ITW1 ASSIGNEMENT-2

NAME:- TARUN ARORA

ROLL NO.:- 20075092

BRANCH :- CSE

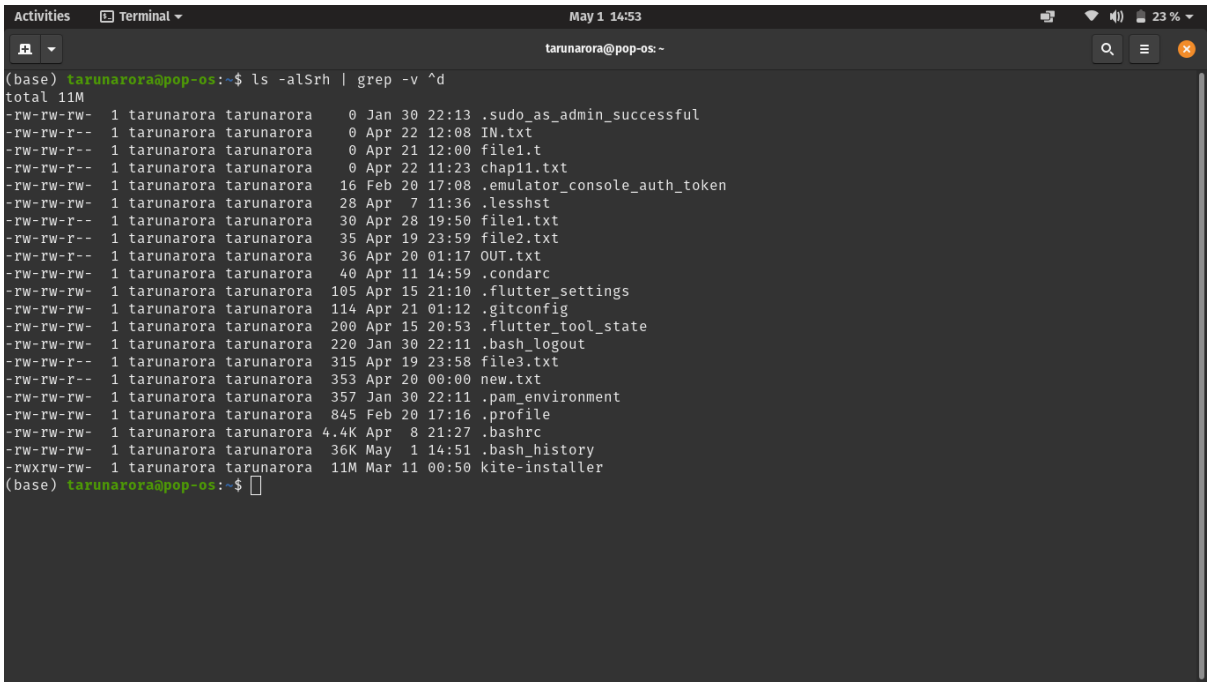
Q1. Write a command to find the list of all the files in the current directory in long format, sorted by size, and smallest first.

Solution:-

Code:-

```
ls -alSrh | grep -v ^d
```

(to display only files)



Q2. What is the difference between $* and $@? How do you find whether your system is 32 bit or 64 bit ?

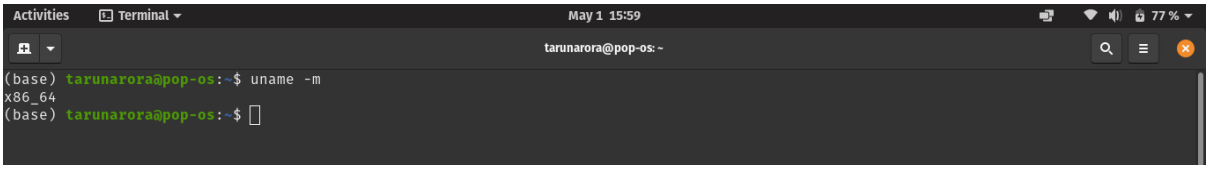
$* Stores all the arguments that were entered on the command line ($1 $2 ...).

"$@" Stores all the arguments that were entered on the command line, individually quoted ("$1" "$2" ...).

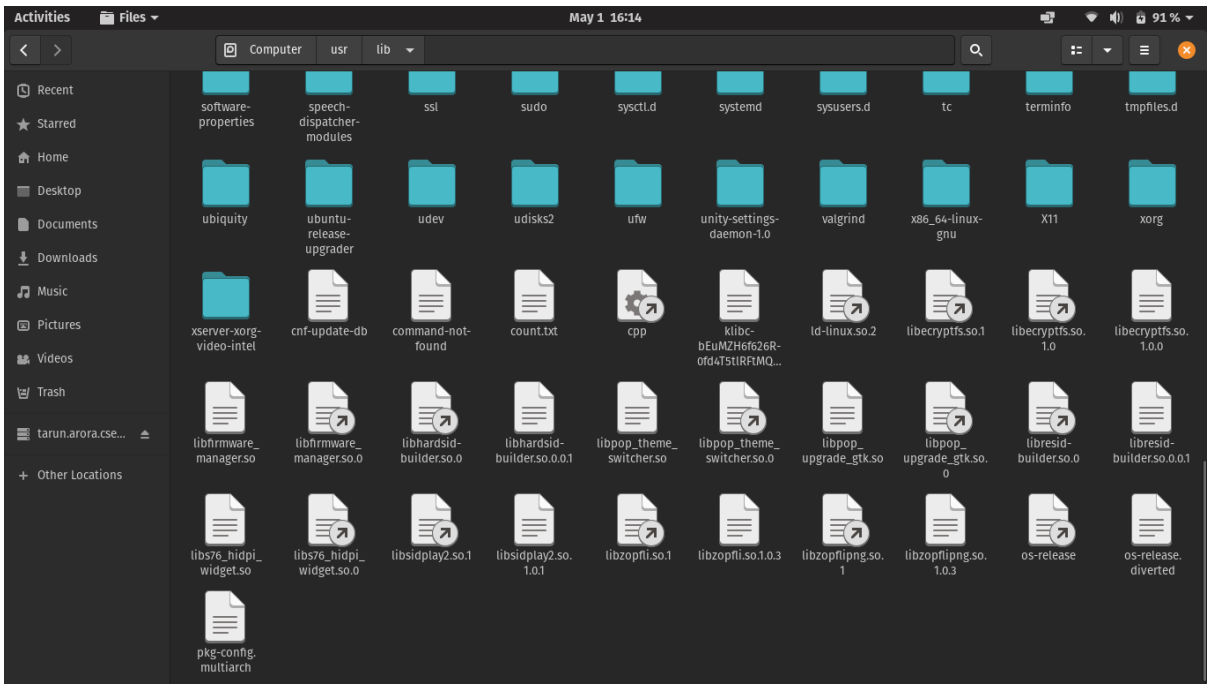
They are special parameters that allow accessing all the command-line arguments at once. $* and$@ both will act the same unless they are enclosed in double quotes, "". However, the "$*" special parameter takes the entire list as one argument with spaces between and the "$@" special parameter takes the entire list and separates it into separate arguments, i.e. $* takes value as a string whereas $@ has a value of array. $* treats command line arguments as a single string. $@ treats each argument as a string and uses string polarisation .

Code to get find whether system is 32/64 bit.

uname -m

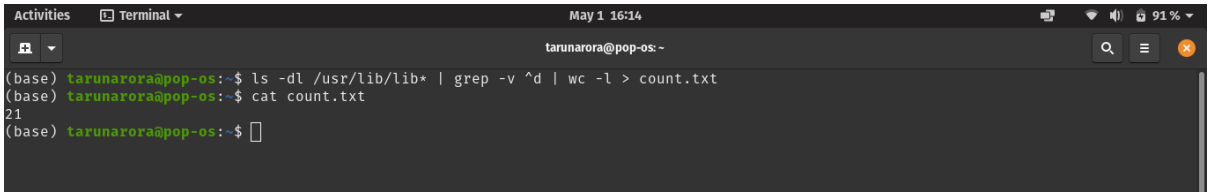


Q3. Count the total number of files in the directory /usr/lib starting with 'lib' and print output in a count.txt file.



Code to count number of "files" in /usr/lib:-

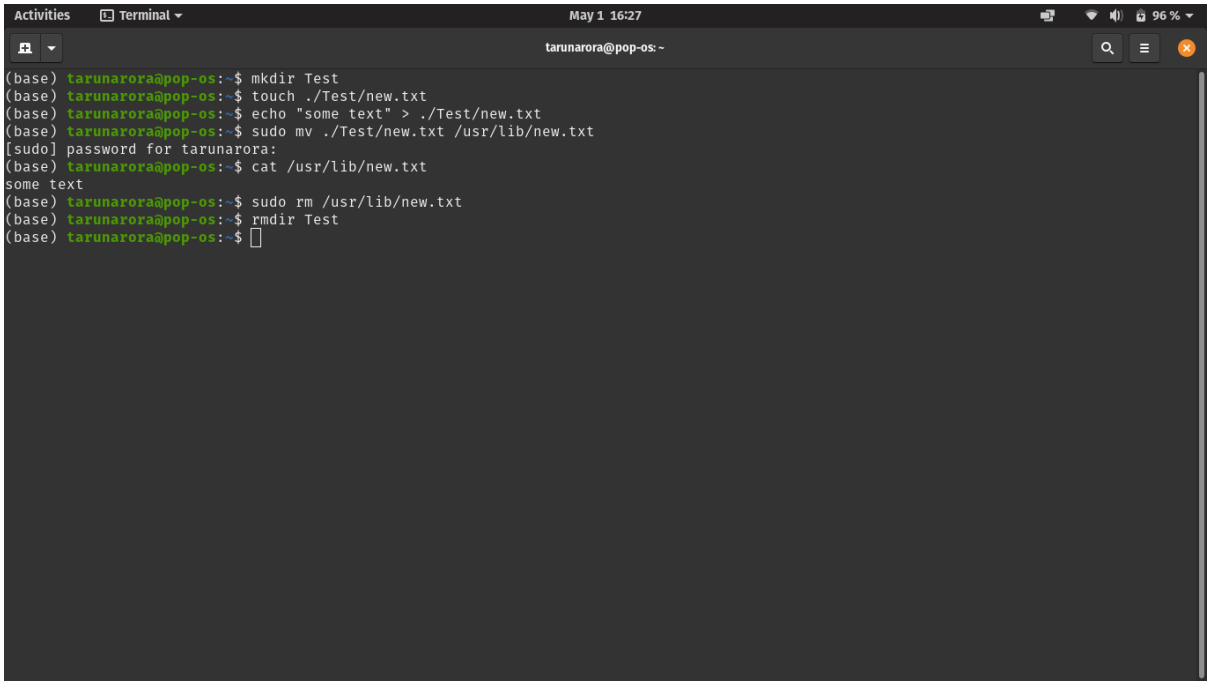
ls -dl /usr/lib/lib* | grep -v ^d | wc -l > count.txt



Q4. From your home directory, create a directory named "Test". Create a new file in Test directory named 'new.txt' and write some text in it. Then,move the file from there to"/usr/lib/". Then, display the content of that file on the terminal and then delete the file "new.txt" and the folder "Test".

Solution:-

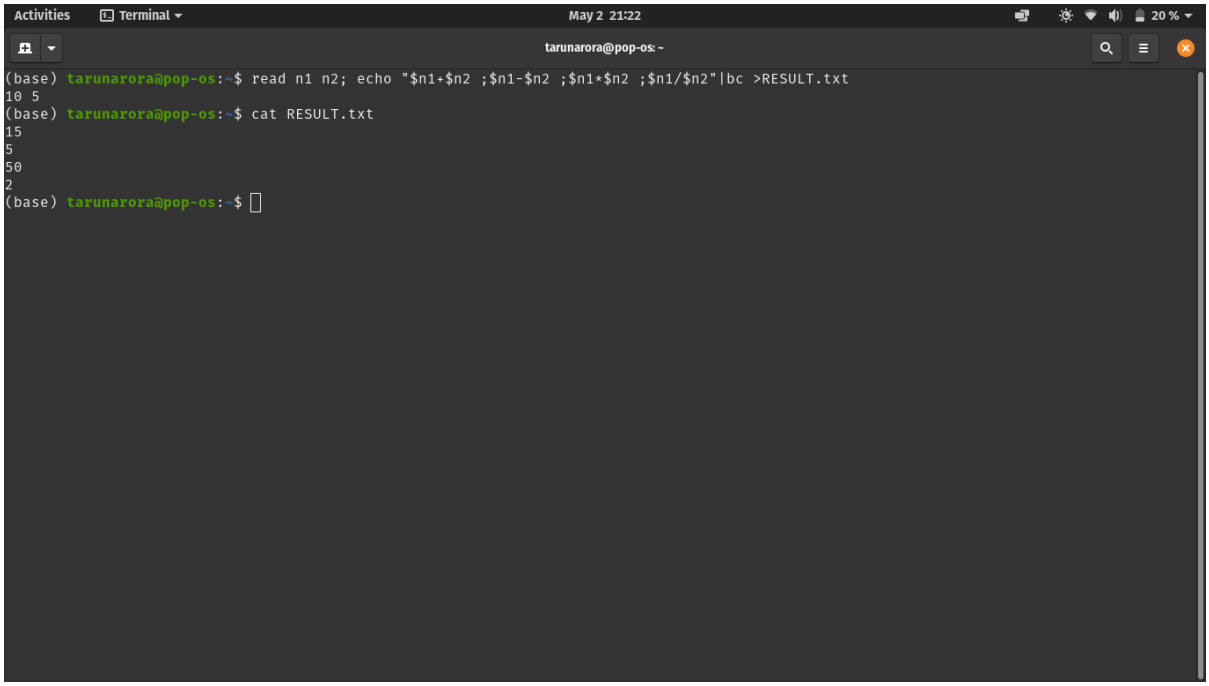
Code is attached in the screenshot below.



Q5. Read two numbers and perform addition, subtraction, multiplication and division. Also save the output of the operations in RESULT.txt.

Solution:-

Code is attached in the screenshot below.

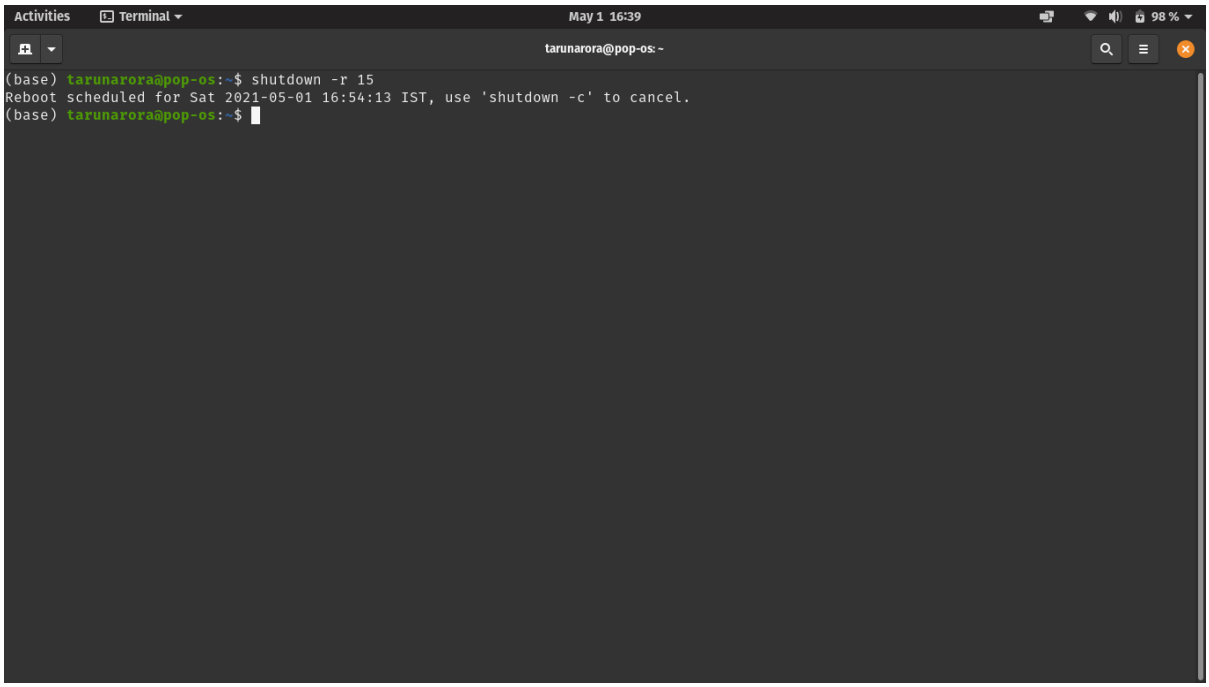


Q6. Write a command that will allow a UNIX system to shut down in 15 minutes, after which it will perform a reboot.

Solution:-

Code:-

```
shutdown -r 15
```

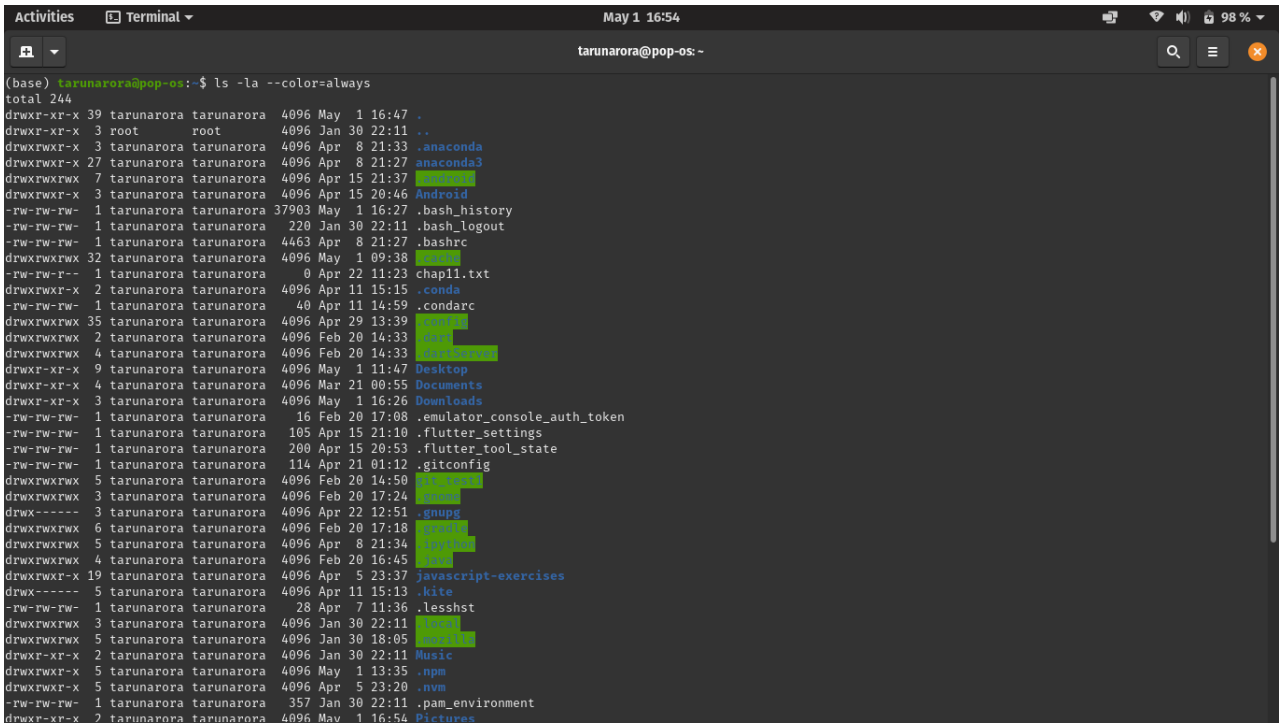


Q7. Write a command that will display files in the current directory, in a colored, long format.

Solution:-

Code:-

```
ls -la -color=always
```



Q8. What is the behavioral difference between "cmp" and "diff" commands? Justify with an example.

Solution:-

➔ **"cmp" command :**

- "cmp" command is a simple file comparison which compares two files bytes by bytes and tells if the file are identical or not.
- If mismatch occurs it returns the byte at which first mismatch occur else if both the file are same then no output occurs and prompt is returned

➔ **"diff" command:**

- "diff" command is compares two files line by line and tells which line needs to be changed in order to make the two files equal.
- If mismatch occurs it reports all of the mismatched lines else if both the files are same then no output is given and prompt is returned.

Q9. Write a command to searches the line which does not start with # or single quote (‘) or double front slashes (//) in a given file (file lines are star with any of [A-Z], [a-z], [0-9], and [#, ‘, //]).

Solution:-

Code:-

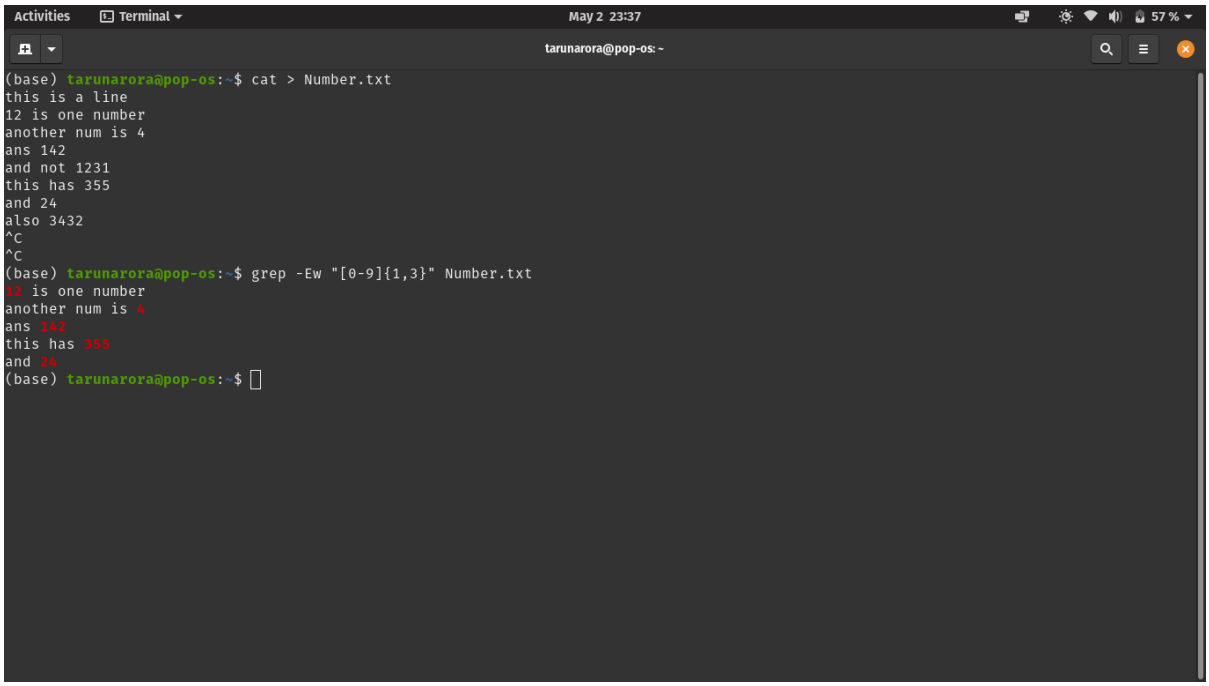
```
grep "^//" f1 -v | grep -v "^[`#]"
```

Q10.Write a command to prints the line if its in the range of 0 to 999 from a file Number.txt. The file Number.txt contain digits in multiple lines.

Solution:-

Code:-

```
grep -Ew "[0-9]{1,3}" Number.txt
```



Q11. **Write a command print all lines containing a vowel (a, e, i, o, or u) followed by a single character followed by the same vowel again from a file (file must have word like evening/adam).**

Solution:-

Code:-

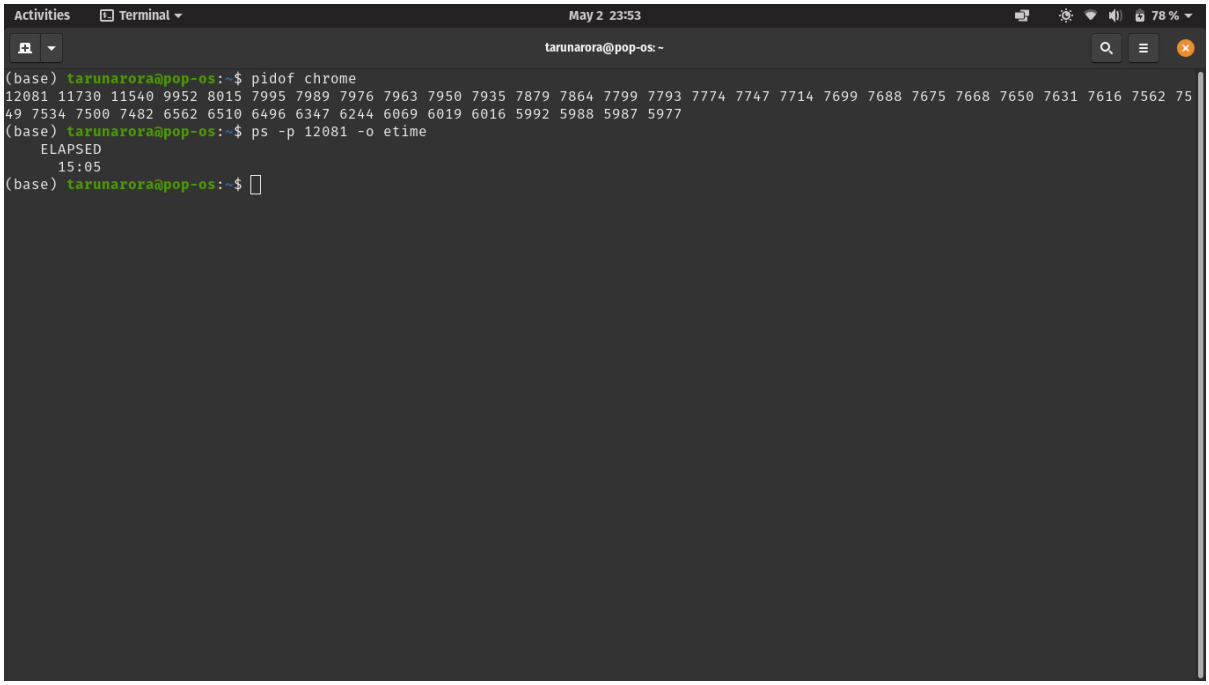
```
grep -E "a.a|e.e|i.i|o.o|u.u" f1
```

Q12.Write a command which provides the elapsed time since the process was started, in the form dd:hh:mm:ss.

Solution:-

Code:-

```
ps -p {pid} -o etime
```

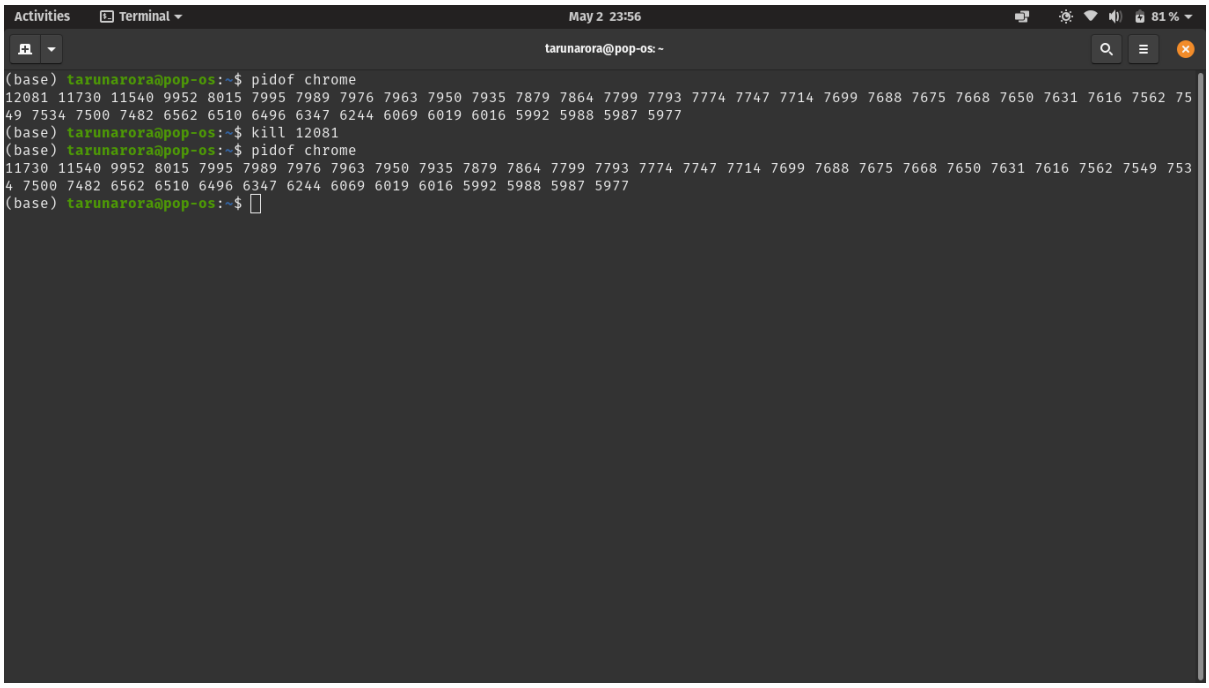


Q13.Write a command to kill the specified process which are selected from all the running processes.

Solution:-

Code:-

```
kill {pid}
```



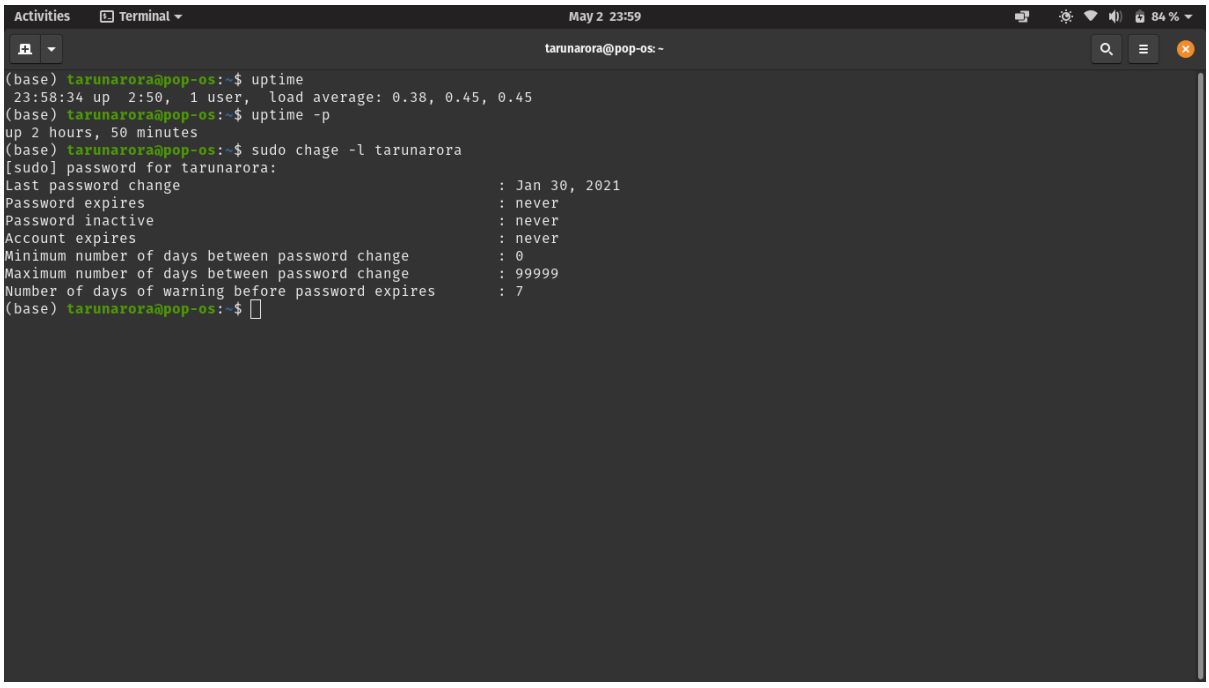
Q14. How can you find out how long the system has been running? How to check the status of the password for the user named ITW1 ?

Solution:-

Code:-

```
uptime
sudo chage -l {username}
```

// Note here username=ITW1



Q15. What will the output of the command:

$ ps -t dev/console.

Explain.

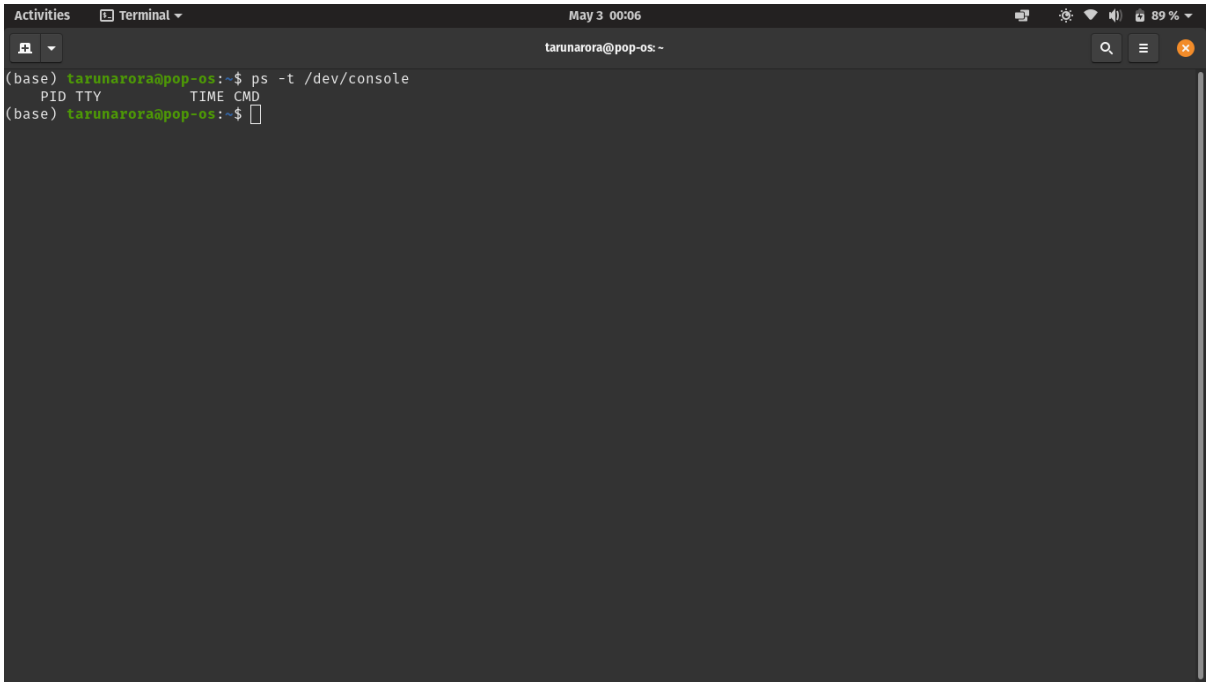
Solution:-

ps command gives the process status for viewing information related to processes running on the system and on using -t option it selects the processes associated with the terminals given in the tty list.

/dev/console is the system console which can be pointed to a variety of devices.

Kernel messages are logged to /dev/console where a login prompt can be launched.

As currently there are no processes linked with the /dev/console running therefore the list is empty



Q16.Write a command to display the 10 th line from a file. Also display the first 5 lines of the file.

Solution:-

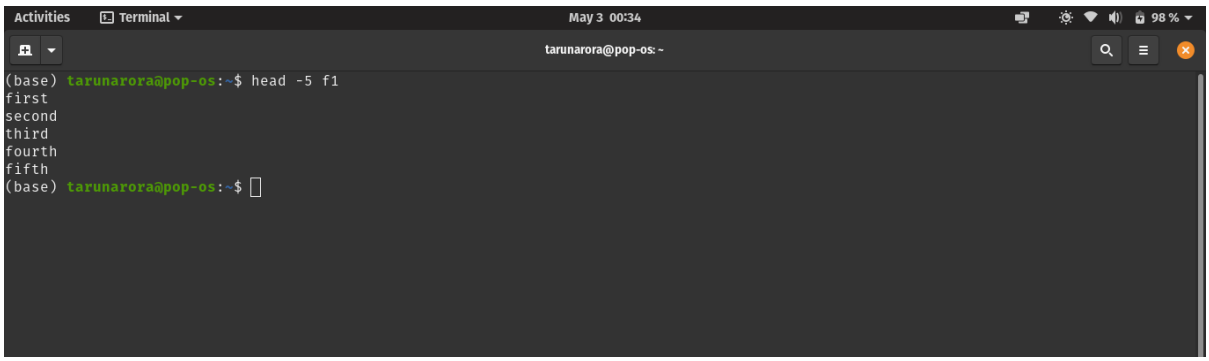
Code:-

To display:- 10th line

```
head -10 fileName | tail -1
```

To display first 5 lines of the file:-

```
Head -5 fileName
```



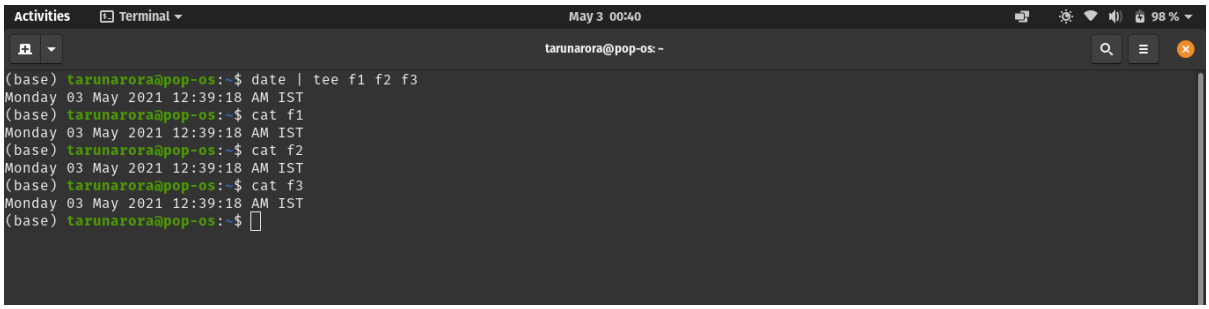
Q17. **Write a command to redirect the output of date command to multiple files. Also how do you list the hidden files in current directory?**

Solution:-

Code:-

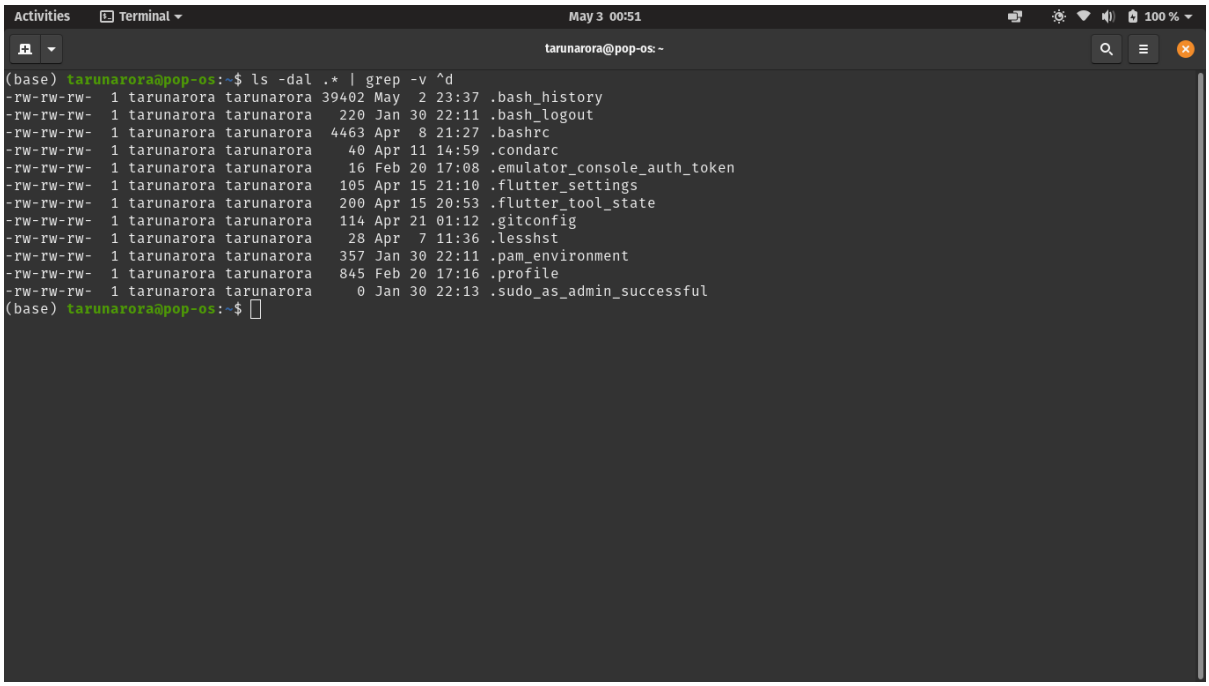
Redirecting output to multiple files

```
date | tee f1 f2 f3
```



Displaying only hidden "files"

```
ls -dal .* | grep -v ^d
```



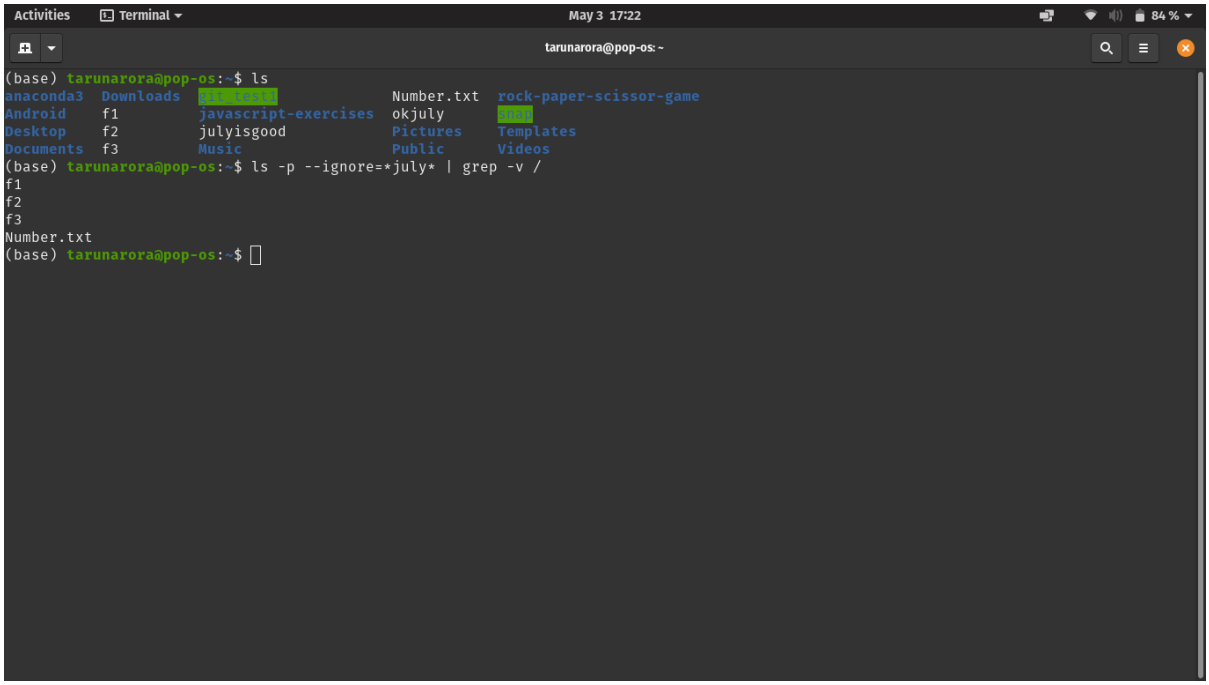
Q18. Write a command to print the file names in a directory that does not contain the word "july"?

Solution:-

To display "filenames" not containing "july"

Code:-

```
ls -p -ignore=*july* | grep -v /
```

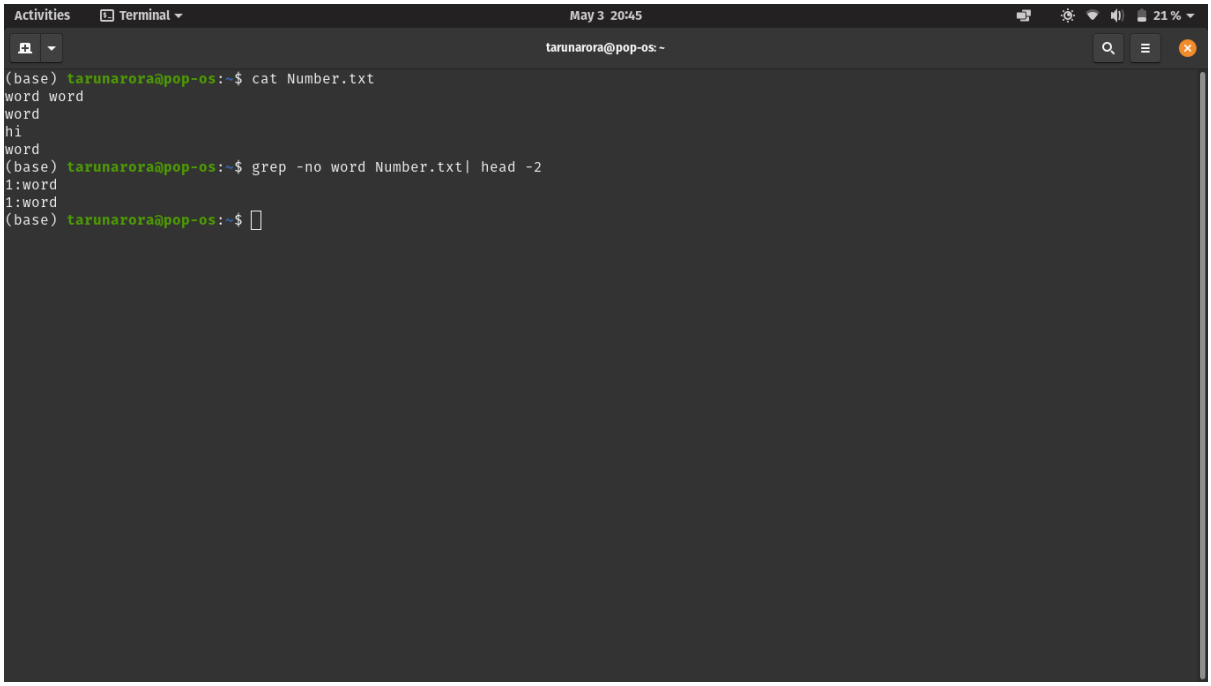


Q19.Write a command to find the first two instances of a "word" from a file. The must have multiple instances of the "word".

Solution:-

Code:-

```
grep -no word Number.txt| head -2
```

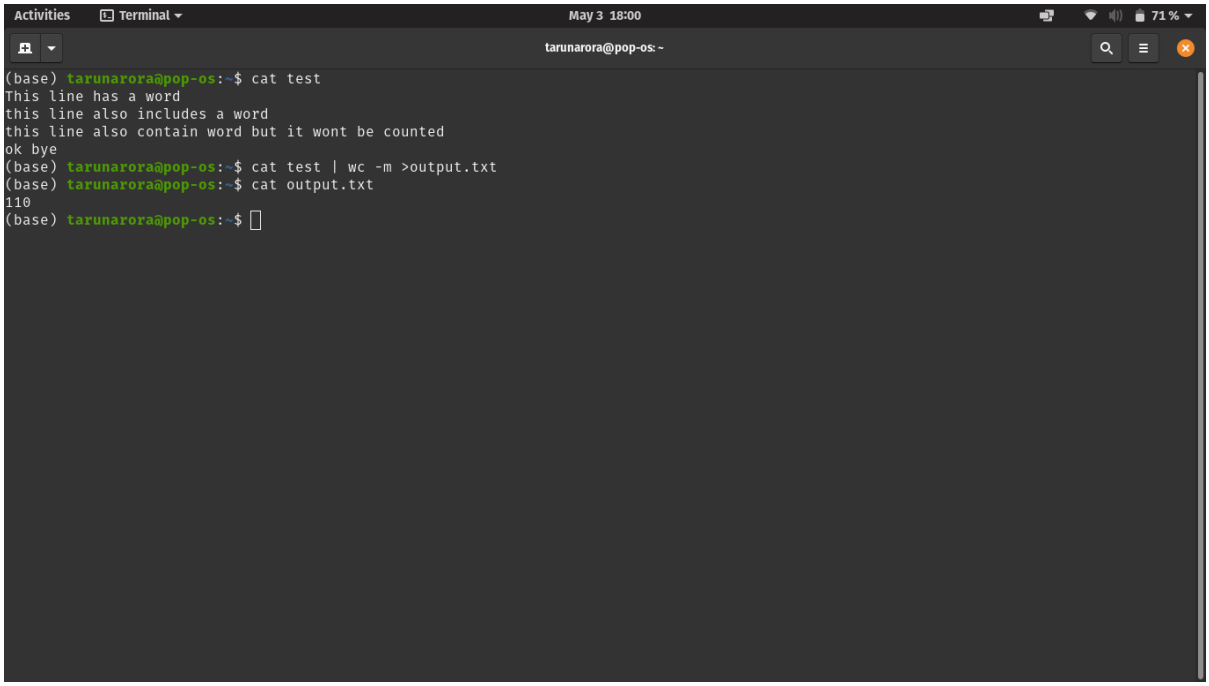


Q20.Write a command to count number of characters in our file and save the output to new text file at the same time.

Solution:-

Code:-

```
cat test | wc -m > output.txt
```



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