

Problem 2: Read the instructions carefully and answer accordingly. If there is any need to insert some data then do that as well.

- a. Suppose you have a file named "data.txt" containing important information. Display the first 10 lines of this file to quickly glance at its contents using a command.

```
cdac@Sandesh: ~
pwdTo run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

Welcome to Ubuntu 22.04.3 LTS (GNU/Linux 5.15.153.1-microsoft-standard-WSL2 x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:        https://ubuntu.com/advantage

This message is shown once a day. To disable it please create the
/home/cdac/.hushlogin file.
cdac@Sandesh:~$ pwd
/home/cdac
cdac@Sandesh:~$ touch data.txt
cdac@Sandesh:~$ nano touch.txt
cdac@Sandesh:~$ head -10 data.txt
cdac@Sandesh:~$ head -10 data.txt
cdac@Sandesh:~$ head -10 touch.txt
1.pwd is command for creating directory
2.nano is used for editor like notepad
3.ls is used for listing out all files and directory
4.mkdir used for creating directory
5.rm is used for removing directory
6.chmod to give permissions
7.whoami to know which user
8.chmod example a+wx file2
9.BY default head have 10 lines
10.Tail has 10 lines
cdac@Sandesh:~$
```

- b. Now, to check the end of the file for any recent additions, display the last 5 lines of "data.txt" using another command.

```
cdac@Sandesh: ~
pwdTo run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

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10.Tail has 10 lines
cdac@Sandesh:~$ tail -5 touch.txt
10.Tail has 10 lines
11.root user has every permissions
12.bqkqdddbqkd
13.cachach
14..cnnncn
cdac@Sandesh:~$
```

- c. In a file named "numbers.txt," there are a series of numbers. Display the first 15 lines of this file to analyze the initial data set.

```
cdac@Sandesh: ~  
cdac@Sandesh:~$ pwd  
/home/cdac  
cdac@Sandesh:~$ touch data.txt  
cdac@Sandesh:~$ nano touch.txt  
cdac@Sandesh:~$ head -10 data.txt  
cdac@Sandesh:~$ head -10 touch.txt  
1.pwd is command for creating directory  
2.nano is used for editor like notepad  
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cdac@Sandesh:~$ tail -5 touch.txt  
10.Tail has 10 lines  
11.root user has every permissions  
12.bqkqdddbqkd  
13.cachach  
14..cnncn  
cdac@Sandesh:~$ nano numbers.txt  
cdac@Sandesh:~$ head -15 numbers.txt  
1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
cdac@Sandesh:~$
```

- d. To focus on the last few numbers of the dataset, display the last 3 lines of "numbers.txt".

```
cdac@Sandesh: ~  
11.root user has every permissions  
12.bqkqdddbqkd  
13.cachach  
14..cnncn  
cdac@Sandesh:~$ nano numbers.txt  
cdac@Sandesh:~$ head -15 numbers.txt  
1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
cdac@Sandesh:~$ tail -3 numbers.txt  
13  
14  
15  
cdac@Sandesh:~$
```

- e. Imagine you have a file named "input.txt" with text content. Use a command to translate all lowercase letters to uppercase in "input.txt" and save the modified text in a new file named "output.txt."

```
cdac@Sandesh: ~  
7  
8  
9  
10  
11  
12  
13  
14  
15  
cdac@Sandesh:~$ tail -3 numbers.txt  
13  
14  
15  
cdac@Sandesh:~$ nano input.txt  
cdac@Sandesh:~$ cat input.txt  
  
Command 'at' not found, but can be installed with:  
sudo apt install at  
cdac@Sandesh:~$ head -t input.txt  
head: invalid option -- 't'  
Try 'head --help' for more information.  
cdac@Sandesh:~$ head -tail input.txt  
head: invalid option -- 't'  
Try 'head --help' for more information.  
cdac@Sandesh:~$ head -5 input.txt  
import java.util.*;  
public static void main(String[] args) {  
Scanner sc = new Scanner(System.in);  
int n = sc.nextInt();  
for(int i=0; i<=n; i++) {  
cdac@Sandesh:~$ tr 'a-z' 'A-Z'<input.txt> output.txt  
cdac@Sandesh:~$ cat output.txt  
IMPORT JAVA.UUTIL.*;  
PUBLIC STATIC VOID MAIN(STRING[] ARGS) {  
SCANNER SC = NEW SCANNER(SYSTEM.IN);  
INT N = SC.NEXTINT();  
FOR(INT I=0; I<=N; I++) {  
FOR(INT J=0; J<I; J++) {  
SYSTEM.OUT.PRINT("**");  
}  
SYSTEM.OUT.PRINTLN();  
}  
}  
cdac@Sandesh:~$
```

- f. In a file named "duplicate.txt," there are several lines of text, some of which are duplicates. Use a command to display only the unique lines from "duplicate.txt."

```
cdac@Sandesh: ~  
head: invalid option -- 't'  
Try 'head --help' for more information.  
cdac@Sandesh:~$ head -5 input.txt  
import java.util.*;  
public static void main(String[] args) {  
Scanner sc = new Scanner(System.in);  
int n = sc.nextInt();  
for(int i=0; i<=n; i++) {  
cdac@Sandesh:~$ tr 'a-z' 'A-Z'<input.txt> output.txt  
cdac@Sandesh:~$ cat output.txt  
IMPORT JAVA.UUTIL.*;  
PUBLIC STATIC VOID MAIN(STRING[] ARGS) {  
SCANNER SC = NEW SCANNER(SYSTEM.IN);  
INT N = SC.NEXTINT();  
FOR(INT I=0; I<=N; I++) {  
FOR(INT J=0; J<I; J++) {  
SYSTEM.OUT.PRINT("**");  
}  
SYSTEM.OUT.PRINTLN();  
}  
}  
cdac@Sandesh:~$ nano duplicate.txt  
cdac@Sandesh:~$ unique duplicate.txt  
Command 'unique' not found, but can be installed with:  
sudo apt install john  
cdac@Sandesh:~$ sort duplicate.txt | uniq  
1.Hello World  
2.Hello World  
3.Hii  
4.Hello World  
cdac@Sandesh:~$ nano duplicate.txt  
cdac@Sandesh:~$ sort duplicate.txt | uniq  
1.Hello World  
3.Hii  
cdac@Sandesh:~$
```

- g. In a file named "fruit.txt," there is a list of fruits, but some fruits are repeated. Use a command to display each unique fruit along with the count of its occurrences in "fruit.txt."

```
cdac@Sandesh: ~  
cdac@Sandesh:~$ nano duplicate.txt  
cdac@Sandesh:~$ unique duplicate.txt  
Command 'unique' not found, but can be installed with:  
sudo apt install john  
cdac@Sandesh:~$ sort duplicate.txt | uniq  
1.Hello World  
2.Hello World  
3.Hii  
4.Hello World  
cdac@Sandesh:~$ nano duplicate.txt  
cdac@Sandesh:~$ sort duplicate.txt | uniq  
1.Hello World  
3.Hii  
cdac@Sandesh:~$ nano fruits.txt  
cdac@Sandesh:~$ sort fruit.txt | uniq-c  
sort: cannot read: fruit.txt: No such file or directory  
uniq-c: command not found  
cdac@Sandesh:~$ sort fruits.txt  
1 Apple  
2 Banana  
3 Kiwi  
3 Kiwi  
4 Orange  
4 Orange  
6 Mango  
cdac@Sandesh:~$ sort fruits.txt | uniq-c  
uniq-c: command not found  
cdac@Sandesh:~$ sort fruits.txt uniq -c  
sort: extra operand 'uniq' not allowed with -c  
cdac@Sandesh:~$ sort fruits.txt | uniq -c  
1  
1 1 Apple  
1 2 Banana  
2 3 Kiwi  
2 4 Orange  
1 6 Mango  
cdac@Sandesh:~$
```