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## TASK 1

### PART A – B

```
ammansoomro@Amman-PC: ~  
ammansoomro@Amman-PC:~$ sudo addgroup oslab2  
Adding group 'oslab2' (GID 1001) ...  
Done.  
ammansoomro@Amman-PC:~$ adduser osuser1  
adduser: Only root may add a user or group to the system.  
ammansoomro@Amman-PC:~$ sudo adduser osuser1  
Adding user 'osuser1' ...  
Adding new group 'osuser1' (1002) ...  
Adding new user 'osuser1' (1001) with group 'osuser1' ...  
Creating home directory '/home/osuser1' ...  
Copying files from '/etc/skel' ...  
New password:  
Retype new password:  
passwd: password updated successfully  
Changing the user information for osuser1  
Enter the new value, or press ENTER for the default  
Full Name []: osuser1  
Room Number []:  
Work Phone []:  
Home Phone []:  
Other []:  
Is the information correct? [Y/n] y  
ammansoomro@Amman-PC:~$ sudo adduser osuser2  
Adding user 'osuser2' ...  
Adding new group 'osuser2' (1003) ...  
Adding new user 'osuser2' (1002) with group 'osuser2' ...  
Creating home directory '/home/osuser2' ...  
Copying files from '/etc/skel' ...  
New password:  
Retype new password:  
passwd: password updated successfully  
Changing the user information for osuser2  
Enter the new value, or press ENTER for the default  
Full Name []: osuser2  
Room Number []:  
Work Phone []:  
Home Phone []:  
Other []:
```

### PART C

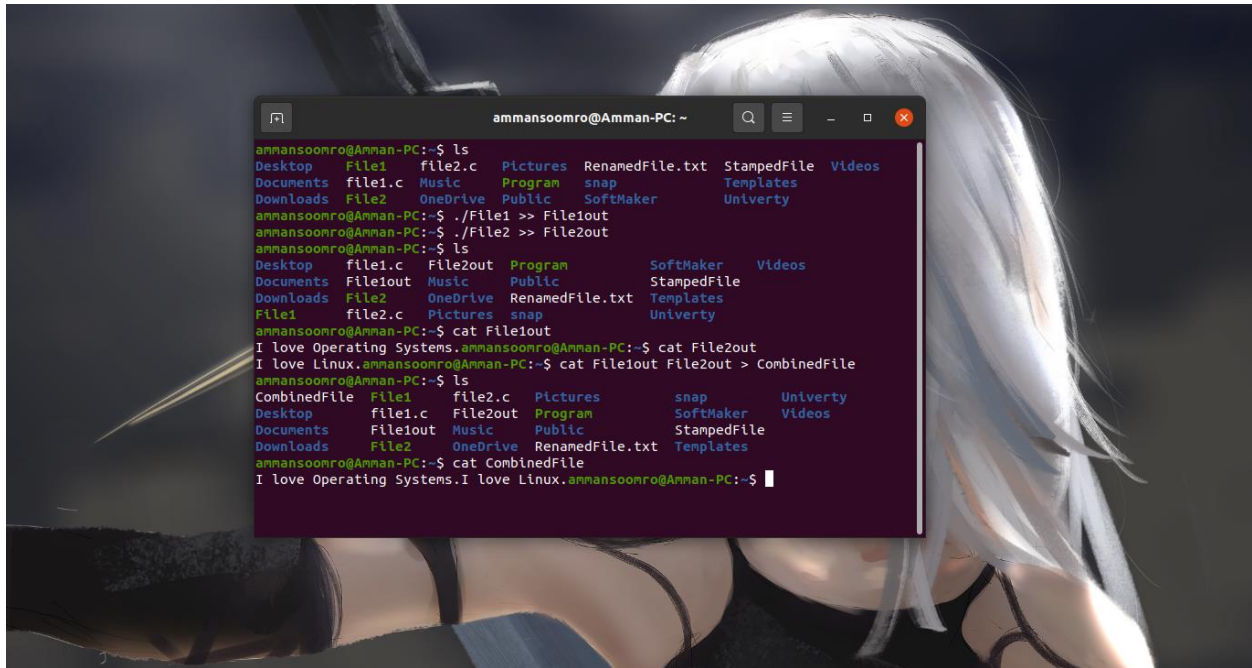
```
ammansoomro@Amman-PC: ~  
Creating home directory '/home/osuser1' ...  
Copying files from '/etc/skel' ...  
New password:  
Retype new password:  
passwd: password updated successfully  
Changing the user information for osuser1  
Enter the new value, or press ENTER for the default  
Full Name []: osuser1  
Room Number []:  
Work Phone []:  
Home Phone []:  
Other []:  
Is the information correct? [Y/n] y  
ammansoomro@Amman-PC:~$ sudo adduser osuser2  
Adding user 'osuser2' ...  
Adding new group 'osuser2' (1003) ...  
Adding new user 'osuser2' (1002) with group 'osuser2' ...  
Creating home directory '/home/osuser2' ...  
Copying files from '/etc/skel' ...  
New password:  
Retype new password:  
passwd: password updated successfully  
Changing the user information for osuser2  
Enter the new value, or press ENTER for the default  
Full Name []: osuser2  
Room Number []:  
Work Phone []:  
Home Phone []:  
Other []:  
Is the information correct? [Y/n] y  
ammansoomro@Amman-PC:~$ sudo usermode -aG oslab2 osuser1  
sudo: usermode: command not found  
ammansoomro@Amman-PC:~$ sudo usermod -aG oslab2 osuser1  
ammansoomro@Amman-PC:~$ sudo usermod -aG oslab2 osuser2  
ammansoomro@Amman-PC:~$ getent group oslab2  
oslab2:x:1001:osuser1,osuser2  
ammansoomro@Amman-PC:~$
```

## TASK 2

```
ammansoomro@Amman-PC: ~/oslab/oslab2
ammansoomro@Amman-PC:~$ ls
anydesk_6.1.0-1_and64.deb  Documents  miclient-x86_64.AppImage  OneDrive  Public  SoftMaker  Templates  Videos
Desktop                  Downloads  Music                    Pictures  snap    softmaker-freeoffice-2018_982-01_and64.deb  Univerty
ammansoomro@Amman-PC:~$ mkdir -p oslab/oslab2
ammansoomro@Amman-PC:~$ ls
Desktop  Downloads  Music
ammansoomro@Amman-PC:~$ cd oslab
ammansoomro@Amman-PC:~/oslab$ ls
oslab2
ammansoomro@Amman-PC:~/oslab$ cd oslab2
ammansoomro@Amman-PC:~/oslab/oslab2$ ls
ammansoomro@Amman-PC:~/oslab/oslab2$
```

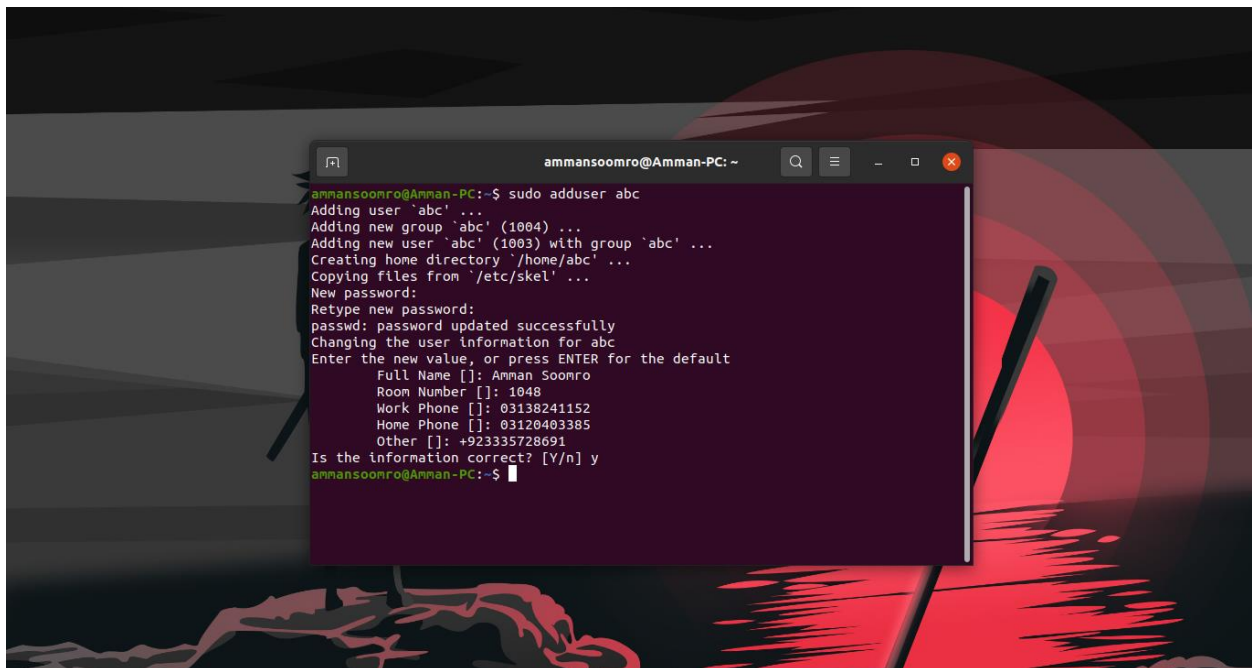
## TASK 3

```
ammansoomro@Amman-PC: ~
ammansoomro@Amman-PC:~$ cat >> file1.c
#include<stdio.h>
int main(){
printf("I love Operating Systems.");
return 0;
}
ammansoomro@Amman-PC:~$ gcc -o File1 file1.c
ammansoomro@Amman-PC:~$ ./File1
I love Operating Systems.ammansoomro@Amman-PC:~$ cat >> file2.c
#include<stdio.h>
int main(){
printf("I love Linux.");
return 0;
}
ammansoomro@Amman-PC:~$ gcc -o File2 file2.c
ammansoomro@Amman-PC:~$ ./File2
I love Linux.ammansoomro@Amman-PC:~$
```

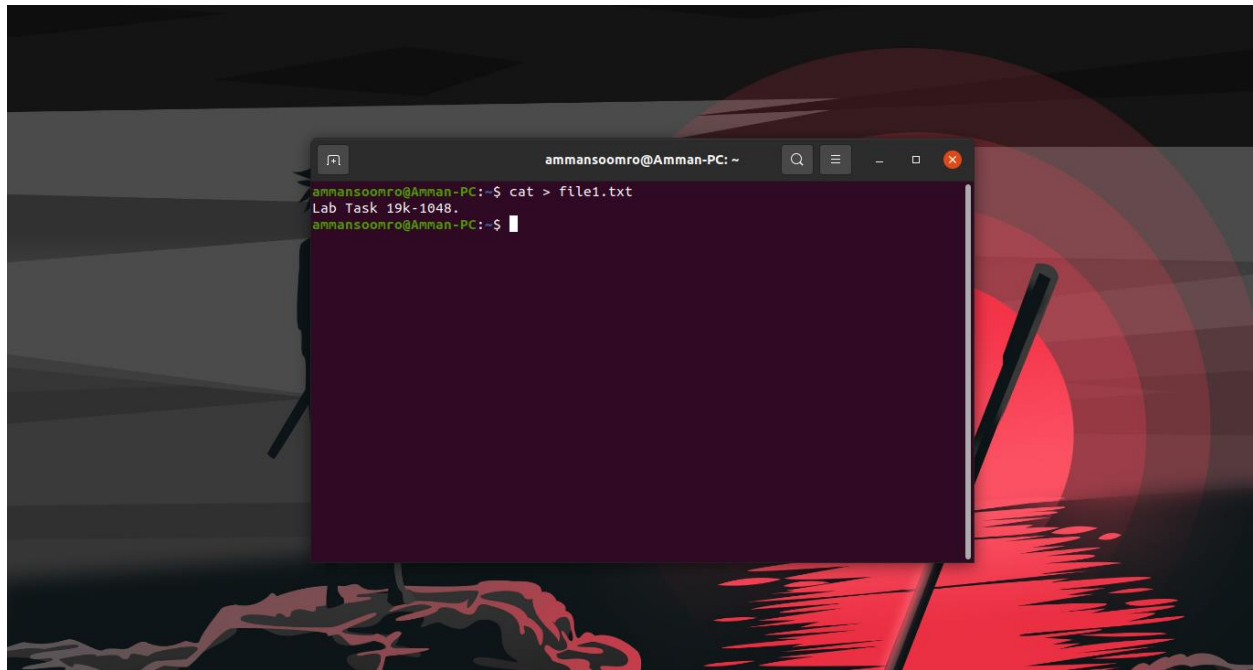


## TASK 4

### PART A



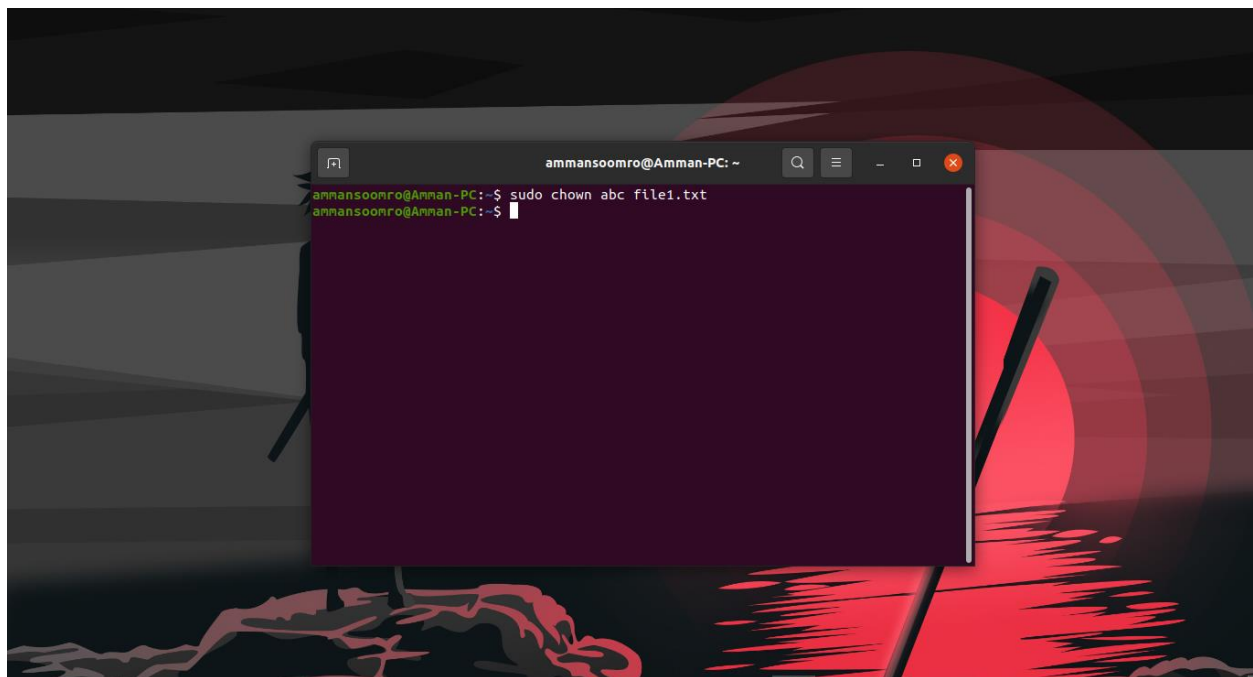
## PART B



A terminal window titled 'ammansoomro@Amman-PC: ~' is displayed against a dark background with a large red sun and a black pen. The terminal shows the command 'cat > file1.txt' being executed, followed by the output 'Lab Task 19k-1048.' and a new prompt line.

```
ammansoomro@Amman-PC: ~  
ammansoomro@Amman-PC:~$ cat > file1.txt  
Lab Task 19k-1048.  
ammansoomro@Amman-PC:~$
```

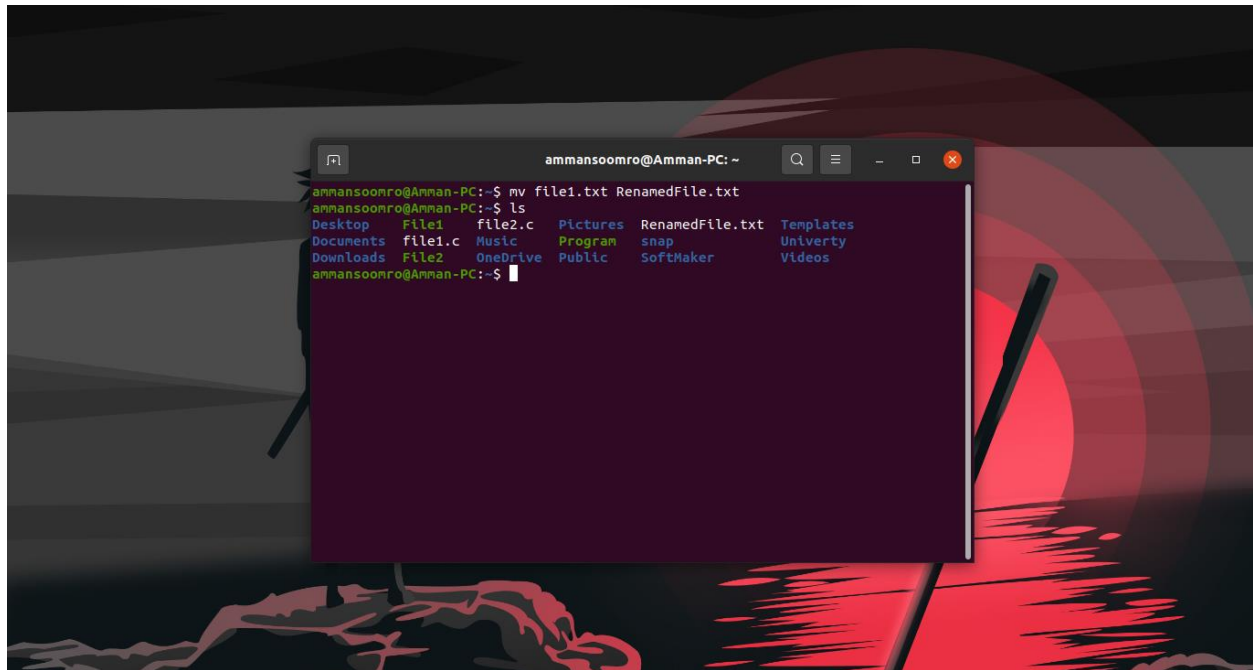
## PART C



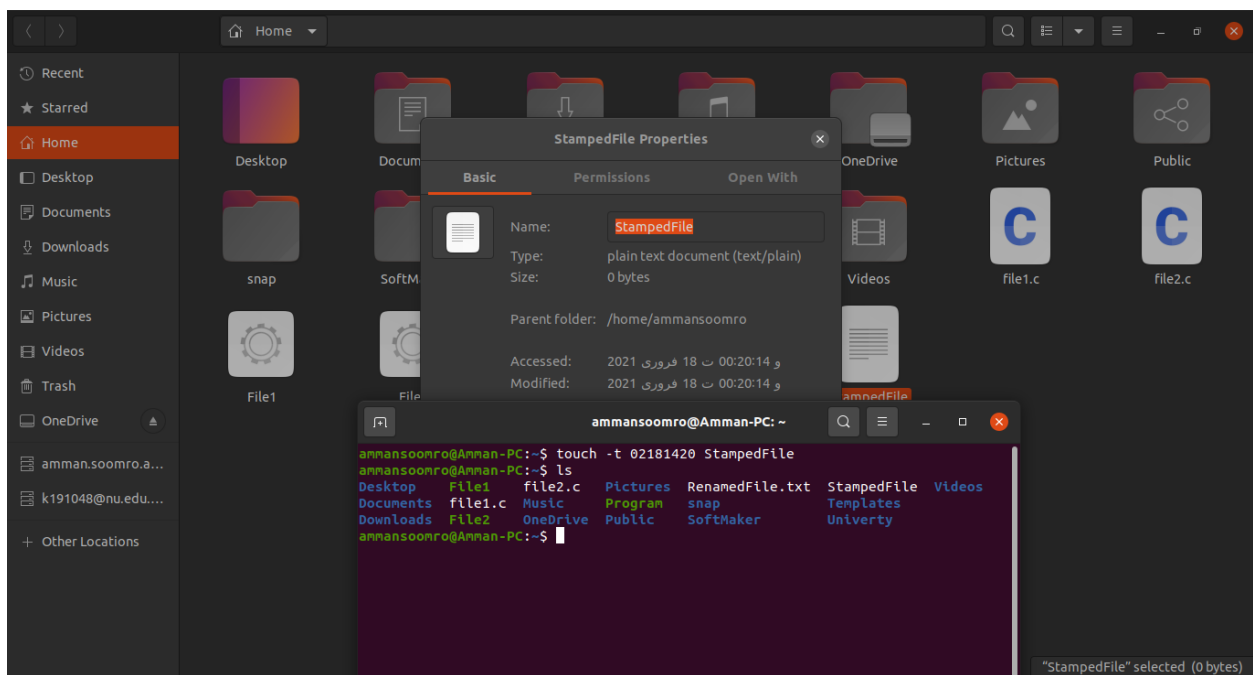
A terminal window titled 'ammansoomro@Amman-PC: ~' is displayed against a dark background with a large red sun and a black pen. The terminal shows the command 'sudo chown abc file1.txt' being executed, followed by a new prompt line.

```
ammansoomro@Amman-PC: ~  
ammansoomro@Amman-PC:~$ sudo chown abc file1.txt  
ammansoomro@Amman-PC:~$
```

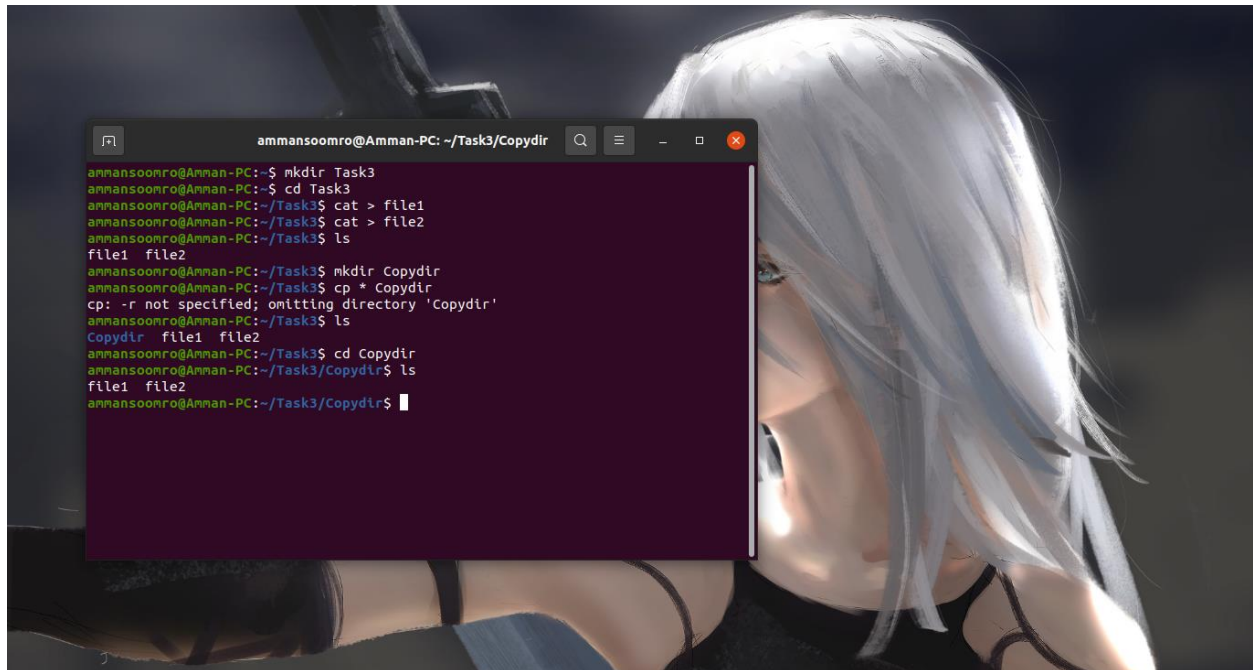
## PART D



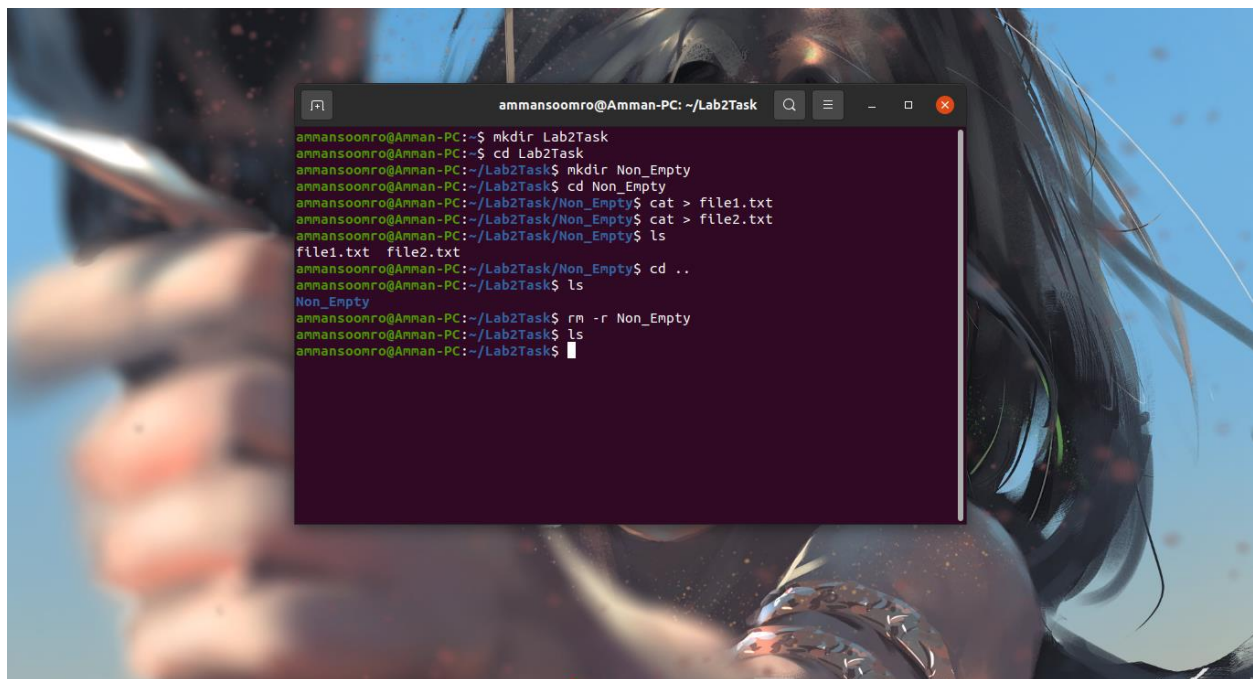
## PART E



## PART F

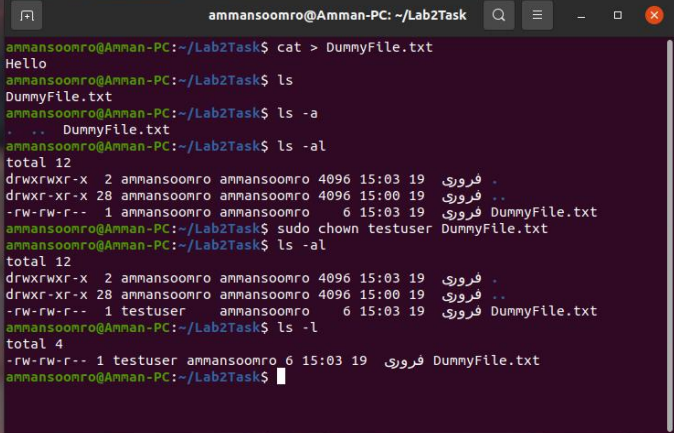


## PART G



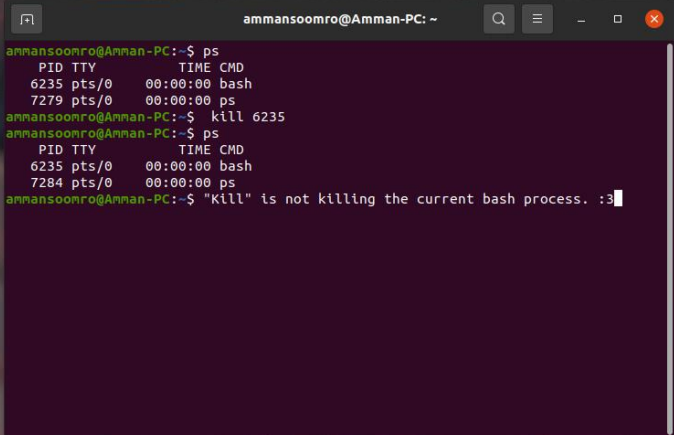


## PART H



```
ammansoomro@Amman-PC: ~/Lab2Task
ammansoomro@Amman-PC:~/Lab2Task$ cat > DummyFile.txt
Hello
ammansoomro@Amman-PC:~/Lab2Task$ ls
DummyFile.txt
ammansoomro@Amman-PC:~/Lab2Task$ ls -a
.  ..  DummyFile.txt
ammansoomro@Amman-PC:~/Lab2Task$ ls -al
total 12
drwxrwxr-x  2 ammansoomro ammansoomro 4096 15:03 19 فروري .
drwxr-xr-x 28 ammansoomro ammansoomro 4096 15:00 19 فروري ..
-rw-rw-r--  1 ammansoomro ammansoomro  6 15:03 19 فروري DummyFile.txt
ammansoomro@Amman-PC:~/Lab2Task$ sudo chown testuser DummyFile.txt
ammansoomro@Amman-PC:~/Lab2Task$ ls -al
total 12
drwxrwxr-x  2 ammansoomro ammansoomro 4096 15:03 19 فروري .
drwxr-xr-x 28 ammansoomro ammansoomro 4096 15:00 19 فروري ..
-rw-rw-r--  1 testuser   ammansoomro  6 15:03 19 فروري DummyFile.txt
ammansoomro@Amman-PC:~/Lab2Task$ ls -l
total 4
-rw-rw-r--  1 testuser ammansoomro 6 15:03 19 فروري DummyFile.txt
ammansoomro@Amman-PC:~/Lab2Task$
```

## PART I



```
ammansoomro@Amman-PC: ~
ammansoomro@Amman-PC:~$ ps
  PID TTY          TIME CMD
  6235 pts/0    00:00:00 bash
  7279 pts/0    00:00:00 ps
ammansoomro@Amman-PC:~$ kill 6235
ammansoomro@Amman-PC:~$ ps
  PID TTY          TIME CMD
  6235 pts/0    00:00:00 bash
  7284 pts/0    00:00:00 ps
ammansoomro@Amman-PC:~$ "Kill" is not killing the current bash process. :3
```



## PART J

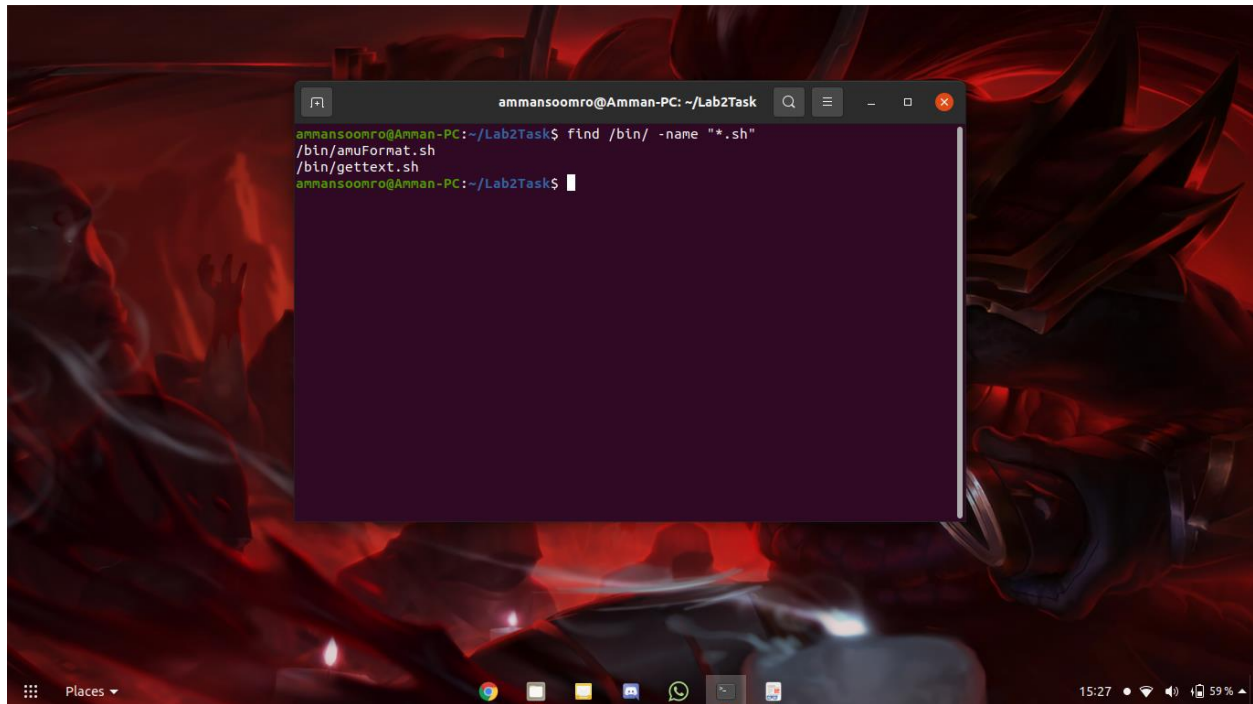
```
ammansoomro@Amman-PC: ~  
ammansoomro@Amman-PC:~$ find ./ | grep "lab"  
./local/share/Steam/tenfoot/resource/images/friends/friends_list_item_panel_labels_mask.tga  
./local/share/Steam/tenfoot/resource/layout/library/library_allgames_griditem_support_labels.xml  
./local/share/Steam/tenfoot/resource/layout/broadcast/notification_availabilitytowatch.xml  
./local/share/Steam/resource/layout/gamespage_details_subheaderright_labels.layout  
./local/share/Steam/resource/layout/gamespage_details_subheader_labels.layout  
./local/share/Steam/friends/remotenplaytogetheravailabilitynotification.res  
./Downloads/Lab Tasks/lab2.rar  
./config/google-chrome/Default/Extensions/kbfnbcaep1bcioakkpcpgfkobkghlhen/14.996.0_2/src/images/7e11b3d730a4391cb59709a8a4c0395d/proofreader-unavailable-small.svg  
./config/google-chrome/Default/Extensions/kbfnbcaep1bcioakkpcpgfkobkghlhen/14.996.0_2/src/images/dff33971407bdd55b8c68b48ee50fb5a/proofreader-availability-small.svg  
./config/google-chrome/Default/Feature Engagement Tracker/AvailabilityDB  
./config/google-chrome/Default/Feature Engagement Tracker/AvailabilityDB/LOG  
./config/google-chrome/Default/Feature Engagement Tracker/AvailabilityDB/LOG.old  
./config/google-chrome/Default/Feature Engagement Tracker/AvailabilityDB/LOCK  
./snap/snap-store/common/.cache/gnome-software/icons/72c6e42035d866d791aedd1f46fecdb3ea-meshlab.png  
./snap/snap-store/518/.local/share/icons/Adwaita/scalable-up-to-32  
./snap/snap-store/518/.local/share/icons/Adwaita/scalable  
./snap/snap-store/518/.local/share/icons/hicolor/scalable  
./snap/snap-store/467/.local/share/icons/Adwaita/scalable-up-to-32  
./snap/snap-store/467/.local/share/icons/Adwaita/scalable  
./snap/snap-store/467/.local/share/icons/hicolor/scalable  
./snap/whatsapp-for-linux/19/.local/share/icons/Adwaita/scalable-up-to-32  
./snap/whatsapp-for-linux/19/.local/share/icons/Adwaita/scalable  
./snap/whatsapp-for-linux/19/.local/share/icons/hicolor/scalable  
ammansoomro@Amman-PC:~$
```

## PART K

```
ammansoomro@Amman-PC: ~  
ammansoomro@Amman-PC:~$ df  
Filesystem      1K-blocks      Used Available Use% Mounted on  
udev            1920992          0  1920992   0% /dev  
tmpfs           390032        1800    388232   1% /run  
/dev/sda6       23899984 12491172 10171720  56% /  
tmpfs           1950156    38888    1911268   2% /dev/shm  
tmpfs           5120          4      5116    1% /run/lock  
tmpfs           1950156          0  1950156   0% /sys/fs/cgroup  
/dev/loop3      63616        63616   0 100% /snap/gtk-common-themes/1506  
/dev/loop0      56832        56832   0 100% /snap/core18/1944  
/dev/loop2      261760      261760   0 100% /snap/gnome-3-34-1804/36  
/dev/loop4      224256      224256   0 100% /snap/gnome-3-34-1804/66  
/dev/loop6      166784      166784   0 100% /snap/gnome-3-28-1804/145  
/dev/loop8      51072        51072   0 100% /snap/snap-store/467  
/dev/loop1      56832        56832   0 100% /snap/core18/1988  
/dev/loop7      52352        52352   0 100% /snap/snap-store/518  
/dev/loop5      66432        66432   0 100% /snap/gtk-common-themes/1514  
/dev/loop9      31872        31872   0 100% /snap/snapd/11036  
/dev/loop10     35712        35712   0 100% /snap/whatsapp-for-linux/19  
/dev/loop11     31872        31872   0 100% /snap/snapd/10707  
/dev/sda2       98304       33354    64950   34% /boot/efi  
tmpfs           390028          4    389988   1% /run/user/1000  
ammansoomro@Amman-PC:~$
```

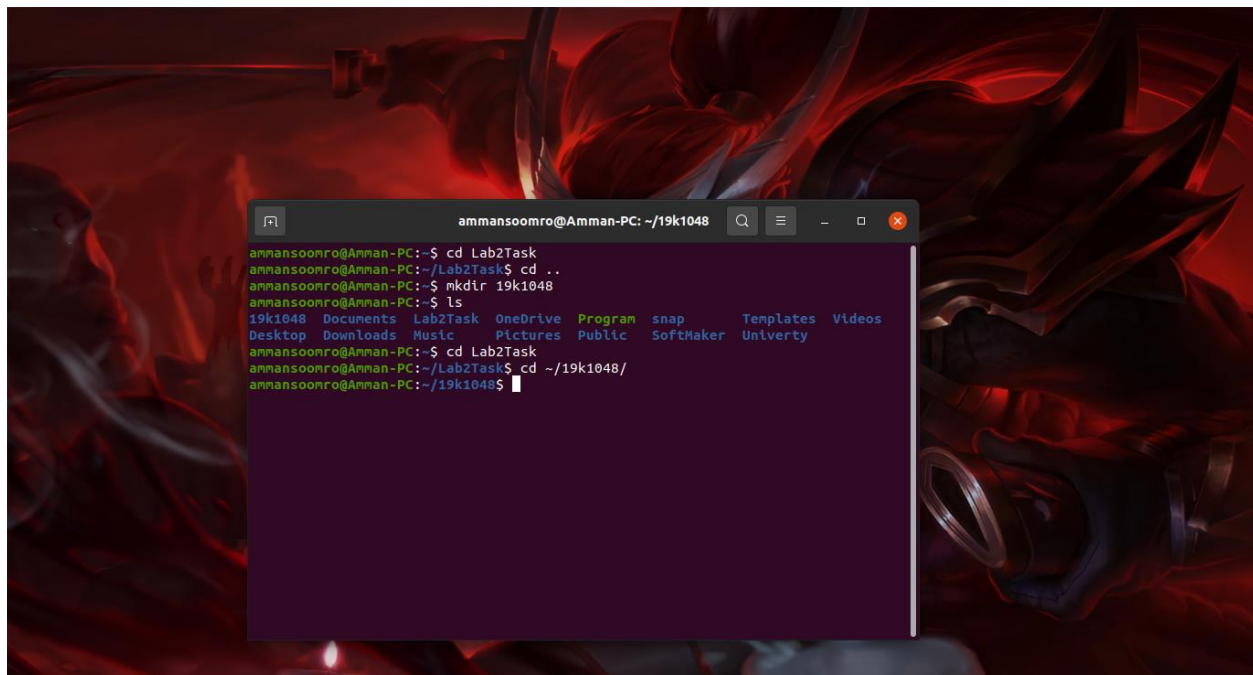
## TASK 5

### PART A

A terminal window titled 'ammansoomro@Amman-PC: ~/Lab2Task' is open on a desktop with a red and black abstract background. The terminal shows the execution of two shell scripts: '/bin/amuFormat.sh' and '/bin/gettext.sh'. The prompt is 'ammansoomro@Amman-PC: ~/Lab2Task\$'.

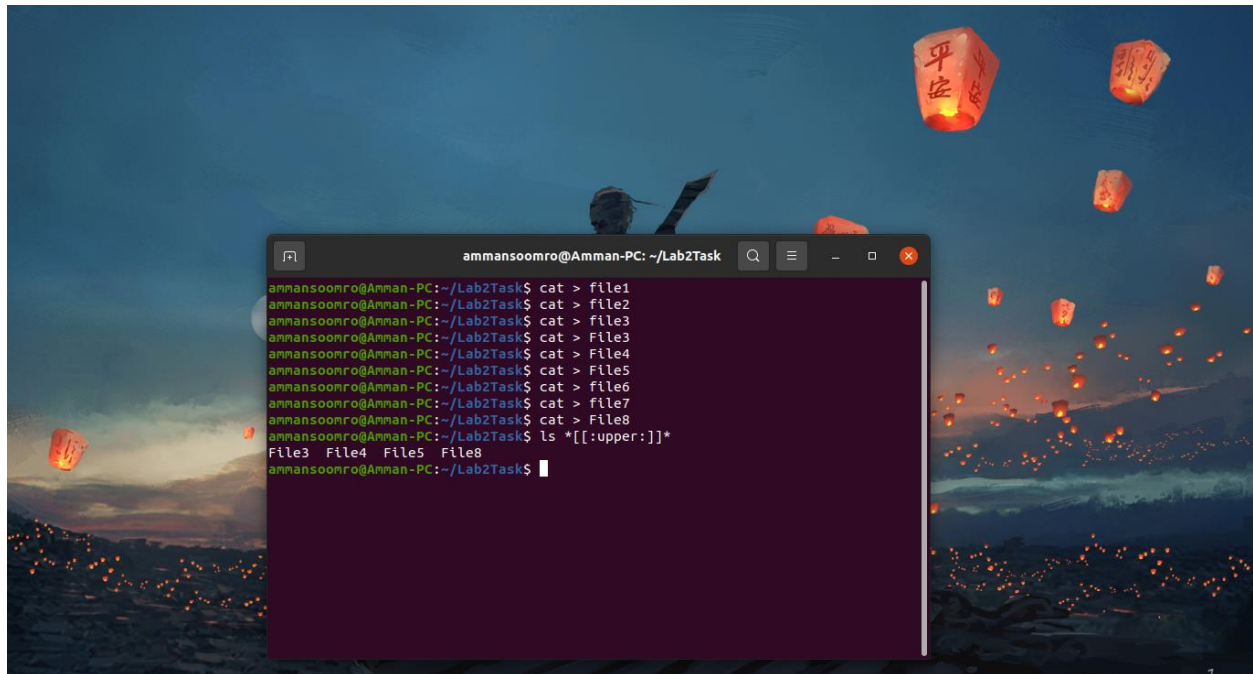
```
ammansoomro@Amman-PC: ~/Lab2Task$ find /bin/ -name "*.sh"
/bin/amuFormat.sh
/bin/gettext.sh
ammansoomro@Amman-PC: ~/Lab2Task$
```

### PART B

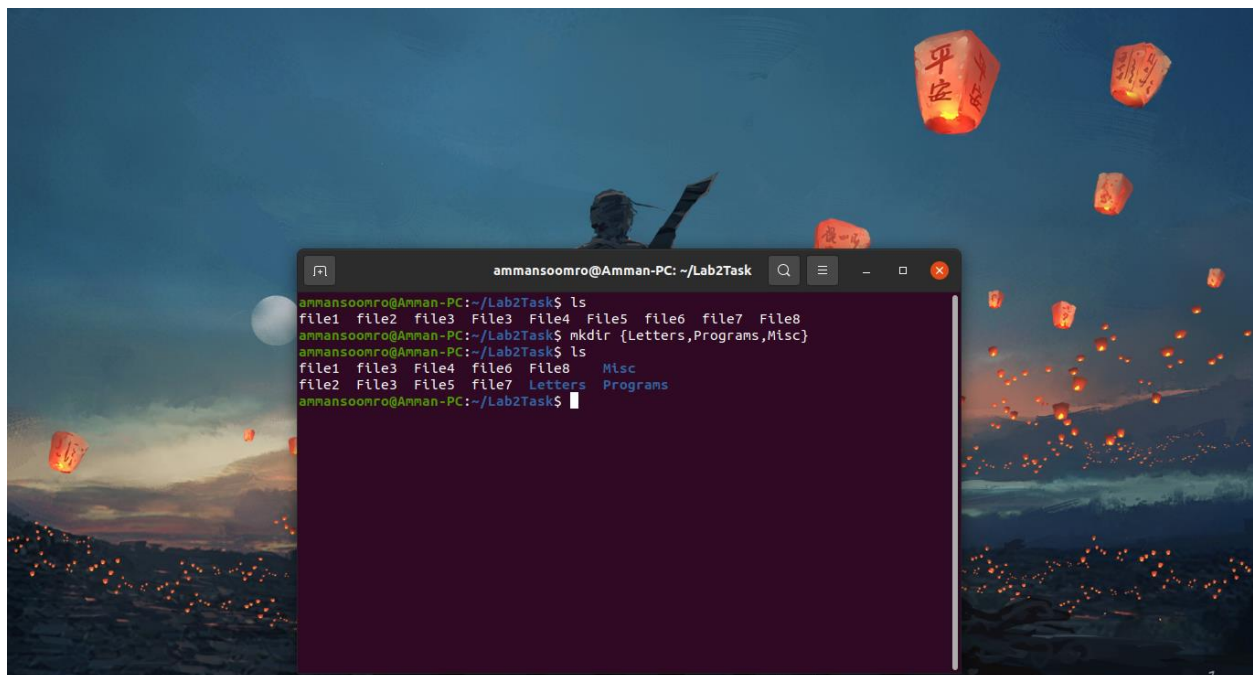
A terminal window titled 'ammansoomro@Amman-PC: ~/19k1048' is open on the same desktop. It shows a series of commands to navigate the file system: 'cd Lab2Task', 'cd ..', 'mkdir 19k1048', 'ls', and 'cd ~/19k1048/'. The 'ls' command output lists various directories. The prompt is 'ammansoomro@Amman-PC: ~/19k1048\$'.

```
ammansoomro@Amman-PC: ~$ cd Lab2Task
ammansoomro@Amman-PC: ~/Lab2Task$ cd ..
ammansoomro@Amman-PC: ~$ mkdir 19k1048
ammansoomro@Amman-PC: ~$ ls
19k1048  Documents  Lab2Task  OneDrive  Program  snap      Templates  Videos
Desktop  Downloads  Music     Pictures  Public   SoftMaker Univerity
ammansoomro@Amman-PC: ~$ cd Lab2Task
ammansoomro@Amman-PC: ~/Lab2Task$ cd ~/19k1048/
ammansoomro@Amman-PC: ~/19k1048$
```

## PART C



## PART D





## PART E, F, G

```
ammansoomro@Amman-PC: ~/Lab2Task
..
File1.c File2.c File3.c File4.c File5.c letter1 letter2 letter3 letter4
letter5 Letters Misc Misc1 Misc2 Misc3 Misc4 Misc5 Programs

./Letters:
./Misc:
./Programs:
ammansoomro@Amman-PC:~/Lab2Task$ cp -r ./let* ./Letters
ammansoomro@Amman-PC:~/Lab2Task$ cp -r /*.c ./Programs
ammansoomro@Amman-PC:~/Lab2Task$ cp -r ./Miscs[12345]* ./Misc
cp: cannot stat './Miscs[12345]*': No such file or directory
ammansoomro@Amman-PC:~/Lab2Task$ cp -r ./Misc[12345]* ./Misc
ammansoomro@Amman-PC:~/Lab2Task$ ls -R
..
File1.c File2.c File3.c File4.c File5.c letter1 letter2 letter3 letter4
letter5 Letters Misc Misc1 Misc2 Misc3 Misc4 Misc5 Programs

./Letters:
letter1 letter2 letter3 letter4 letter5

./Misc:
Misc1 Misc2 Misc3 Misc4 Misc5

./Programs:
File1.c File2.c File3.c File4.c File5.c
ammansoomro@Amman-PC:~/Lab2Task$
```

## PART H

```
ammansoomro@Amman-PC: ~/Lab2Task/OS
Letters Misc Programs
ammansoomro@Amman-PC:~/Lab2Task$ cat > copy.me
ammansoomro@Amman-PC:~/Lab2Task$ cat > move.me
ammansoomro@Amman-PC:~/Lab2Task$ mkdir OS
ammansoomro@Amman-PC:~/Lab2Task$ ls
copy.me Letters Misc move.me OS Programs
ammansoomro@Amman-PC:~/Lab2Task$ cp -r ./copy.me* OS
ammansoomro@Amman-PC:~/Lab2Task$ mv -r ./move.me* OS
mv: invalid option -- 'r'
Try 'mv --help' for more information.
ammansoomro@Amman-PC:~/Lab2Task$ mv ./move.me* OS
ammansoomro@Amman-PC:~/Lab2Task$ ls
copy.me Letters Misc OS Programs
ammansoomro@Amman-PC:~/Lab2Task$ cd OS
ammansoomro@Amman-PC:~/Lab2Task/OS$ ls
copy.me move.me
ammansoomro@Amman-PC:~/Lab2Task/OS$
```

## PART I

