rf *.o hello1  
  
(jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)-[~]  
$ ls  
c1.c Dotfiles Makefile Pictures Templates tmp_dir  
Desktop Downloads Music Public test.txt videos  
Documents exp1.sh Others snap textfile  
  
(jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx)-[~]  
$ 
```



The screenshot shows a terminal window with a dark theme and a file editor window. The terminal output is as follows:

- Compiling a C program named `c1.c` into `hello1`.
- Creating a `Makefile` for the project.
- Running the compiled program `./hello1` which outputs a test message to `test.txt`.
- Cleaning up by removing the object file `hello1.o`.
- Listing the contents of the current directory, which includes the source code files and the generated executable.

The file editor window titled `test.txt` contains the text: "1 这是一段用于测试的话, Q23010327姜健正在上实验课。".

3-2

```
jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:~
```

```
[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx) [~]
$ nano c2.c
--INSERT--
```

```
[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx) [~]
$ nano Makefile
--INSERT--
```

```
[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx) [~]
$ make
make: 'hello2' is up to date.
--INSERT--
```

```
[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx) [~]
$ ./hello2
textfile
c2.c
Makefile
Dotfiles
snap
Documents
Downloads
c1.c
c1.o
Public
c2.o
Pictures
tmp_dir
others
exp1.sh
Desktop
hello2
test.txt
Music
Templates
Videos
```

```
[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx) [~]
$ make clean
rm -rf *.o hello2
--INSERT--
```

```
[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx) [~]
$ ls
c1.c    Documents  exp1.sh  others    snap      textfile
c2.c    Dotfiles   Makefile  Pictures  Templates  tmp_dir
Desktop Downloads  Music    Public    test.txt  Videos
--INSERT--
```

```
[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx) [~]
$
```

3-3

```
Jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:~
```

```
[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:~] $ nano c3.c --INSERT--
```

```
[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:~] $ nano Makefile --INSERT--
```

```
[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:~] $ make --INSERT--
```

```
gcc -c c3.c  
gcc -o hello3 c3.o
```

```
[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:~] $ ./hello3 --INSERT--
```

```
Current working directory: /home/jian  
Change directory to /home success  
New working directory: /home
```

```
[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:~] $ make clean --INSERT--
```

```
rm -rf *.o hello3
```

```
[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:~] $ ls --INSERT--
```

```
Cc1.c Desktop Downloads Music Public test.txt Videos  
Cc2.c Documents exp1.sh Others snap textfile  
Cc3.c Dotfiles Makefile Pictures Templates tmp_dir
```

```
[jian@jian-Victus-by-HP-Gaming-Laptop-16-r0xxx:~] $ [ ] --INSERT--
```