

Q1

Display information about files in the current directory

```
shruthimohan@EDITH:~$ ls
C++_codes      IITM_Cprog    build  codejam    hashcat.txt  pubkey.pub  sc_iitm  script.sh  templ.c
Data_Structures OS_sem3       builf  hashcat.exe pubkey       s1.txt    sc_iitm.pub script.sh.save templ.out
```

Q2

Display the current working directory

```
shruthimohan@EDITH:~$ pwd
/home/shruthimohan
```

Q3

Create a new directory

```
shruthimohan@EDITH:~$ mkdir Big_data_analytics
shruthimohan@EDITH:~$ ls
Big_data_analytics  Data_Structures  OS_sem3  builf  hashcat.exe  pubkey  s1.txt  sc_iitm.pub  script.sh.save  templ.out
C++_codes           IITM_Cprog      build    codejam  hashcat.txt  pubkey.pub  sc_iitm  script.sh  templ.c
```

Q4

Navigate between folders

```
shruthimohan@EDITH:~$ cd Big_data_analytics
shruthimohan@EDITH:~/Big_data_analytics$ cd ..
```

Q5

Remove empty files from a directory

```
shruthimohan@EDITH:~$ touch emptyfile
shruthimohan@EDITH:~$ // created an empty file ^C
shruthimohan@EDITH:~$ ls
Big_data_analytics  Data_Structures  OS_sem3  builf  emptyfile  hashcat.exe  pubkey  sc_iitm  script.sh  templ.c
C++_codes           IITM_Cprog      build    codejam  emptyfile.c  hashcat.txt  pubkey.pub  sc_iitm.pub  script.sh.save  templ.out
shruthimohan@EDITH:~$ find . -type f -empty -exec rm {} \;
shruthimohan@EDITH:~$ ls
Big_data_analytics  Data_Structures  OS_sem3  builf  emptyfile.c  hashcat.txt  pubkey.pub  sc_iitm.pub  script.sh.save  templ.out
C++_codes           IITM_Cprog      build    codejam  hashcat.exe  pubkey       sc_iitm  script.sh  templ.c
```

Q6. a

Copy files from one directory to the same directory.

```
shruthimohan@EDITH:~/Big_data_analytics/Ex1$ touch file.txt
shruthimohan@EDITH:~/Big_data_analytics/Ex1$ cp file.txt file2.txt
shruthimohan@EDITH:~/Big_data_analytics/Ex1$ ls
file.txt  file2.txt
```

Q6. b

Copy files to another directory

```
shruthimohan@EDITH:~/Big_data_analytics/Ex1$ mkdir temp_dir
shruthimohan@EDITH:~/Big_data_analytics/Ex1$ cp file2.txt temp_dir
shruthimohan@EDITH:~/Big_data_analytics/Ex1$ cd temp_dir
shruthimohan@EDITH:~/Big_data_analytics/Ex1/temp_dir$ ls
file2.txt
```

Q7. a

Rename a directory

```
shruthimohan@EDITH:~/Big_data_analytics/Ex1/temp_dir$ cd ..
shruthimohan@EDITH:~/Big_data_analytics/Ex1$ mv temp_dir directory1
shruthimohan@EDITH:~/Big_data_analytics/Ex1$ ls
directory1  file.txt  file2.txt
```

Q7. b

Move a file to a directory

```
shruthimohan@EDITH:~/Big_data_analytics/Ex1$ mv file2.txt directory1
shruthimohan@EDITH:~/Big_data_analytics/Ex1$ ls
directory1
shruthimohan@EDITH:~/Big_data_analytics/Ex1$ cd directory1
shruthimohan@EDITH:~/Big_data_analytics/Ex1/directory1$ ls
file2.txt
```

Q8. a

Remove a file from a directory

```
shruthimohan@EDITH:~/Big_data_analytics/Ex1$ cd directory1
shruthimohan@EDITH:~/Big_data_analytics/Ex1/directory1$ ls
file2.txt
shruthimohan@EDITH:~/Big_data_analytics/Ex1/directory1$ rm -rf file2.txt
shruthimohan@EDITH:~/Big_data_analytics/Ex1/directory1$ ls
shruthimohan@EDITH:~/Big_data_analytics/Ex1/directory1$ |
```

Q8. b

Remove a directory containing a few files.

```
shruthimohan@EDITH:~/Big_data_analytics/Ex1/directory1$ touch file1.txt file2.txt file3.txt
shruthimohan@EDITH:~/Big_data_analytics/Ex1/directory1$ ls
file1.txt file2.txt file3.txt
shruthimohan@EDITH:~/Big_data_analytics/Ex1/directory1$ cd..
cd.: command not found
shruthimohan@EDITH:~/Big_data_analytics/Ex1/directory1$ cd ..
shruthimohan@EDITH:~/Big_data_analytics/Ex1$ rm -r directory1
shruthimohan@EDITH:~/Big_data_analytics/Ex1$ ls
directory
```

Q9

Get basic information about the OS

```
shruthimohan@EDITH:~/Big_data_analytics/Ex1$ uname -a
Linux EDITH 5.10.60.1-microsoft-standard-WSL2 #1 SMP Wed Aug 25 23:20:18 UTC 2021 x86_64 x86_64 x86_64 GNU/Linux
```

Q10

Find a file in a directory

```
shruthimohan@EDITH:~/Big_data_analytics/Ex1$ touch file.txt
shruthimohan@EDITH:~/Big_data_analytics/Ex1$ find *.txt
file.txt
```

Q11

Create an empty file

```
shruthimohan@EDITH:~/Big_data_analytics/Ex1$ touch file2.txt
shruthimohan@EDITH:~/Big_data_analytics/Ex1$ ls
directory file.txt file2.txt
```

Q12

Display the contents of a file on the terminal

```
shruthimohan@EDITH:~/Big_data_analytics/Ex1$ cat > file.txt
HELL0000
^C
shruthimohan@EDITH:~/Big_data_analytics/Ex1$
shruthimohan@EDITH:~/Big_data_analytics/Ex1$ cat file.txt
HELL0000
```

Q13

Clear terminal

```
shruthimohan@EDITH:~/Big_data_analytics/Ex1$ clear
```

Q14

Display the processes in the terminal

```
shruthimohan@EDITH:~/Big_data_analytics/Ex1$ ps -a
PID TTY          TIME CMD
 92 pts/0        00:00:00 nano
175 pts/0        00:00:00 ps
shruthimohan@EDITH:~/Big_data_analytics/Ex1$ ps -A
PID TTY          TIME CMD
  1 ?             00:00:00 init
  7 ?             00:00:00 init
  8 ?             00:00:00 init
  9 pts/0        00:00:00 bash
 92 pts/0        00:00:00 nano
176 pts/0        00:00:00 ps
```

Q15

Display list of commands

```
shruthimohan@EDITH:~/Big_data_analytics/Ex1$ help
GNU bash, version 5.0.17(1)-release (x86_64-pc-linux-gnu)
These shell commands are defined internally.  Type 'help' to see this list.
Type 'help name' to find out more about the function 'name'.
Use 'info bash' to find out more about the shell in general.
Use 'man -k' or 'info' to find out more about commands not in this list.

A star (*) next to a name means that the command is disabled.

job_spec [<]
(( expression ))
. filename [arguments]
:
[ arg... ]
[[ expression ]]
alias [-p] [name[=value] ... ]
bg [job_spec ...]
bind [-lpsvPSVX] [-m keymap] [-f filename] [-q name] [-u name] >
break [n]
builtin [shell-builtin [arg ...]]
caller [expr]
case WORD in [PATTERN] [PATTERN]...) COMMANDS ;;)... esac
cd [-L][-P][-e] [-@]] [dir]
command [-pVv] command [arg ...]
compgen [-abdefgjkuv] [-o option] [-A action] [-G globpat] [->
complete [-abdefgjkuv] [-pr] [-DEI] [-o option] [-A action] [->
compgot [-o|+o option] [-DEI] [name ...]
continue [n]
coproc [NAME] command [redirections]
declare [-aAfFgiLnrstux] [-p] [name[=value] ...]
dirs [-clpv] [+N] [-N]
disown [-h] [-ar] [jobspec ... | pid ...]

history [-c] [-d offset] [n] or history -anrw [filename] or hi>
if COMMANDS; then COMMANDS; [ elif COMMANDS; then COMMANDS; ].>
jobs [-lnprs] [jobspec ...] or jobs -x command [args]
kill [-s sigspec | -n signum | -sigspec] pid | jobspec ... or >
let arg [arg ...]
local [option] name[=value] ...
logout [n]
mapfile [-d delim] [-n count] [-O origin] [-s count] [-t] [-u >
popd [-n] [+N | -N]
printf [-v var] format [arguments]
pushd [-n] [+N | -N | dir]
pwd [-LP]
read [-ers] [-a array] [-d delim] [-i text] [-n nchars] [-N nc>
readarray [-d delim] [-n count] [-O origin] [-s count] [-t] [->
readonly [-aAf] [name[=value] ...] or readonly -p
return [n]
select NAME [in WORDS ... ;] do COMMANDS; done
set [-abefhkmnptuvxBCHP] [-o option-name] [--] [arg ...]
shift [n]
shopt [-pqsu] [-o] [optname ...]
source filename [arguments]
suspend [-f]
test [expr]
```

Q16

Search for a specific string in output

```
shruthimohan@EDITH:~/Big_data_analytics/Ex1$ grep 'HELLO' file.txt
HELLO000
```

Q17

Display active processes on terminal

```
shruthimohan@EDITH:~/Big_data_analytics/Ex1$ ps
PID TTY          TIME CMD
  9 pts/0        00:00:00 bash
 92 pts/0        00:00:00 nano
179 pts/0        00:00:00 ps
```

Q18

Download files from the internet.

```
shruthimohan@EDITH:~/Big_data_analytics/Ex1$ wget https://www.google.com/
--2024-07-17 10:50:42-- https://www.google.com/
Resolving www.google.com (www.google.com)... 142.250.183.164, 2404:6800:4009:82b::2004
Connecting to www.google.com (www.google.com)[142.250.183.164]:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: unspecified [text/html]
Saving to: 'index.html'

index.html                                     [ <=> ] 22.17K --.-KB/s in 0.04s

2024-07-17 10:50:42 (560 KB/s) - 'index.html' saved [22706]
```

Q19

Create or update passwords for existing users

```
shruthimohan@EDITH:~/Big_data_analytics/Ex1$ passwd
Changing password for shruthimohan.
Current password:
```

Q20

View the exact location of any tool/software installed

```
shruthimohan@EDITH:~/Big_data_analytics/Ex1$ which hashcat
/usr/bin/hashcat
```

Q21

Check the details of the file system

```
shruthimohan@EDITH:~/Big_data_analytics/Ex1$ df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/sdc        251G   2.4G  236G   1% /
none            3.9G   28K   3.9G   1% /mnt/wslg
none            3.9G   4.0K   3.9G   1% /mnt/wsl
tools           476G  409G   68G   86% /init
none            3.9G     0   3.9G   0% /dev
none            3.9G     0   3.9G   0% /run
none            3.9G     0   3.9G   0% /run/lock
none            3.9G     0   3.9G   0% /run/shm
none            3.9G     0   3.9G   0% /run/user
tmpfs           3.9G     0   3.9G   0% /sys/fs/cgroup
drivers          476G  409G   68G   86% /usr/lib/wsl/drivers
lib             476G  409G   68G   86% /usr/lib/wsl/lib
none            3.9G   76K   3.9G   1% /mnt/wslg/versions.txt
none            3.9G   76K   3.9G   1% /mnt/wslg/doc
drvfs           476G  409G   68G   86% /mnt/c
```

Q22

Check the lines, word count, and characters in a file using different options

```
shruthimohan@EDITH:~/Big_data_analytics/Ex1$ wc file.txt
1 1 9 file.txt
shruthimohan@EDITH:~/Big_data_analytics/Ex1$ wc -l file.txt
1 file.txt
shruthimohan@EDITH:~/Big_data_analytics/Ex1$ wc -w file.txt
1 file.txt
shruthimohan@EDITH:~/Big_data_analytics/Ex1$ wc -c file.txt
9 file.txt
shruthimohan@EDITH:~/Big_data_analytics/Ex1$ wc -wc file.txt
1 9 file.txt
```