

# National Textile University Department of Computer Science Subject:

Submitted to:
Sir Nasir

Submitted by:
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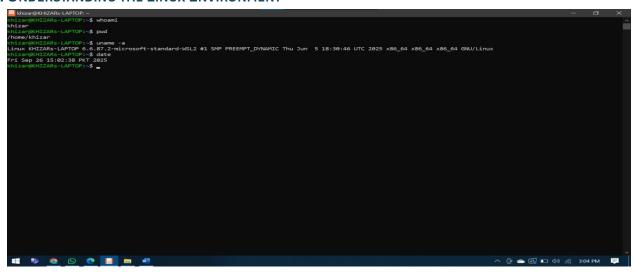
Reg number:
23-NTU-CS-1169

Lab no:
02

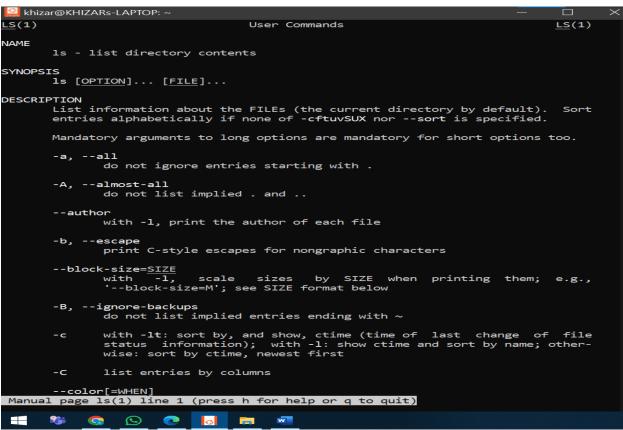
Semester:
5th

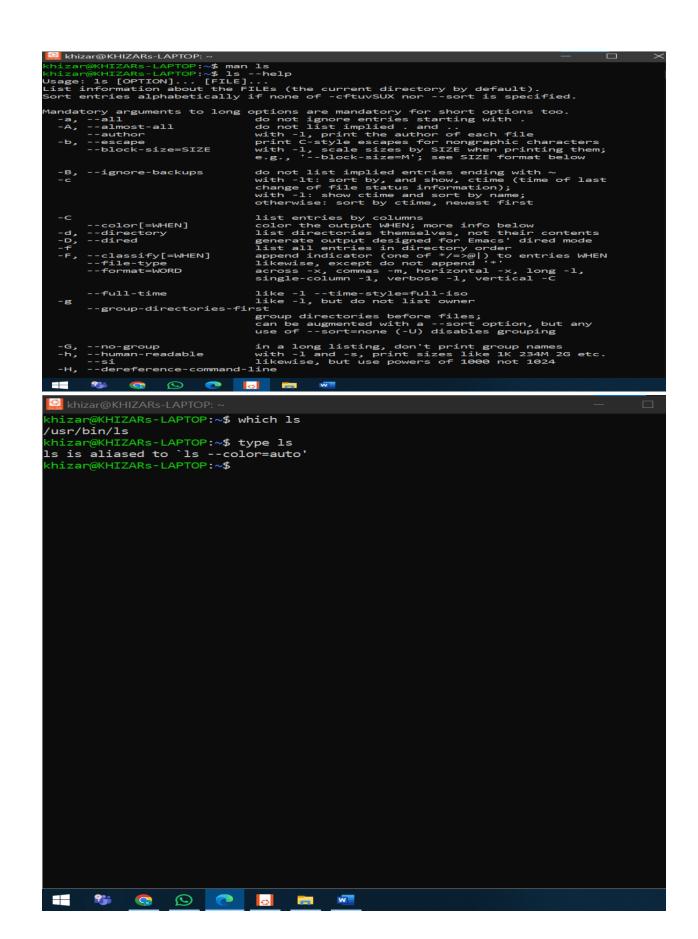
### Part 1: Linux Environment Orientation

### 1.1 Understanding the Linux Environment



# 1.2 GETTING HELP IN LINUX





# Part 2: File System Navigation

### 2.1 Understanding Linux Directory Structure

```
🚨 khizar@KHIZARs-LAPTOP: /home
                                                                           khizar@KHIZARs-LAPTOP:~$ ls /
                       lib.usr-is-merged mnt
                  etc
                                                 run
                                                                     srv
bin.usr-is-merged home lib64
                                                 sbin
                                                                     sys
                                           proc sbin.usr-is-merged
boot
                  init lost+found
                                                                     tmp
dev
                  lib media
                                           root snap
                                                                     usr
khizar@KHIZARs-LAPTOP:~$ ls -la
total 56
drwxr-x--- 8 khizar khizar 4096 Sep 26 15:07 .
                          4096 Sep 19 16:28 ...
drwxr-xr-x 3 root
                   root
-rw----- 1 khizar khizar 2034 Sep 25 14:17 .bash history
-rw-r--r-- 1 khizar khizar 220 Sep 19 16:28 .bash_logout
-rw-r--r-- 1 khizar khizar 3771 Sep 19 16:28 .bashrc
drwx----- 3 khizar khizar 4096 Sep 20 20:50 .cache
drwxr-xr-x 3 khizar khizar 4096 Sep 20 20:50 .dotnet
-rw-r--r-- 1 khizar khizar
                            62 Sep 20 20:33 .gitconfig
drwxr-xr-x 2 khizar khizar 4096 Sep 25 13:54 .landscape
-rw----- 1 khizar khizar
                            20 Sep 26 15:07 .lesshst
-rw-rw-r-- 1 khizar khizar
                             0 Sep 26 14:28 .motd_shown
-rw-r--r-- 1 khizar khizar 807 Sep 19 16:28 .profile
drwx----- 2 khizar khizar 4096 Sep 20 20:43 .ssh
-rw-r--r-- 1 khizar khizar
                             0 Sep 20 20:12 .sudo_as_admin_successful
drwxr-xr-x 5 khizar khizar 4096 Sep 20 20:50 .vscode-server
drwxr-xr-x 3 khizar khizar 4096 Sep 20 20:39 ubuntuu
khizar@KHIZARs-LAPTOP:~$ cd /home
khizar@KHIZARs-LAPTOP:/home$ cd ~
khizar@KHIZARs-LAPTOP:~$ cd -
/home
khizar@KHIZARs-LAPTOP:/home$
```

# 2.2 BASIC NAVIGATION COMMANDS (15 MINUTES)

```
🖳 khizar@KHIZARs-LAPTOP: /
                                                                            X
khizar@KHIZARs-LAPTOP:~$ pwd
/home/khizar
khizar@KHIZARs-LAPTOP:~$ ls
ubuntuu
khizar@KHIZARs-LAPTOP:~$ ls -l
total 4
drwxr-xr-x 3 khizar khizar 4096 Sep 20 20:39 ubuntuu
khizar@KHIZARs-LAPTOP:~$ ls -la
total 56
drwxr-x--- 8 khizar khizar 4096 Sep 26 15:07 .
drwxr-xr-x 3 root root 4096 Sep 19 16:28 ..
-rw----- 1 khizar khizar 2034 Sep 25 14:17 .bash history
-rw-r--r-- 1 khizar khizar 220 Sep 19 16:28 .bash_logout
-rw-r--r-- 1 khizar khizar 3771 Sep 19 16:28 .bashrc
drwx----- 3 khizar khizar 4096 Sep 20 20:50 .cache
drwxr-xr-x 3 khizar khizar 4096 Sep 20 20:50 .dotnet
-rw-r--r-- 1 khizar khizar 62 Sep 20 20:33 .gitconfig
drwxr-xr-x 2 khizar khizar 4096 Sep 25 13:54 .landscape
-rw----- 1 khizar khizar 20 Sep 26 15:07 .lesshst
-rw-rw-r-- 1 khizar khizar 0 Sep 26 14:28 .motd_shown
-rw-r--r-- 1 khizar khizar 807 Sep 19 16:28 .profile
drwx----- 2 khizar khizar 4096 Sep 20 20:43 .ssh
-rw-r--r-- 1 khizar khizar  0 Sep 20 20:12 .sudo as admin successful
drwxr-xr-x 5 khizar khizar 4096 Sep 20 20:50 .vscode-server
drwxr-xr-x 3 khizar khizar 4096 Sep 20 20:39 ubuntuu
khizar@KHIZARs-LAPTOP:~$ ls -lh
total 4.0K
drwxr-xr-x 3 khizar khizar 4.0K Sep 20 20:39 ubuntuu
khizar@KHIZARs-LAPTOP:~$ cd ubuntuu/
khizar@KHIZARs-LAPTOP:~/ubuntuu$ cd
khizar@KHIZARs-LAPTOP:~$ cd ubuntuu/
khizar@KHIZARs-LAPTOP:~/ubuntuu$ cd ...
khizar@KHIZARs-LAPTOP:~$ cd ubuntuu/
khizar@KHIZARs-LAPTOP:~/ubuntuu$ cd ~
khizar@KHIZARs-LAPTOP:~$ cd /
khizar@KHIZARs-LAPTOP:/$
                     O
 \odot
```

# Part 3: File and Directory Operations

## 3.1 CREATING AND MANAGING FILES/DIRECTORIES

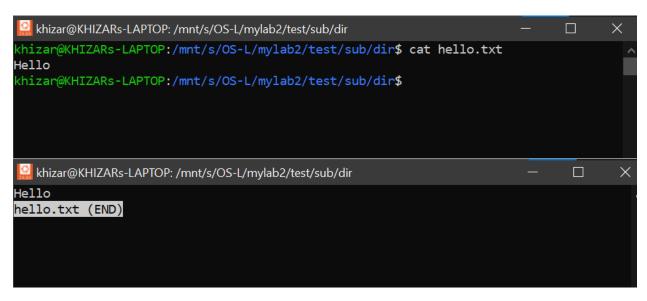
### **COMMANDS TO DEMONSTRATE:**

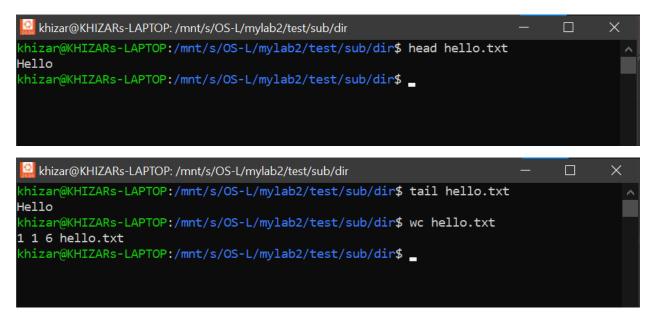
```
khizar@KHIZARs-LAPTOP:/mnt/s/OS-L/mylab2/test/sub/dir

khizar@KHIZARs-LAPTOP:/mnt/s/OS-L$ mkdir mylab2
khizar@KHIZARs-LAPTOP:/mnt/s/OS-L$ cd mylab2/
khizar@KHIZARs-LAPTOP:/mnt/s/OS-L/mylab2$ mkdir -p test/sub/dir
khizar@KHIZARs-LAPTOP:/mnt/s/OS-L/mylab2$ cd test/sub/dir
khizar@KHIZARs-LAPTOP:/mnt/s/OS-L/mylab2/test/sub/dir$ touch file1.txt
khizar@KHIZARs-LAPTOP:/mnt/s/OS-L/mylab2/test/sub/dir$ touch file2.txt file3.txt
khizar@KHIZARs-LAPTOP:/mnt/s/OS-L/mylab2/test/sub/dir$ nano hello.txt
khizar@KHIZARs-LAPTOP:/mnt/s/OS-L/mylab2/test/sub/dir$ echo "Hello"> hello.txt
khizar@KHIZARs-LAPTOP:/mnt/s/OS-L/mylab2/test/sub/dir$

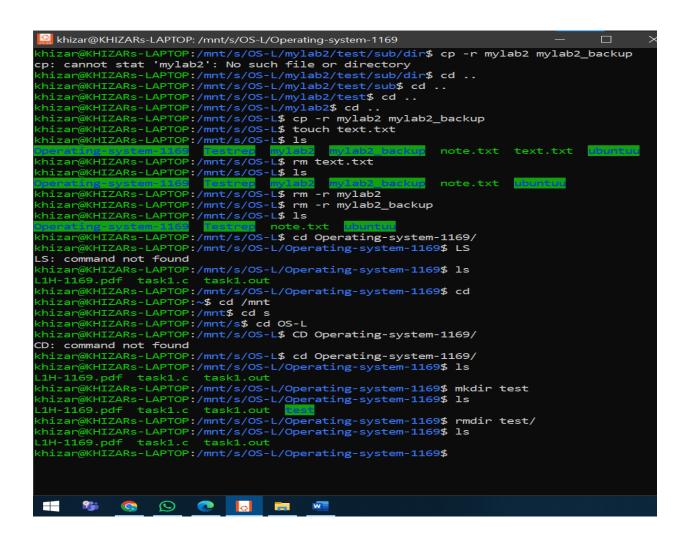
khizar@KHIZARs-LAPTOP:/mnt/s/OS-L/mylab2/test/sub/dir$
```

### **FILE VIEWING COMMANDS:**





# 3.2 COPYING, MOVING, AND DELETING



# Part 4: File Permissions and Ownership

### **4.1 UNDERSTANDING FILE PERMISSIONS**

