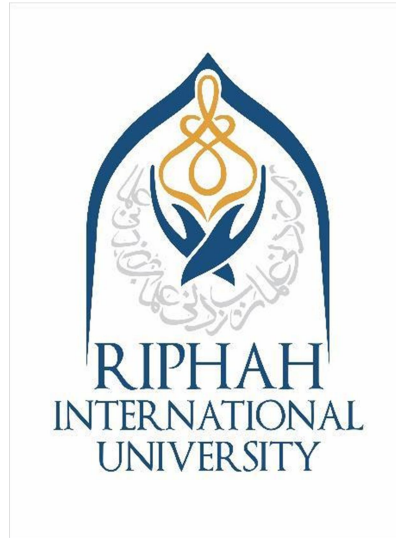


LAB # 04



Operating System

Submitted By : Adeesha Sherani

Sap Id : 47379

Submitted to : Miss Kousar

Task#01

You are tasked with changing the access permissions of file name **LINUXOS** according to the following requirements by using **both methods**.

User (Owner): Full permissions (read, write, and execute).

Group: Read and write permissions.

Others: Read permission only.

Answer:

```
[root@localhost ~]# touch LINUXOS
[root@localhost ~]# ls
bench.py hello.c LINUXOS
[root@localhost ~]# ls -l
total 8
-rw-r--r-- 1 root root 114 Dec 26 2020 bench.py
-rw-r--r-- 1 root root 185 Sep 9 2018 hello.c
-rw-r--r-- 1 root root 0 Sep 8 15:10 LINUXOS
[root@localhost ~]# chmod u+x LINUXOS
[root@localhost ~]# ls -l
total 8
-rw-r--r-- 1 root root 114 Dec 26 2020 bench.py
-rw-r--r-- 1 root root 185 Sep 9 2018 hello.c
-rwxr--r-- 1 root root 0 Sep 8 15:10 LINUXOS
[root@localhost ~]# chmod g+w LINUXOS
[root@localhost ~]# ls -l
total 8
-rw-r--r-- 1 root root 114 Dec 26 2020 bench.py
-rw-r--r-- 1 root root 185 Sep 9 2018 hello.c
-rwxrw-r-- 1 root root 0 Sep 8 15:10 LINUXOS
[root@localhost ~]#
```

Task # 02

Create a directory called lab4 and create three files say quiz, report and c program inside the directory.
Now try to set the following rights;

-rw-r--r-- quiz
-rw-rw-r-- report
-rwxrwx-x c program

Answer:

```
[root@localhost ~]# mkdir lab4
[root@localhost ~]# cd lab4
[root@localhost lab4]# touch quiz
[root@localhost lab4]# touch report
[root@localhost lab4]# touch cprogram
[root@localhost lab4]# ls
cprogram  quiz  report
[root@localhost lab4]# ls -l
total 0
-rw-r--r-- 1 root root 0 Sep  8 16:08 cprogram
-rw-r--r-- 1 root root 0 Sep  8 16:08 quiz
-rw-r--r-- 1 root root 0 Sep  8 16:08 report
[root@localhost lab4]# chmod 644 quiz
```

```
-rw-r--r-- 1 root root 0 Sep  8 16:08 cprogram
-rw-r--r-- 1 root root 0 Sep  8 16:08 quiz
-rw-r--r-- 1 root root 0 Sep  8 16:08 report
[root@localhost lab4]# chmod 664 report
[root@localhost lab4]# ls -l
total 0
-rw-r--r-- 1 root root 0 Sep  8 16:08 cprogram
-rw-r--r-- 1 root root 0 Sep  8 16:08 quiz
-rw-rw-r-- 1 root root 0 Sep  8 16:08 report
[root@localhost lab4]# chmod 771 cprogram
[root@localhost lab4]# ls -l
total 0
-rwxrwx--x 1 root root 0 Sep  8 16:08 cprogram
-rw-r--r-- 1 root root 0 Sep  8 16:08 quiz
-rw-rw-r-- 1 root root 0 Sep  8 16:08 report
[root@localhost lab4]#
```

Task # 03

You are managing a project where you need to organize and summarize information for a class assignment. On your Linux system, you have two directories named OSLAB and OS Theory. In the OSLAB directory, your task is to create three text files: overview.txt with the text "Overview of Operating Systems," details.txt with the text "Detailed study of key OS concepts," and applications.txt with the text "Applications and examples of OS concepts." Once these files are created and populated, you need to combine their contents into a single file named combined text. Now display the data in a combined text.

Answer:

```
[root@localhost ~]# mkdir OSLAB
[root@localhost ~]# mkdir OSTheory
[root@localhost ~]# cd OSLAB
[root@localhost OSLAB]# touch overview.txt
[root@localhost OSLAB]# touch details.txt
[root@localhost OSLAB]# touch applications.txt
[root@localhost OSLAB]# ls
applications.txt  details.txt  overview.txt
[root@localhost OSLAB]# cat > overview.txt
Overview of Operating System [root@localhost OSLAB]#
[root@localhost OSLAB]# cat > details.txt
Detail study of key Operating System Concepts
[root@localhost OSLAB]# cat > applications.txt
Application and Examples of OS concepts
[root@localhost OSLAB]# cat overview.txt details.txt applications.txt > Combined
text
[root@localhost OSLAB]# ls
applications.txt  Combinedtext  details.txt  overview.txt
[root@localhost OSLAB]# cat Combinedtext
Overview of Operating System Detail study of key Operating System Concepts
Application and Examples of OS concepts
[root@localhost OSLAB]#
```

Task # 04

Directory A contains at least two files named "FinalTerm" and "MidTerm". Directory B contains at least two files named "OSTheory" and "OSLAB".

Your task involves the following steps:

Move the "MidTerm" file from the existing Directory to the Directory where the OSLAB file exists and Rename it with TASK.

Answer:

```
[root@localhost ~]# mkdir A
[root@localhost ~]# mkdir B
[root@localhost ~]# cd A
[root@localhost A]# touch FinalTerm
[root@localhost A]# touch MidTerm
[root@localhost A]# ls
FinalTerm  MidTerm
[root@localhost A]# cd B
sh: cd: B: No such file or directory
[root@localhost A]# cd ..
[root@localhost ~]# cd B
[root@localhost B]# touch OSTheory
[root@localhost B]# touch OSLab
[root@localhost B]# ls
OSLab  OSTheory
[root@localhost B]# cd
[root@localhost ~]# cd A
[root@localhost A]# mv /root/A/MidTerm /root/B
[root@localhost A]# ls
FinalTerm
[root@localhost A]# cd
[root@localhost ~]# mv B/ TASK/
A bench.py hello.c TASK
[root@localhost ~]# cd TASK
[root@localhost TASK]# ls
MidTerm OSLab OSTheory
[root@localhost TASK]#
```

Task # 05:

As part of your coursework, you have been assigned a project to develop a simple application on a Linux system. Your task is to write a C++ program that draws a circle on the screen. Describe the steps you would follow to complete this task, including the setup of the necessary library, writing the C++ code, compiling the program, and running it to display the circle. What commands and procedures would you use to accomplish this?

Answer:

```
GNU nano 5.3 cup.cpp
#include<iostream>
#include<math.h>
int main(){
int radius =6;
int i , j;
for(i=0; i<=2*radius; i++){
for(j=0; j<=2*radius; j++){
double distance=sqrt(((double)(i-radius)*(i-radius)+(j-radius)*(j-radius)));
if(distance>radius-0.65 && distance<radius+0.2)
{
std::cout<<"*";
}
else
{
std::cout<<" ";
}
}
std::cout<<std::endl;
}
return 0;
}
```

[illegible]