

## USP LAB – 1

1. Find the present directory.

```
user@LAPTOP-EVHI4LP7:~$ pwd
/home/user
```

2. Write the / directory structure

```
user@LAPTOP-EVHI4LP7:~$ cd /
user@LAPTOP-EVHI4LP7:/$ ls
bin boot dev etc home init lib lib32 lib64 libx32 lost+found media mnt opt
```

3. Write a few commands available in /bin and /sbin directory

```
user@LAPTOP-EVHI4LP7:/$ ls /bin
NF                colrm              gpgv
VGAAuthService    column             gpic
X11               comm              grep
'['              compose           gresource
aa-enabled        conch3            groff
aa-exec          corelist          grog
add-apt-repository cp                grops
addpart          cpan              grotty
appport-bug      cpan5.30-x86_64-linux-gnu groups
appport-cli      cpio              growpart
appport-collect  crontab           gsettings
appport-unpack   csplit            gtbl
```

```
user@LAPTOP-EVHI4LP7:/$ ls /sbin
aa-remove-unknown  cpgr              era_restore
aa-status          cppw              ethtool
aa-teardown        cron              fatlabel
accessdb           cryptdisks_start  fdformat
add-shell          cryptdisks_stop   fdisk
addgnupghome       cryptsetup        filefrag
addgroup           cryptsetup-reencrypt findfs
adduser            ctrlaltdel        fixparts
agetty             debugfs           fsadm
apparmor_parser    delgroup          fsck
apparmor_status    deluser           fsck.btrfs
applygnupgdefaults depmod             fsck.cramfs
```

4. Create a new directory test

```
user@LAPTOP-EVHI4LP7:~$ mkdir test
```

5. Write the permissions of test directory

```
user@LAPTOP-EVHI4LP7:~$ ls -la test
total 8
drwxr-xr-x 2 user user 4096 Oct 28 22:44 .
drwxr-xr-x 4 user user 4096 Oct 28 22:44 ..
```

6. Copy the file /etc/resolv.conf in test directory

```
user@LAPTOP-EVHI4LP7:~$ cp /etc/resolv.conf test
user@LAPTOP-EVHI4LP7:~$ ls test
resolv.conf
```

7. Rename the test directory to testing

```
user@LAPTOP-EVHI4LP7:~$ mv test testing
```

8. Change the permissions of testing directory to 775

```
user@LAPTOP-EVHI4LP7:~$ chmod 775 testing
```

9. Change the permissions of /tmp directory to 700

10. Change the permissions of guest directory to 700

```
user@LAPTOP-EVHI4LP7:~$ sudo chmod 700 /tmp
user@LAPTOP-EVHI4LP7:~$ sudo chmod 700 guest
```

11. Delete the testing directory

```
user@LAPTOP-EVHI4LP7:~$ rm -r testing
user@LAPTOP-EVHI4LP7:~$ ls testing
ls: cannot access 'testing': No such file or directory
```

12. The location of kernel files in Unix File System is /boot and by looking at the kernel file, write the kernel version you are using in your system.

```
user@LAPTOP-EVHI4LP7:~$ ls /boot
```

```
user@LAPTOP-EVHI4LP7:~$ uname -srm
Linux 5.10.16.3-microsoft-standard-WSL2 x86_64
```

13. Change the directory to /

```
user@LAPTOP-EVHI4LP7:~$ cd /  
user@LAPTOP-EVHI4LP7:/$ pwd  
/  
user@LAPTOP-EVHI4LP7:/$
```

14. List the contents of /home directory

```
user@LAPTOP-EVHI4LP7:/$ ls /home  
user
```

15. Create a file sidbi in the home directory

16. Find the permissions of the file sidbi

17. Find the inode number of file sidbi

```
user@LAPTOP-EVHI4LP7:/home$ sudo touch sidbi  
user@LAPTOP-EVHI4LP7:/home$ ls -l sidbi  
-rw-r--r-- 1 root root 0 Oct 28 23:01 sidbi  
user@LAPTOP-EVHI4LP7:/home$ ls -li sidbi  
40078 -rw-r--r-- 1 root root 0 Oct 28 23:01 sidbi
```

18. Copy the file sidbi to sidbi1

19. Find the inode number of file sidbi1

```
user@LAPTOP-EVHI4LP7:/home$ sudo cp sidbi sidbi1  
user@LAPTOP-EVHI4LP7:/home$ ls -li sidbi1  
40079 -rw-r--r-- 1 root root 0 Oct 28 23:02 sidbi1
```

20. Move the file sidbi to sidbi2

21. Find the inode number of file sidbi2

```
user@LAPTOP-EVHI4LP7:/home$ sudo mv sidbi sidbi2  
user@LAPTOP-EVHI4LP7:/home$ ls -li sidbi2  
40078 -rw-r--r-- 1 root root 0 Oct 28 23:01 sidbi2
```

22. Move sidbi2 to sidbi

```
mv: cannot move 'sidbi2' to 'sidbi': Permission denied  
user@LAPTOP-EVHI4LP7:/home$ sudo mv sidbi2 sidbi  
user@LAPTOP-EVHI4LP7:/home$
```