2. Basic Linux Commands

Study of a terminal-based text editor such as Vim or Emacs. (By the end of the course, students are expected to acquire following skills in using the editor: cursor operations, manipulate text, search for patterns, global search and replace)
Basic Linux commands, familiarity with following commands/operations expected.

1. man
2. ls, echo, read
3. more, less, cat
4. cd, mkdir, pwd, find
5. mv, cp, rm, tar
6. wc, cut, paste
7. head, tail, grep, expr
8. chmod, chown
9. Redirections & Piping
10. useradd, usermod, userdel, passwd
11. df,top, ps

1. **man:** by using this command you can easily learn how to use

Output

```
mits@mits-H610M-H-V2-DDR4:~$man ls
NAME
    ls - list directory contents

SYNOPSIS
    ls [OPTION]... [FILE]…

DESCRIPTION
    List information about the FILEs (the current directory by default). Sort entries alphabetically if none of -cftuvSUX nor –sort is specified.

 Mandatory arguments to long options are mandatory for short options too.
  -a, --all
       do not ignore entries starting with .
  -A, --almost-all
       do not list implied . and ..
```

2. **ls, echo, read**

ls: The ls command is used to view the contents of a directory. By default, this command will display the contents of your current working directory. If you want to see the content of other directories, type ls and then the directory's path.
There are variations you can use with the ls command:

Output

- ls -R will list all the files in the sub-directories as well

```
.:Desktop Documents Downloads Hanna india Music Pictures Public snap Templates Videos
/Desktop:
./Documents:
```

./Downloads:
firefox.tmp
/Downloads/firefox.tmp:
tmpaddon
./Hanna:
ACN
./Hanna/ACN:
document.docx document.pdf

- ls –l – long listing
  mits@mits-H610M-H-V2-DDR4:~$ ls -l
  total 44
  drwxr-xr-x 2 mits mits 4096 Jul 15 2024 Desktop
  drwxr-xr-x 2 mits mits 4096 Jul 1 2024 Documents
  drwxr-xr-x 3 mits mits 4096 Feb 5 11:33 Downloads
  drwxrwxr-x 3 mits mits 4096 Feb 5 10:18 Hanna
  -rw-rw-r-- 1 mits mits 386 Feb 5 10:49 india
  drwxr-xr-x 2 mits mits 4096 Jan 24 2024 Music
  drwxr-xr-x 3 mits mits 4096 Feb 13 2024 Pictures
  drwxr-xr-x 2 mits mits 4096 Jan 24 2024 Public
  drwx------ 5 mits mits 4096 Jun 4 2024 snap
  drwxr-xr-x 2 mits mits 4096 Jan 24 2024 Templates
  drwxr-xr-x 2 mits mits 4096 Jan 24 2024 Videos
  mits@mits-H610M-H-V2-DDR4:~$
- ls -a will show the hidden files
- ls -al will list the files and directories with detailed information like the
- permissions, size, owner, etc.
- ls -t lists files sorted in the order of “last modified”
- ls -r option will reverse the natural sorting order. Usually used in combination with other switches such as ls -tr. This will reverse the time-wise listing.

echo: echo command is used to move some data into a file. If you want to add the text, “Hello, my name is John” into a file called name.txt, you would type echo Hello, my name is John >> name.txt2.head.

Output

mits@mits-H610M-H-V2-DDR4:~$ echo "Hanna"
Hanna
mits@mits-H610M-H-V2-DDR4:~$ a="10"
mits@mits-H610M-H-V2-DDR4:~$ echo $a

read: read the contents of a line into a variable. The read command can be used with and without arguments. read command is used to read [options] [name...] . $read $read var1 var2 var3. $echo "[$var1] [$var2] [$var3].

Output

mits@mits-H610M-H-V2-DDR4:~$ echo "Enter your name:"; read;
Enter your name:
hanna
mits@mits-H610M-H-V2-DDR4:~$ echo "Enter your name:"; read name; echo "hello" $name;
Enter your name:
hanna

hello hanna

3. **more, less, cat**

more: Like cat command, more command displays the content of a file. Only difference is that, in case of larger files, ' cat' command output will scroll off your screen while ' more' command displays output one screenful at a time. Enter key

Output

```
mits@mits-H610M-H-V2-DDR4:~$ more -p india
India is my country
I love my country
All Indians are my brothers and sisters
India has 29 states
India is the seventh largest country
India is megadiverse country
Indian culture history spans more than 4500 years
India has a very ancient tradition of art
There are 22 official languages in India
India is the tiger capital of the world
India is the largest producer films in the world
```

less: The 'less' command is same as 'more' command but include some more features. It automatically adjusts with the width and height of the terminal window, while 'more' command cuts the content as the width of the terminal window get shorter.

Output

```
mits@mits-H610M-H-V2-DDR4:~$ less india
India is my country
I love my country
All Indians are my brothers and sisters
India has 29 states
India is the seventh largest country
India is megadiverse country
Indian culture history spans more than 4500 years
India has a very ancient tradition of art
There are 22 official languages in India
India is the tiger capital of the world
India is the largest producer films in the world
india (END)
```

Cat: cat (short for concatenate) is one of the most frequently used commands in Linux. It is used to list the contents of a file on the standard output stdout. To run this command, type cat followed by the file's name and its extension.

Output

```
mits@mits-H610M-H-V2-DDR4:~$ cat > countries
india
china
switzerland
germany
mits@mits-H610M-H-V2-DDR4:~$ cat countries
```

indi
china

4. **cd, mkdir, pwd, find**

cd: To navigate through the Linux files and directories, use the cd .It requires either the full path or the name of the directory, depending on the current working directory that you're in.

Output
mits@mits-H610M-H-V2-DDR4:~$ cd Desktop
mits@mits-H610M-H-V2-DDR4:~/Desktop$ cd ..
mits@mits-H610M-H-V2-DDR4:~$

mkdir: Use mkdir command to make a new directory — if you type mkdir Music it will create a directory called Music. To generate a new directory inside another directory, use this Linux basic command.

Output
mits@mits-H610M-H-V2-DDR4:~$ mkdir music
mits@mits-H610M-H-V2-DDR4:~$ mkdir music/classical

pwd: The command will return an absolute (full) path, which is basically a path of all the directories that starts with a forward slash (/). An example of an absolute path is /home/username.

Output
mits@mits-H610M-H-V2-DDR4:~$ pwd
/home/mits
mits@mits-H610M-H-V2-DDR4:~/Hanna/N&SA$ pwd
/home/mits/Hanna/N&SA
mits@mits-H610M-H-V2-DDR4:~/Hanna/N&SA$

find: Similar to the locate command, using find also searches for files and directories. The difference is, you use the find command to locate files within a given directory. As an example, find /home/ -name notes.txt command will search for a file called notes.txt within the home directory and its subdirectories. Other variations when using the find are: To find files in the current directory use, find . -name notes.txt. To look for directories use, / -type d -name notes. txt.

Output
mits@mits-H610M-H-V2-DDR4:~$:~$find ~ -name "india"
/home/mits/india
mits@mits-H610M-H-V2-DDR4:~$:~$find . -name "*.txt"
./sample.txt
./file1.txt
./file2.txt

5. **mv, cp, rm, tar**

mv: The primary use of the mv command is to move files, it can also be used to rename files. The arguments in mv are similar to the cp command. You need to type mv, the file's name, and the destination's directory. mv file.txt
/home/username/Documents. To rename files, the Linux is mv oldname.ext newname.ext.

Output

```
mits@mits-H610M-H-V2-DDR4:~$ cat states
Kerala
Tamil nadu
Goa
mits@mits-H610M-H-V2-DDR4:~$ mv states state
mits@mits-H610M-H-V2-DDR4:~$ cat state
kerala
arunachal Pradesh
Karnataka
tamil nadu
india@is@my@country
mits@mits-H610M-H-V2-DDR4:~$ cat states
cat: states: No such file or directory
```

cp: cp command issued to copy files from the current directory to a different directory. For instance, the command cp scenery.jpg /home/username/Pictures would create a copy of scenery.jpg (from your current directory) into the Pictures directory. cp -i will ask for user's consent in case of a potential file overwrite. cp -p will preserve source files' mode, ownership and timestamp. cp -r will copy directories recursively. cp -u copies files only if the destination file is not existing or the source file is newer than the destination file.

Output

```
mits@mits-H610M-H-V2-DDR4:~/Hanna/N&amp;amp;SA$ ls
docs file1 'shell script' Shellscript.docx
mits@mits-H610M-H-V2-DDR4:~/Hanna/N&SA$ cp file1 file2
mits@mits-H610M-H-V2-DDR4:~/Hanna/N&SA$ ls
docs file1 file2 'shell script' Shellscript.docx
mits@mits-H610M-H-V2-DDR4:~/Hanna/NSA$
```

rm: The rm command is used to delete directories and the contents within them. If you only want to delete the directory —as an alternative to rmdir — use rm -r. Be very careful with this command and double-check which directory you are in. This will delete everything and there is no undo. To remove a file use rm filename.

Output

```
mits@mits-H610M-H-V2-DDR4:~$ rm music
```

tar: The Linux 'tar'stands for tape archive, is used to createArchive and extract theArchive files Linux tar command to create compressed or uncompressed Archive files.

Output

```
mits@mits-H610M-H-V2-DDR4:~$ tar -cvf archive.tar myfolder
myfolder/
myfolder/sample.txt
```

6. **wc, cut, paste**

wc: wc stands for word count. Used for counting purpose. It is used to find out number of lines,

word count, byte and characters count in the files specified in the file arguments. #wc state.txt 6 8 54 state.tx . #wc state.txt capital.txt wc -l state.txt wc -w state.txt capital.txt wc -c state.txt .wc -m state.txt

Output

```
mits@mits-H610M-H-V2-DDR4:~$ cat state
Kerala
Tamil nadu
Goa
mits@mits-H610M-H-V2-DDR4:~$ wc state
3 4 22 state
mits@mits-H610M-H-V2-DDR4:~$ wc -l state
3 state
mits@mits-H610M-H-V2-DDR4:~$ wc -c state
22 state
mits@mits-H610M-H-V2-DDR4:~$ wc -w state
4 state
```

cut: The cut command is used for cutting out the sections from each line offiles and writing the result to standard output. It can be used to cut parts of aline by byte position, character and file.

Output

```
mits@mits-H610M-H-V2-DDR4:~$ cat india
India is my country
I love my country
All Indians are my brothers and sisters
India has 29 states
India is the seventh largest country
India is megadiverse country
Indian culture history spans more than 4500 years
India has a very ancient tradition of art
There are 22 official languages in India
India is the tiger capital of the world
India is the largest producer films in the world
mits@mits-H610M-H-V2-DDR4:~$ cut -b 1,2,3 india
Ind
I l
All
Ind
Ind
Ind
Ind
Ind
The
Ind
Ind
mits@mits-H610M-H-V2-DDR4:~$ cut -b 1-4,7-9 india
Indiis
I lo my
All dia
Indihas
```

```
Indiis
Indiis
Indi cu
Indihas
Therare
Indiis
Indiis
mits@mits-H610M-H-V2-DDR4:~$ cut -c 5-9 india
a is
ve my
India
a has
a is
a is
an cu
a has
e are
a is
a is
mits@mits-H610M-H-V2-DDR4:~$ cut -d " " -f 1-4 india
India is my country
I love my country
All Indians are my
India has 29 states
India is the seventh
India is megadiverse country
Indian culture history spans
India has a very
There are 22 official
India is the tiger
India is the largest
mits@mits-H610M-H-V2-DDR4:~$ cut -d " " -f 4 india
country
country
my
states
seventh
country
spans
very
official
tiger
largest
```

paste: It is used to join files horizontally (parallel merging) by outputting lines consisting of lines from each file specified, separated by tab as delimiter, to the standard output. paste [OPTION]... [FILES]...$ paste state.txt capital.txt.

Output

```
mits@mits-H610M-H-V2-DDR4:~$ cat number
1
2
```

```
3
mits@mits-H610M-H-V2-DDR4:~$ cat state
Kerala
Tamil nadu
Goa
mits@mits-H610M-H-V2-DDR4:~$ cat capital
Trivandrum
Chennai
Panaji
mits@mits-H610M-H-V2-DDR4:~$ paste number state capital
1Kerala         Trivandrum
2Tamil nadu   Chennai
3Goa   Panaji
mits@mits-H610M-H-V2-DDR4:~$ paste -d ":" number state capital
1:Kerala:Trivandrum
2:Tamil nadu:Chennai
3:Goa:Panaji
mits@mits-H610M-H-V2-DDR4:~$ paste -d ":," number state capital
1:Kerala,Trivandrum
2:Tamil nadu,Chennai
3:Goa,Panaji
mits@mits-H610M-H-V2-DDR4:~$ paste -s number state capital
12      3
Kerala Tamil nadu     Goa
Trivandrum    Chennai         Panaji
```

7. head, tail, grep, expr

head: The head command is used to view the first lines of any text file. By default, it will show the first ten lines, but you can change this number to your liking. If you only want to show the first five lines, type head -n 5 filename.txt.

Output

```
mits@mits-H610M-H-V2-DDR4:~$ cat india
India is my country
I love my country
All Indians are my brothers and sisters
India has 29 states
India is the seventh largest country
India is megadiverse country
Indian culture history spans more than 4500 years
India has a very ancient tradition of art
There are 22 official languages in India
India is the tiger capital of the world
India is the largest producer films in the world
mits@mits-H610M-H-V2-DDR4:~$ head india
India is my country
I love my country
All Indians are my brothers and sisters
India has 29 states
India is the seventh largest country
India is megadiverse country
```

Indian culture history spans more than 4500 years
India has a very ancient tradition of art
There are 22 official languages in India
India is the tiger capital of the world
mits@mits-H610M-H-V2-DDR4:~$ head -n 3 india
India is my country
I love my country
All Indians are my brothers and sister

tail: This one has a similar function to the head command, but instead of showing the first lines, the tail command will display the last ten lines of a text file. tail -n filename.txt.

Output
mits@mits-H610M-H-V2-DDR4:~$ cat india
India is my country
I love my country
All Indians are my brothers and sisters
India has 29 states
India is the seventh largest country
India is megadiverse country
Indian culture history spans more than 4500 years
India has a very ancient tradition of art
There are 22 official languages in India
India is the tiger capital of the world
India is the largest producer films in the world
mits@mits-H610M-H-V2-DDR4:~$ tail india
I love my country
All Indians are my brothers and sisters
India has 29 states
India is the seventh largest country
India is megadiverse country
Indian culture history spans more than 4500 years
India has a very ancient tradition of art
There are 22 official languages in India
India is the tiger capital of the world
India is the largest producer films in the world
mits@mits-H610M-H-V2-DDR4:~$ tail -5 india | cat
Indian culture history spans more than 4500 years
India has a very ancient tradition of art
There are 22 official languages in India
India is the tiger capital of the world
India is the largest producer films in the world

grep: Another basic Linux command that is undoubtedly helpful for everyday use is grep. It lets you search through all the text in a given file. To illustrate, grep blue notepad.txt will search for the word blue in the notepad file. Lines that contain the searched word will be displayed fully. Usually output of a previous command is piped into the grep command. For example, ls -l |grep “kernel”.

Output
mits@mits-H610M-H-V2-DDR4:~$ cat india
India is my country

```
I love my country
All Indians are my brothers and sisters
India has 29 states
India is the seventh largest country
India is megadiverse country
Indian culture history spans more than 4500 years
India has a very ancient tradition of art
There are 22 official languages in India
India is the tiger capital of the world
India is the largest producer films in the world
mits@mits-H610M-H-V2-DDR4:~$ grep -i -l "india" india
india
mits@mits-H610M-H-V2-DDR4:~$ grep -i -n "india" india
1:India is my country
3:All Indians are my brothers and sisters
4:India has 29 states
5:India is the seventh largest country
6:India is megadiverse country
7:Indian culture history spans more than 4500 years
8:India has a very ancient tradition of art
9:There are 22 official languages in India
10:India is the tiger capital of the world
11:India is the largest producer films in the world
mits@mits-H610M-H-V2-DDR4:~$ grep -i -e "has" -e "are" india
All Indians are my brothers and sisters
India has 29 states
India has a very ancient tradition of art
There are 22 official languages in India
```

expr: The expr command evaluates a given expression and displays its corresponding output. It is used for: . Basic operations like addition, subtraction, multiplication, division, and modulus on integers. Evaluating regular expressions,string operations like substring, length of strings etc. Performing operations on variables inside a shell script.

Output

```
mits@mits-H610M-H-V2-DDR4:~$ a="10"
mits@mits-H610M-H-V2-DDR4:~$ b="5"
mits@mits-H610M-H-V2-DDR4:~$ expr $a + $b
15
mits@mits-H610M-H-V2-DDR4:~$ expr $a - $b
5
mits@mits-H610M-H-V2-DDR4:~$ expr $a \* $b
50
mits@mits-H610M-H-V2-DDR4:~$ expr $a / $b
2
```

8. chmod, chown

chmod: To change directory permissions of file/ Directory in Linux. #chmod who what which file/directory chmod +rwx filename to add permissions. chmod -rwx directory name to remove permissions. chmod +x filename to allow executable permissions. chmod -wx filename to take out write and executable permissions. #chmod u+x test #chmod g- rwx test

#chmod o-r test 4

Output

```
mits@mits-H610M-H-V2-DDR4:~$ ls -l
-rw-rw-r-- 1 mits mits  148 Mar  5 11:24 myfile1.txt
mits@mits-H610M-H-V2-DDR4:~$ chmod 777 myfile1.txt
mits@mits-H610M-H-V2-DDR4:~$ ls -l
-rwxrwxrwx 1 mits mits  148 Mar  5 11:24 myfile1.txt
```

chown: The chown command allows you to change the user and/or group ownership of a given file, directory. #chownTom Test

Output

```
mits@mits-H610M-H-V2-DDR4:~$ sudo chown hanna myfile1.txt
mits@mits-H610M-H-V2-DDR4:~$ ls -l
-rwxrwxrwx 1 hanna mits 148 Mar  5 11:24 myfile1.txt
```

9. **Redirections & Piping:** A pipe is a form of redirection to send the output of one command/program/process to another command/program/process for further processing. Pipe is used to combine two or more commands, the output of one command acts as input to another command, and this command's output may act as input to the next command and so on.

Output

```
mits@mits-H610M-H-V2-DDR4:~$echo "Hello" > output.txt
mits@mits-H610M-H-V2-DDR4:~$echo "Linux" >> output.txt
mits@mits-H610M-H-V2-DDR4:~$ls -l | grep ".txt"
```

10. **useradd, usermod, userdel, passwd**

useradd: This is available only to system admins .Since Linux is a multi- user system, this means more than one person can interact with the same system at the same time. useradd is used to create a new user, while passwd is adding a password to that user's account. To add a new person named John type, user add John and then to add his password type, passwd 123456789.

Output

```
mits@mits-H610M-H-V2-DDR4:~$ sudo useradd hanna
[sudo] password for mits:
mits@mits-H610M-H-V2-DDR4:~$ cat /etc/passwd | grep "hanna"
hanna:x:1003:1003::/home/hanna:/bin/sh
```

usermod: usermod command is used to change the properties of a user in Linux through the command line command-line utility that allows you to modify a user's login information.

Output

```
mits@mits-H610M-H-V2-DDR4:~$ sudo usermod -l hannah hanna
mits@mits-H610M-H-V2-DDR4:~$ cat /etc/passwd | grep "hannah"
hannah:x:1003:1004::/home/hanna:/bin/sh
```

userdel: Remove a user is very similar to adding a new user. To delete the users account type, userdel UserName.

Output

```
mits@mits-H610M-H-V2-DDR4:~$ sudo userdel hanna
mits@mits-H610M-H-V2-DDR4:~$ cat /etc/passwd | grep "hanna"
mits@mits-H610M-H-V2-DDR4:~$
```

passwd: Changes passwords for user accounts. A normal user may only change the password for their own account, while the superuser may change the password for any account.

11. **df, top, ps**

df: Use df command to get a report on the system's disk space usage, shown in percentage and KBs. If you want to see the report in megabytes, type df - m.

Output

```
mits@mits-H610M-H-V2-DDR4:~$ df
Filesystem   1K-blocks     Used Available   Use% Mounted on
tmpfs          789972      2372     787600    1% /run
/dev/sda5    219711472 16791240 191686696    9% /
tmpfs          3949856     0     3949856     0%   /dev/shm
tmpfs           5120         4      5116     1%  /run/lock
efivarfs        256         125       127       50% /sys/firmware/efi/efivars
/dev/sda1       98304     31816     66488 33% /boot/efi
tmpfs           789968     72      789896   1% /run/user/127
tmpfs          789968      104     789864    1% /run/user/1000
```

top: top command is used to show the Linux processes. It provides a dynamic real- time view of the running system

Syntax:

top [options]

Output

```
mits@mits-Veriton-M200-H510:~$top
top - 12:34:56 up  2:30,  1 user,  load average: 0.23, 0.15, 0.10
Tasks: 150 total,   1 running, 149 sleeping,   0 stopped,   0 zombie
%Cpu(s):  2.0 us,  1.0 sy,  0.0 ni, 97.0 id,  0.0 wa,  0.0 hi,  0.0 si,  0.0 st
MiB Mem :   8000.0 total,   4000.0 free,   2000.0 used,   2000.0 buff/cache
MiB Swap:   4000.0 total,   3900.0 free,    100.0 used.   5000.0 avail Mem
PID USER     PR  NI    VIRT    RES    SHR S  %CPU %MEM     TIME+ COMMAND
1234 root     20   0  400000  60000  15000 S   3.0  1.0   0:01.25 firefox
5678 user     20   0  250000  45000  12000 S   1.5  0.8   0:00.95 chrome
```

ps: The ps command, short for Process Status, is a command line utility that is used to display or view information related to the processes running in a Linux system. PID – This is the unique process ID TTY– This is the type of terminal that the user is logged in to . TIME – This is the time in minutes and seconds that the process has been running .CMD – The command that launched the process

Syntax:

ps [options]

Output

```
mits@mits-Veriton-M200-H510:~$ps
USER     PID %CPU %MEM    VSZ   RSS TTY     STAT START   TIME COMMAND
root       1  0.0  0.1 169984  9456 ?       Ss   10:00   0:02 /sbin/init
user     1234  0.0  0.3 250000 45000 pts/0    S    10:05   0:01 /bin/bash
user     5678  0.1  0.1  40000 10000 pts/0    R    10:10   0:00 ps aux
```

3. Execute the following scenario using basic Linux commands

a) Login to your home directory
b) List contents of your current working directory
c) List all contents of your current working directory, including hidden files
d) Make a directory called April2024 inside your current working directory. Change to the directory April2024
e) Create an empty file name file1
f) Make a copy of file1 to file2
g) Copy file1 from the current working directory and save it as the name file2 in one Directory up from the current directory
h) Clear the terminal window

Output

```
mits@mits-H610M-H-V2-DDR4:~$ ls
a1         Documents             Hanna  MCA       Public  Templates
capital    Downloads             india  Music     sample  Videos
countries  FactorialExample.java  java   number    snap    you
Desktop    hanna                 ls     Pictures  states
mits@mits-H610M-H-V2-DDR4:~$ ls -a
.                    .fontconfig  number
..                   .gnupg       Pictures
a1                   hanna        .profile
.bash_history        Hanna        Public
.bash_logout         india        .python_history
.bashrc              .java        sample
.cache               java         snap
capital              .lesshst     .ssh
.config              .local       states
countries            ls           .sudo_as_admin_successful
Desktop              MCA          Templates
Documents            .mozilla     .thunderbird
Downloads            Music        Videos
FactorialExample.java  .myfile.swp  you
mits@mits-H610M-H-V2-DDR4:~$ mkdir April2024
mits@mits-H610M-H-V2-DDR4:~$ cd April2024
mits@mits-H610M-H-V2-DDR4:~/April2024$ touch file1
mits@mits-H610M-H-V2-DDR4:~/April2024$ cp file1 file2
mits@mits-H610M-H-V2-DDR4:~/April2024$ cp file1 ../file2
mits@mits-H610M-H-V2-DDR4:~/April2024$ clear
```

4. Execute the following scenario using basic Linux commands

a) Login to your home directory

b) Write the contents of syslog (located in the /var/log/ directory) onto thescreen a page at a time.

Output

```
mits@mits-H610M-H-V2-DDR4:~$ more /var/log/syslog
Feb 27 18:40:55 mits-H610M-H-V2-DDR4 systemd[1]: rsyslog.service: Sent signal SI
GHUP to main process 793 (rsyslogd) on client request.
Feb 27 18:40:55 mits-H610M-H-V2-DDR4 systemd[1]: logrotate.service: Deactivated
successfully.
Feb 27 18:40:55 mits-H610M-H-V2-DDR4 systemd[1]: Finished Rotate log files.
Feb 27 18:40:55 mits-H610M-H-V2-DDR4 mariadbd[984]: 2025-02-27 18:40:55 0 [Note]
 InnoDB: 128 rollback segments are active.
Feb 27 18:40:55 mits-H610M-H-V2-DDR4 mariadbd[984]: 2025-02-27 18:40:55 0 [Note]
 InnoDB: Creating shared tablespace for temporary tables
Feb 27 18:40:55 mits-H610M-H-V2-DDR4 mariadbd[984]: 2025-02-27 18:40:55 0 [Note]
 InnoDB: Setting file './ibtmp1' size to 12 MB. Physically writing the file full
; Please wait ...
Feb 27 18:40:55 mits-H610M-H-V2-DDR4 mariadbd[984]: 2025-02-27 18:40:55 0 [Note]
 InnoDB: File './ibtmp1' size is now 12 MB.
Feb 27 18:40:55 mits-H610M-H-V2-DDR4 mariadbd[984]: 2025-02-27 18:40:55 0 [Note]
 InnoDB: 10.6.18 started; log sequence number 44496; transaction id 14
Feb 27 18:40:55 mits-H610M-H-V2-DDR4 mariadbd[984]: 2025-02-27 18:40:55 0 [Note]
 InnoDB: Loading buffer pool(s) from /var/lib/mysql/ib_buffer_pool
Feb 27 18:40:55 mits-H610M-H-V2-DDR4 mariadbd[984]: 2025-02-27 18:40:55 0 [Note]
 Plugin 'FEEDBACK' is disabled.
Feb 27 18:40:55 mits-H610M-H-V2-DDR4 mariadbd[984]: 2025-02-27 18:40:55 0 [Note]
 InnoDB: Buffer pool(s) load completed at 250227 18:40:55
Feb 27 18:40:55 mits-H610M-H-V2-DDR4 mariadbd[984]: 2025-02-27 18:40:55 0 [Warni
--More--(0%)
```

c) Read documentation on a command: less

Output

```
India is my country
I love my country
All Indians are my brothers and sisters
India has 29 states
India is the seventh largest country
India is megadiverse country
Indian culture history spans more than 4500 years
India has a very ancient tradition of art
There are 22 official languages in India
India is the tiger capital of the world
India is the largest producer films in the world
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(END)
```

5. Execute the following scenario using basic Linux Commands

a) Create an untitled document myfile.txt using anyone editor

Output
mits@mits-H610M-H-V2-DDR4:~$vi myfile.txt

b) Place the following text in myfile.txt and save it
c) Neo: What are you trying to tell me? That I can dodge bullets? Morpheus: No, Neo. I'm trying to tell you that when you're ready, you won't have to.

Output
$i (to enter **INSERT mode**.)
Neo: What are you trying to tell me? That I can dodge bullets?
Morpheus: No, Neo. I'm trying to tell you that when you're ready, you won't have to.
esc
$wq (**save and exit.)**

d) Count the number of characters, words, and lines in the file

Output
mits@mits-H610M-H-V2-DDR4:~$wc myfile.txt
2 26 162 myfile.txt

e) Find the occurrence of the word “tell” in the file

Output
mits@mits-H610M-H-V2-DDR4:~$grep -o "tell" myfile.txt | wc -l
2

f) Make two copies of myfile.txt with names myfile1.txt and myfile2.txt

Output
mits@mits-H610M-H-V2-DDR4:~$cp myfile.txt myfile1.txt
mits@mits-H610M-H-V2-DDR4:~$cp myfile.txt myfile2.txt

g) List all the filenames with the word file in the present working directory.

Output
mits@mits-H610M-H-V2-DDR4:~$ls *file*
myfile.txt myfile1.txt myfile2.txt