



Name : Muhammad Ammanullah

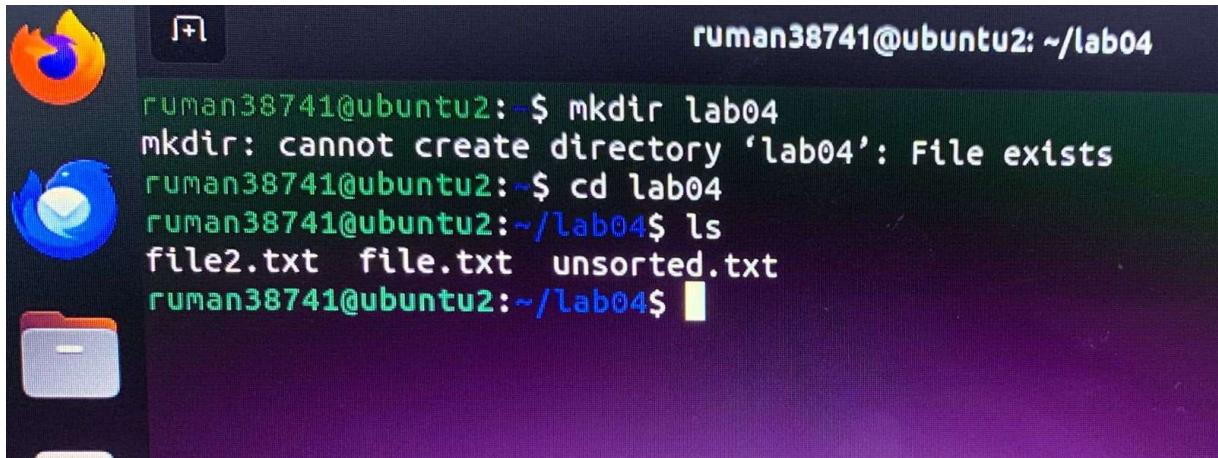
Sap I`d : 55633

Section : BS SE (5 – 2)

Course : Operating System Lab

Lab 4 Tasks:

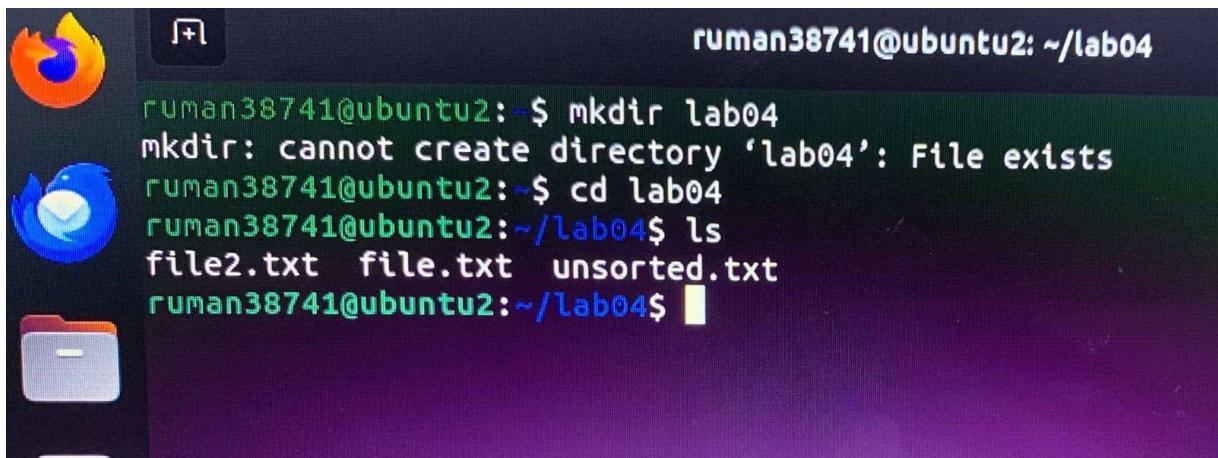
Tasks 1:

A screenshot of a Linux desktop environment, likely Ubuntu. On the left, there's a dock with icons for the Dash, Home, and several application windows. One window is a terminal with the following text:

```
ruman38741@ubuntu2: ~/lab04
ruman38741@ubuntu2:~$ mkdir lab04
mkdir: cannot create directory 'lab04': File exists
ruman38741@ubuntu2:~$ cd lab04
ruman38741@ubuntu2:~/lab04$ ls
file2.txt file.txt unsorted.txt
ruman38741@ubuntu2:~/lab04$
```

The terminal window has a dark background with light-colored text.

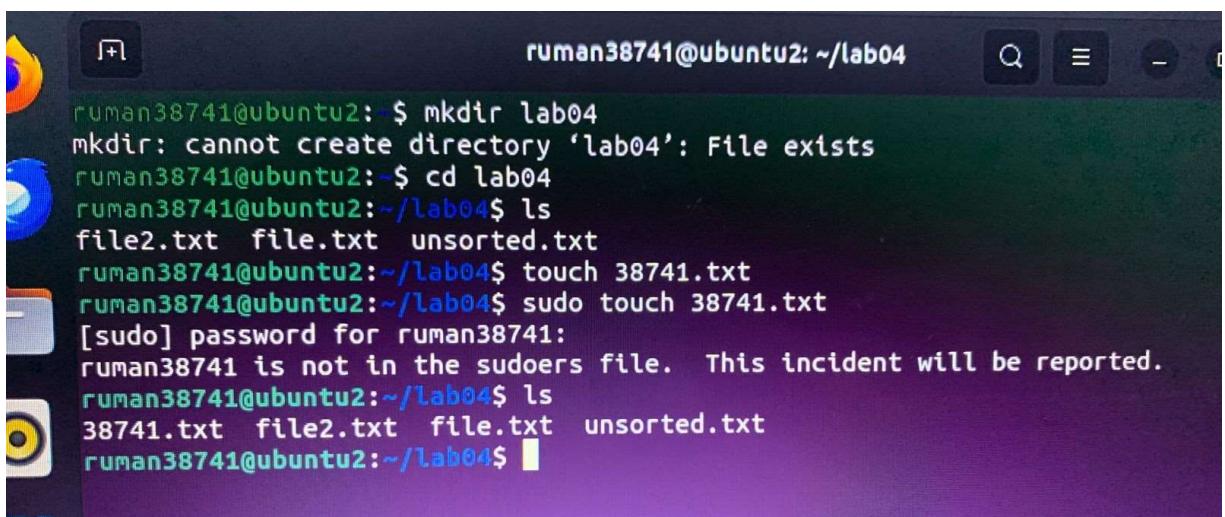
Tasks 2:

A screenshot of a Linux desktop environment, likely Ubuntu. On the left, there's a dock with icons for the Dash, Home, and several application windows. One window is a terminal with the following text:

```
ruman38741@ubuntu2: ~/lab04
ruman38741@ubuntu2:~$ mkdir lab04
mkdir: cannot create directory 'lab04': File exists
ruman38741@ubuntu2:~$ cd lab04
ruman38741@ubuntu2:~/lab04$ ls
file2.txt file.txt unsorted.txt
ruman38741@ubuntu2:~/lab04$
```

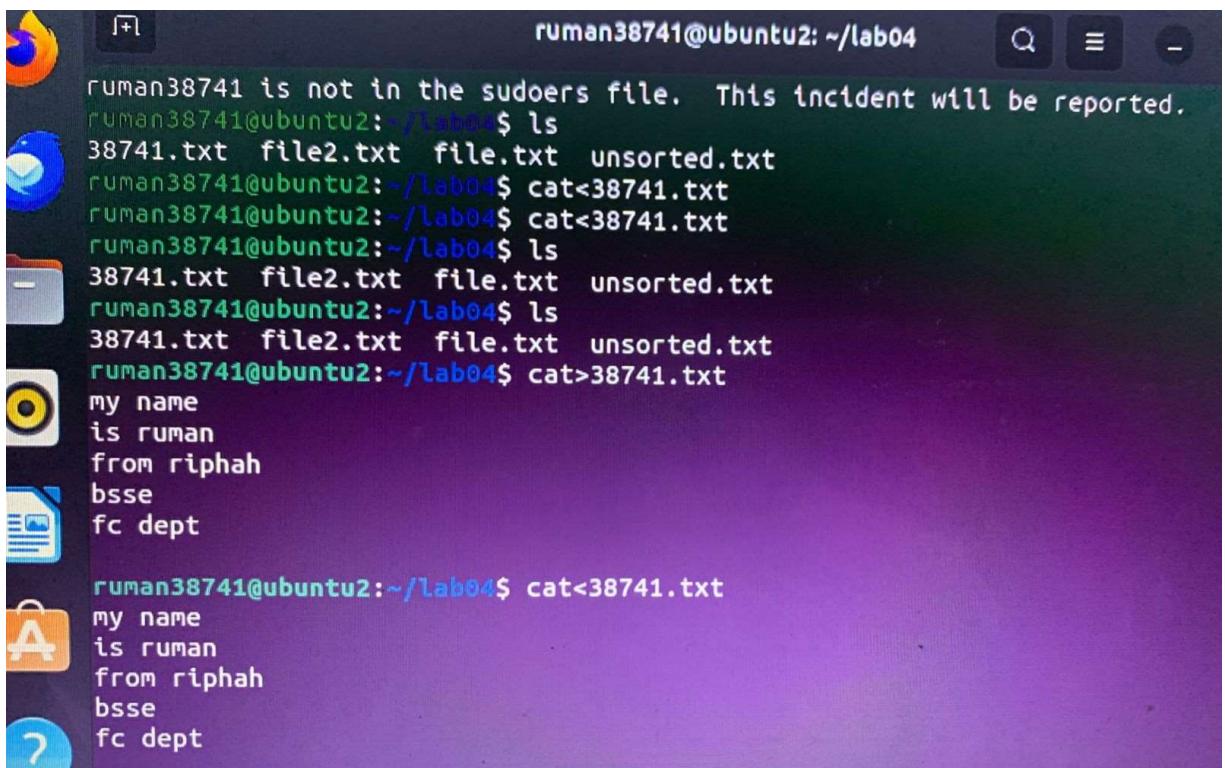
The terminal window has a dark background with light-colored text.

Tasks 3:



```
ruman38741@ubuntu2:~$ mkdir lab04
mkdir: cannot create directory 'lab04': File exists
ruman38741@ubuntu2:~$ cd lab04
ruman38741@ubuntu2:~/lab04$ ls
file2.txt file.txt unsorted.txt
ruman38741@ubuntu2:~/lab04$ touch 38741.txt
ruman38741@ubuntu2:~/lab04$ sudo touch 38741.txt
[sudo] password for ruman38741:
ruman38741 is not in the sudoers file. This incident will be reported.
ruman38741@ubuntu2:~/lab04$ ls
38741.txt file2.txt file.txt unsorted.txt
ruman38741@ubuntu2:~/lab04$
```

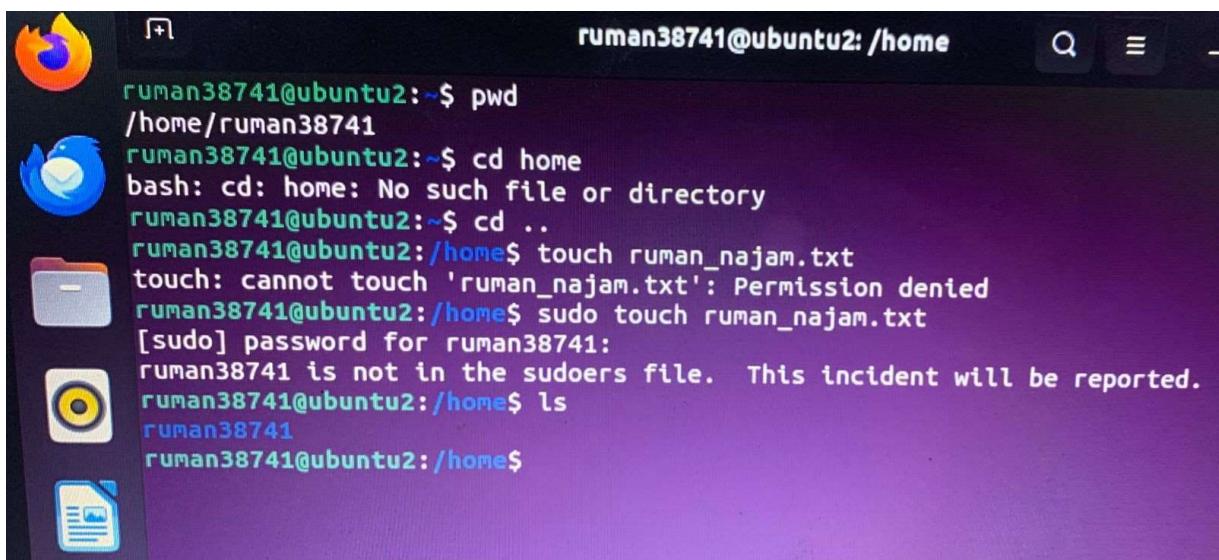
Tasks 4:



```
ruman38741 is not in the sudoers file. This incident will be reported.
ruman38741@ubuntu2:~/lab04$ ls
38741.txt file2.txt file.txt unsorted.txt
ruman38741@ubuntu2:~/lab04$ cat<38741.txt
ruman38741@ubuntu2:~/lab04$ cat<38741.txt
ruman38741@ubuntu2:~/lab04$ ls
38741.txt file2.txt file.txt unsorted.txt
ruman38741@ubuntu2:~/lab04$ ls
38741.txt file2.txt file.txt unsorted.txt
ruman38741@ubuntu2:~/lab04$ cat>38741.txt
my name
is ruman
from riphah
bsse
fc dept

ruman38741@ubuntu2:~/lab04$ cat<38741.txt
my name
is ruman
from riphah
bsse
fc dept
```

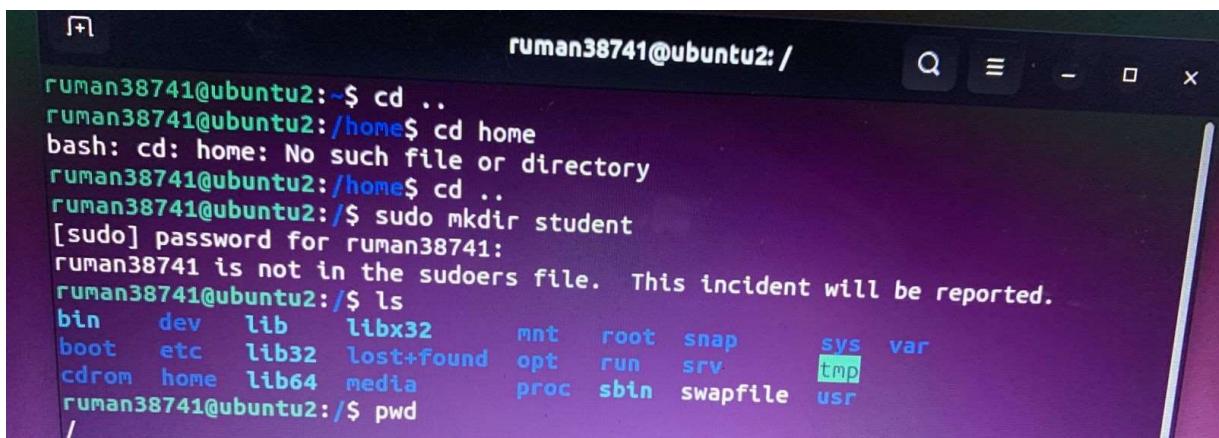
Tasks 5:



A screenshot of a Ubuntu desktop environment. On the left, there is a dock with several icons: a red browser, a blue file manager, a grey folder, a yellow target, and a blue document. The main area is a terminal window titled 'ruman38741@ubuntu2: /home'. The terminal output is as follows:

```
ruman38741@ubuntu2:~$ pwd  
/home/ruman38741  
ruman38741@ubuntu2:~$ cd home  
bash: cd: home: No such file or directory  
ruman38741@ubuntu2:~$ cd ..  
ruman38741@ubuntu2:/home$ touch ruman_najam.txt  
touch: cannot touch 'ruman_najam.txt': Permission denied  
ruman38741@ubuntu2:/home$ sudo touch ruman_najam.txt  
[sudo] password for ruman38741:  
ruman38741 is not in the sudoers file. This incident will be reported.  
ruman38741@ubuntu2:/home$ ls  
ruman38741@ubuntu2:/home$
```

Tasks 6:



A screenshot of a Ubuntu desktop environment. The terminal window is titled 'ruman38741@ubuntu2: /'. The terminal output is as follows:

```
ruman38741@ubuntu2:~$ cd ..  
ruman38741@ubuntu2:/home$ cd home  
bash: cd: home: No such file or directory  
ruman38741@ubuntu2:/home$ cd ..  
ruman38741@ubuntu2:$ sudo mkdir student  
[sudo] password for ruman38741:  
ruman38741 is not in the sudoers file. This incident will be reported.  
ruman38741@ubuntu2:$ ls  
bin dev lib lib32 mnt root snap sys var  
boot etc lib32 lost+found opt run srv tmp  
cdrom home lib64 media proc sbin swapfile usr  
ruman38741@ubuntu2:$ pwd  
/
```

Tasks 7:

```
touch students.txt pstudent.txt fstudents.txt
ls -l

# 2. Assign read-only permission (numeric + symbolic)
chmod 400 students.txt pstudent.txt fstudents.txt
chmod u=r students.txt pstudent.txt fstudents.txt
ls -l

# 3. Debug permissions for writing + enter names
chmod u+rwx pstudent.txt fstudents.txt
echo -e "Ali\nBilal\nSara\nUsman\nHina\nTariq\nRida\nAhmed\nIqra\nFaisal" > pstudent.txt
echo -e "Ayesha\nZara\nOmar\nNida\nSameer\nShahid\nLubna\nImran\nMaira\nYasir" > fstudents.txt
cat pstudent.txt
cat fstudents.txt
```

Tasks 8:

```
cat fstudents.txt

# 4. Create directory RIPHAK + assign read-only (numeric + symbolic)
mkdir RIPHAK
chmod 440 RIPHAK
chmod ug=r RIPHAK
ls -ld RIPHAK

# 5. Copy files to RIPHAK (debug permissions if error occurs)
chmod ug+wx RIPHAK
cp students.txt pstudent.txt fstudents.txt RIPHAK/
ls -l RIPHAK

# 6. Append students.txt with sorted names
sort pstudent.txt | head -n 5 >> students.txt
sort fstudents.txt | tail -n 5 >> students.txt
```

Tasks 9:

```
chmod 600 pstudent.txt fstudents.txt
chmod u=r students.txt
chmod u=rw pstudent.txt fstudents.txt
ls -l

# 9. Try appending another student (will give error)
echo "Zubair" >> students.txt

# 10. Display contents of all files
cat students.txt
cat pstudent.txt
cat fstudents.txt

# 11. Show permissions + contents of files inside RIPHAKH
ls -l RIPHAKH
cat RIPHAKH/students.txt
cat RIPHAKH/pstudent.txt
cat RIPHAKH/fstudents.txt
```

THE END :