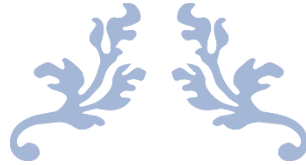




# RIPHAH

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LAB 04

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**Name** : Muhammad Hammad  
**Sap id** : 56765  
**Course** : Operating System  
**Section:** SE 5-2

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**Presented to :**

Sir. Shehzad Ahmed



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During lab work :

```
hammad56765@Ubuntu: ~/lab04

hammad56765@Ubuntu:~$ ls
Desktop  Downloads  Music      Public  Templates
Documents lab04      Pictures  snap    Videos
hammad56765@Ubuntu:~$ cd lab04
hammad56765@Ubuntu:~/lab04$ cat<file.txt
ls
hammad56765@Ubuntu:~/lab04$ cat>file.txt
Hello my name is hammad
I am a student in riphah international university
I studied in 5 semester
I currently study the course of operating system
Course instructor : Shehzad Ahmed
hammad56765@Ubuntu:~/lab04$ cat<file.txt
Hello my name is hammad
I am a student in riphah international university
I studied in 5 semester
I currently study the course of operating system
Course instructor : Shehzad Ahmed
hammad56765@Ubuntu:~/lab04$ ls
file.txt
hammad56765@Ubuntu:~/lab04$ touch file2.txt
hammad56765@Ubuntu:~/lab04$ cat<file2.txt
hammad56765@Ubuntu:~/lab04$ cat>file2.txt
This is file 2
now ,we discuss about operating system course
in this course we do the ubuntu installation with window having with virtual box
hammad56765@Ubuntu:~/lab04$ touch file3.txt

hammad56765@Ubuntu:~/lab04$ touch file3.txt
hammad56765@Ubuntu:~/lab04$ ls
file2.txt file3.txt file.txt
hammad56765@Ubuntu:~/lab04$ cat<file2.txt
This is file 2
now ,we discuss about operating system course
in this course we do the ubuntu installation with window having with virtual box
hammad56765@Ubuntu:~/lab04$ cat>file2.txt
Operating system
hammad56765@Ubuntu:~/lab04$ cat<file2.txt
Operating system
hammad56765@Ubuntu:~/lab04$ cat>file3.txt
Course learning outcomes:
ubuntu understanding and also terminal based cmd runs
hammad56765@Ubuntu:~/lab04$ ls
file2.txt file3.txt file.txt
hammad56765@Ubuntu:~/lab04$ cat<file3.txt
Course learning outcomes:
ubuntu understanding and also terminal based cmd runs
hammad56765@Ubuntu:~/lab04$ cat file.txt file1.txt>file3.txt
cat: file1.txt: No such file or directory
hammad56765@Ubuntu:~/lab04$ ls
file2.txt file3.txt file.txt
hammad56765@Ubuntu:~/lab04$ cat file.txt file2.txt>file3.txt
hammad56765@Ubuntu:~/lab04$ ls
file2.txt file3.txt file.txt
hammad56765@Ubuntu:~/lab04$ cat<file3.txt
```



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```
hammad56765@Ubuntu:~/lab04$ cat<file3.txt
Hello my name is hammad
I am a student in riphah international university
I studied in 5 semester
I currently study the course of operating system
Course instructor : Shehzad Ahmed
Operating system
hammad56765@Ubuntu:~/lab04$ ls
file2.txt file3.txt file.txt
hammad56765@Ubuntu:~/lab04$ sudo head file3.txt
[sudo] password for hammad56765:
hammad56765 is not in the sudoers file. This incident will be reported.
hammad56765@Ubuntu:~/lab04$ head -n3 file3.txt
Hello my name is hammad
I am a student in riphah international university
I studied in 5 semester
hammad56765@Ubuntu:~/lab04$ tail -n2 file3.txt
Course instructor : Shehzad Ahmed
Operating system
hammad56765@Ubuntu:~/lab04$ touch unsorted.txt
hammad56765@Ubuntu:~/lab04$ cat>unsorted.txt
Anees
ahmed
abbas
haroon
hammad56765@Ubuntu:~/lab04$ cat<unsorted.txt
Anees
```

```
hammad56765@Ubuntu:~/lab04$ cat<unsorted.txt
Anees
ahmed
abbas
haroon
hammad56765@Ubuntu:~/lab04$ sort <unsorted.txt>sorted.txt
hammad56765@Ubuntu:~/lab04$ cat<sorted.txt
abbas
ahmed
Anees
haroon
hammad56765@Ubuntu:~/lab04$ ls
file2.txt file3.txt file.txt sorted.txt unsorted.txt
hammad56765@Ubuntu:~/lab04$ cp file3.txt file4.txt
hammad56765@Ubuntu:~/lab04$ cat<file4.txt
Hello my name is hammad
I am a student in riphah international university
I studied in 5 semester
I currently study the course of operating system
Course instructor : Shehzad Ahmed
Operating system
hammad56765@Ubuntu:~/lab04$ ls -l
total 24
-rw-rw-r-- 1 hammad56765 hammad56765 18 Sep 16 11:42 file2.txt
-rw-rw-r-- 1 hammad56765 hammad56765 202 Sep 16 11:52 file3.txt
-rw-rw-r-- 1 hammad56765 hammad56765 202 Sep 16 12:12 file4.txt
-rw-rw-r-- 1 hammad56765 hammad56765 184 Sep 16 11:37 file.txt
```



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```
hammad56765@Ubuntu:~/lab04$ ls -l
total 24
-rw-rw-r-- 1 hammad56765 hammad56765 18 Sep 16 11:42 file2.txt
-rw-rw-r-- 1 hammad56765 hammad56765 202 Sep 16 11:52 file3.txt
-rw-rw-r-- 1 hammad56765 hammad56765 202 Sep 16 12:12 file4.txt
-rw-rw-r-- 1 hammad56765 hammad56765 184 Sep 16 11:37 file.txt
-rw-rw-r-- 1 hammad56765 hammad56765 25 Sep 16 12:02 sorted.txt
-rw-rw-r-- 1 hammad56765 hammad56765 25 Sep 16 12:00 unsorted.txt
hammad56765@Ubuntu:~/lab04$ chmod 765 file4.txt
hammad56765@Ubuntu:~/lab04$ ls -l
total 24
-rw-rw-r-- 1 hammad56765 hammad56765 18 Sep 16 11:42 file2.txt
-rw-rw-r-- 1 hammad56765 hammad56765 202 Sep 16 11:52 file3.txt
-rwxrw-r-x 1 hammad56765 hammad56765 202 Sep 16 12:12 file4.txt
-rw-rw-r-- 1 hammad56765 hammad56765 184 Sep 16 11:37 file.txt
-rw-rw-r-- 1 hammad56765 hammad56765 25 Sep 16 12:02 sorted.txt
-rw-rw-r-- 1 hammad56765 hammad56765 25 Sep 16 12:00 unsorted.txt
hammad56765@Ubuntu:~/lab04$ cd home
bash: cd: home: No such file or directory
hammad56765@Ubuntu:~/lab04$ cd/home
bash: cd/home: No such file or directory
hammad56765@Ubuntu:~/lab04$ s
```

## Tasks

**1. Show Simulation results after performing the following tasks by using suitable commands in Linux. Also show command/commands used for specific task.**

1. Create a blank text file on your home directory with your name.
2. Make a directory with name student.
3. Change the directory to student and copy your text file in this directory.
4. Assign no permission to anyone (use numeric method for permission).
5. Verify that above task has done successfully.
6. Now try to write in this file. If error occurs, state why?



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## Output:

```
hammad56765@Ubuntu: ~/student
hammad56765@Ubuntu:~$ pwd
/home/hammad56765
hammad56765@Ubuntu:~$ touch hammad.txt
hammad56765@Ubuntu:~$ ls
Desktop  Downloads  lab04  Pictures  snap      Videos
Documents  hammad.txt  Music  Public    Templates
hammad56765@Ubuntu:~$ mkdir student
hammad56765@Ubuntu:~$ ls
Desktop  Downloads  lab04  Pictures  snap      Templates
Documents  hammad.txt  Music  Public    student  Videos
hammad56765@Ubuntu:~$ cp hammad.txt student
hammad56765@Ubuntu:~$ cd student
hammad56765@Ubuntu:~/student$ ls
hammad.txt
hammad56765@Ubuntu:~/student$ chmod 000 hammad.txt
hammad56765@Ubuntu:~/student$ ls -l hammad.txt
----- 1 hammad56765 hammad56765 0 Sep 17 22:04 hammad.txt
hammad56765@Ubuntu:~/student$ cat>hammad.txt
bash: hammad.txt: Permission denied
```

7. Assign permission of write only to user (do it twice by using both symbolic and numeric methods). 8. Verify that above task has done successfully.

## Output:

```
hammad56765@Ubuntu:~/student$ chmod 200 hammad.txt
hammad56765@Ubuntu:~/student$ ls -l hammad.txt
--w----- 1 hammad56765 hammad56765 0 Sep 17 22:04 hammad.txt
hammad56765@Ubuntu:~/student$ chmod 000 hammad.txt
hammad56765@Ubuntu:~/student$ ls-l hammad.txt
ls-l: command not found
hammad56765@Ubuntu:~/student$ ls -l hammad.txt
----- 1 hammad56765 hammad56765 0 Sep 17 22:04 hammad.txt
hammad56765@Ubuntu:~/student$ chmod u=w hammad.txt
hammad56765@Ubuntu:~/student$ ls -l hammad.txt
--w----- 1 hammad56765 hammad56765 0 Sep 17 22:04 hammad.txt
```



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9. Write your introduction in 5 to 7 lines in .txt file.

10. Display contents of the file. If error occurs, state why?

### Output:

```
hammad56765@Ubuntu: ~/student
hammad56765@Ubuntu:~/student$ cat>hammad.txt
Intro : I'm Hammad (Software engineer).I'm currently studied at 5th semester at
RIU . I'm also doing some projects on Requirement Engineering with real life ^[[
world problem (ONLINE Ticketing booking system of Railway Management system . I
also now develop & construct with the help of requirements analysis .
Now I studied the course of operating system .
hammad56765@Ubuntu:~/student$ cat<hammad.txt
bash: hammad.txt: Permission denied
```

**Reason :** *User have only permission of write the file. On the other hand , user have not permission of file to read.*

11. Assign permission of read only to user (do it twice by using both symbolic and numeric methods).

12. Verify that above task has done successfully.

13. Display contents of the file.

### Output:

```
hammad56765@Ubuntu: ~/student
hammad56765@Ubuntu:~/student$ cat<hammad.txt
bash: hammad.txt: Permission denied
hammad56765@Ubuntu:~/student$ chmod 400 hammad.txt
hammad56765@Ubuntu:~/student$ chmod 000 hammad.txt
hammad56765@Ubuntu:~/student$ chmod u=r hammad.txt
hammad56765@Ubuntu:~/student$ ls -l
total 4
-r----- 1 hammad56765 hammad56765 348 Sep 17 22:13 hammad.txt
hammad56765@Ubuntu:~/student$ cat<hammad.txt
Intro : I'm Hammad (Software engineer).I'm currently studied at 5th semester at
RIU . I'm also doing some projects on Requirement Engineering with reaworld prob
lem (ONLINE Ticketing booking system of Railway Management system . I also now d
velop & construct with the help of requirements analysis .
Now I studied the course of operating system .
```





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14. Assign permissions of read and execute only to user (do it twice by using both symbolic and numeric methods).

15. Verify that above task has done successfully.

### Output:

```
hammad56765@Ubuntu: ~/student
hammad56765@Ubuntu:~/student$ chmod 500 hammad.txt
hammad56765@Ubuntu:~/student$ ls -l
total 4
-r-x----- 1 hammad56765 hammad56765 348 Sep 17 22:13 hammad.txt
hammad56765@Ubuntu:~/student$ chmod u=r+x hammad.txt
hammad56765@Ubuntu:~/student$ ls-l
ls-l: command not found
hammad56765@Ubuntu:~/student$ ls -l
total 4
-r-x----- 1 hammad56765 hammad56765 348 Sep 17 22:13 hammad.txt
```

16. Assign permissions of read and write only to user (do it twice by using both symbolic and numeric methods).

17. Verify that above task has done successfully.

### Output :

```
hammad56765@Ubuntu:~/student$ chmod 600 hammad.txt
hammad56765@Ubuntu:~/student$ ls -l
total 4
-rw----- 1 hammad56765 hammad56765 348 Sep 17 22:13 hammad.txt
hammad56765@Ubuntu:~/student$ chmod u=r+w hammad.txt
hammad56765@Ubuntu:~/student$ ls -l
total 4
-rw----- 1 hammad56765 hammad56765 348 Sep 17 22:13 hammad.txt
```

18. Assign all permissions to user (do it twice by using both symbolic and numeric methods).

19. Verify that above task has done successfully.

20. Assign permission of read and execute only to group (do it twice by using both symbolic and numeric methods).



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21. Verify that above task has done successfully.
22. Assign all permissions to all users (do it twice by using both symbolic and numeric methods).
23. Verify that above task has done successfully.

### **Output:**

```
hammad56765@Ubuntu:~/student$ chmod 700 hammad.txt
hammad56765@Ubuntu:~/student$ ls -l
total 4
-rwx----- 1 hammad56765 hammad56765 348 Sep 17 22:13 hammad.txt
hammad56765@Ubuntu:~/student$ chmod u=r+w+x hammad.txt
hammad56765@Ubuntu:~/student$ ls -l
total 4
-rwx----- 1 hammad56765 hammad56765 348 Sep 17 22:13 hammad.txt
hammad56765@Ubuntu:~/student$ chmod 060 hammad.txt
hammad56765@Ubuntu:~/student$ ls -l
total 4
----rw---- 1 hammad56765 hammad56765 348 Sep 17 22:13 hammad.txt
hammad56765@Ubuntu:~/student$ chmod g=r+w hammad.txt
hammad56765@Ubuntu:~/student$ ls -l hammad.txt
----rw---- 1 hammad56765 hammad56765 348 Sep 17 22:13 hammad.txt
hammad56765@Ubuntu:~/student$ chmod 777 hammad.txt
hammad56765@Ubuntu:~/student$ chmod a+rwX hammad.txt
hammad56765@Ubuntu:~/student$ ls -l
total 4
-rwxrwxrwx 1 hammad56765 hammad56765 348 Sep 17 22:13 hammad.txt
```

**2. Show Simulation results after performing the following tasks by using suitable commands in Linux. Also show command/commands used for specific task.**

1. Create 3 empty text files and name them as students.txt, pstudent.txt and fstudents.txt.
2. Assign permissions to read only permission to the user (do it twice by using both symbolic and numeric methods).
3. Enter at least 10 10 different students' names in pstudent.txt and fstudent.txt. If any error appears, debug that error for user only.
4. Now create directory named RIPHAH and assign permissions of read only to user and group (do it twice by using both symbolic and numeric methods).





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### Output :

```
hammad56765@Ubuntu: /  
hammad56765@Ubuntu:~$ ls  
Desktop    Downloads  Music      Public    student   Videos  
Documents  lab04      Pictures   snap      Templates  
hammad56765@Ubuntu:~$ touch student.txt  
hammad56765@Ubuntu:~$ touch pstudent.txt  
hammad56765@Ubuntu:~$ touch fstudents.txt  
hammad56765@Ubuntu:~$ ls  
Desktop    Downloads  lab04      Pictures   Public    student   Templates  
Documents  fstudents.txt Music      pstudent.txt snap      student.txt Videos  
hammad56765@Ubuntu:~$ chmod 400 student.txt pstudent.txt fstudents.txt
```

```
hammad56765@Ubuntu: /  
hammad56765@Ubuntu:~$ ls -l student.txt pstudent.txt fstudents.txt  
-r----- 1 hammad56765 hammad56765 0 Sep 17 22:44 fstudents.txt  
-r----- 1 hammad56765 hammad56765 0 Sep 17 22:44 pstudent.txt  
-r----- 1 hammad56765 hammad56765 0 Sep 17 22:43 student.txt  
hammad56765@Ubuntu:~$ chmod u=r student.txt pstudent.txt fstudents.txt  
hammad56765@Ubuntu:~$ ls -l student.txt pstudent.txt fstudents.txt  
-r----- 1 hammad56765 hammad56765 0 Sep 17 22:44 fstudents.txt  
-r----- 1 hammad56765 hammad56765 0 Sep 17 22:44 pstudent.txt  
-r----- 1 hammad56765 hammad56765 0 Sep 17 22:43 student.txt  
hammad56765@Ubuntu:~$ cat>pstudent.txt  
bash: pstudent.txt: Permission denied
```

```
hammad56765@Ubuntu: /  
hammad56765@Ubuntu:~$ chmod u=w pstudent.txt fstudents.txt  
hammad56765@Ubuntu:~$ cat>pstudent.txt  
waqas  
ahmed  
nouman  
afridi  
nawaz  
fakhar  
babar  
rizwan  
farhan  
saim  
abrar  
hammad56765@Ubuntu:~$ cat>fstudents.txt  
kohli  
sharma  
surya  
pandya  
bumrah  
kumar  
abhishek  
tilak  
hammad56765@Ubuntu:~$ mkdir RIPHAH  
hammad56765@Ubuntu:~$ chmod 440 RIPHAH
```



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---

```
hammad56765@Ubuntu:~$ ls -ld RIPHAH
dr--r----- 2 hammad56765 hammad56765 4096 Sep 17 22:50 RIPHAH
hammad56765@Ubuntu:~$ chmod ug=r RIPHAH
hammad56765@Ubuntu:~$ ls -ld RIPHAH
dr--r----- 2 hammad56765 hammad56765 4096 Sep 17 22:50 RIPHAH
```