DATE : - 06.02.2019

1. a. Display the current time in 12-hour format.
   b. With a user-specified date, display only the day of the week (e.g. Tuesday)

Sol :-
a)

```
root@Swapnil:~# date +%r
10:59:01 PM IST
root@Swapnil:~#
```

b)

```
root@Swapnil:~# date --date="04 Feb 2019" +"%A"
Monday
root@Swapnil:~#
```

02. Write the command to find the square root of 4.

Sol :-

```
root@Swapnil:~# echo "sqrt(4)" | bc -l
2.00000000000000000000
root@Swapnil:~#
```

3. Show how we can calculate the following expression in the terminal of UNIX A=5, b=6,z=15 Total = (A*b) + (z/A) Display the Total.

Sol :-

```
root@Swapnil:~# a=5;b=6;z=15;
root@Swapnil:~# echo "($a * $b) + ($z / $a)" | bc
33
```

4. How can we sort a list of numbers in a file (both ascending and descending order)?

Sol :-

```
root@Swapnil:~/Desktop# cat file.txt
123
21
45
78
4534

root@Swapnil:~/Desktop# sort file.txt -n
21
45
78
123
4534
root@Swapnil:~/Desktop# sort file.txt -n -r
4534
123
78
45
21

root@Swapnil:~/Desktop#
```

NAME : SWAPNIL RAJ
SEC : A   ROLL : 09

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5. Create the file student.dat as follows:

Roll | Name | Dept | Year

105 | Anik | CSE | 1st

101 | Debesh | CSE | 2nd

108 | Aniket | IT | 1st

200 | Mainak | ECE | 2nd

105 | Anik | CSE | 1st

a. Sort the data according to Roll.

b. Sort the data according to Dept.

c. Show only the records of students from the CSE Dept.

Sol : -

```
root@Swapnil:~/Desktop# echo 105 Anik CSE 1st >> student.dat
root@Swapnil:~/Desktop# echo 101 Debesh CSE 2nd >> student.dat
root@Swapnil:~/Desktop# echo 108 Aniket IT 1st >> student.dat
root@Swapnil:~/Desktop# echo 200 Mainak ECE 2nd >> student.dat
root@Swapnil:~/Desktop# cat student.dat
105 Anik CSE 1st
101 Debesh CSE 2nd
108 Aniket IT 1st
200 Mainak ECE 2nd
root@Swapnil:~/Desktop# sort -k1 student.dat
101 Debesh CSE 2nd
105 Anik CSE 1st
108 Aniket IT 1st
200 Mainak ECE 2nd
root@Swapnil:~/Desktop#
```

6. Show the last 2 lines of the file animals.txt.

7. Show the first 3 lines of the file animals.txt.

Sol :-

```
root@Swapnil:~/Desktop# tail -2 animals.txt
king cobra
monkey
root@Swapnil:~/Desktop# head -3 animals.txt
cow
buffalo
horse
root@Swapnil:~/Desktop# cat animals.txt
cow
buffalo
horse
lion
tiger
king cobra
monkey
root@Swapnil:~/Desktop#
```

NAME : SWAPNIL RAJ

SEC : A   ROLL : 09

DATE : - 06.02.2019

8. (Re-Visit) List only the directory files in your current directory.

Sol :-

```
root@Swapnil:~/Desktop# ls -d */
 airgeddon/                                  OpenCv/       WorkBooks/
 Books_for_sem/                              Others/
'Machine Learning A-Z Template Folder/'      Placement/
root@Swapnil:~/Desktop#
```

9. Count the number of directories in your current directory.

Sol :-

```
root@Swapnil:~/Desktop# ls -d */ | wc -l
7
root@Swapnil:~/Desktop# ls -d */
 airgeddon/                                  OpenCv/       WorkBooks/
 Books_for_sem/                              Others/
'Machine Learning A-Z Template Folder/'      Placement/
root@Swapnil:~/Desktop#
```

10. Dog is a domestic animal
   Dog hates cat
   Cat drinks milk
   Dog is bigger than Cat
   Cat is also a domestic animal

a. Find the total number of lines contains the word 'Dog' in animals.txt.

b. Also find the total number of lines does not contain the word 'Dog' in animals.txt.

c. Display the lines in animals.txt that end with the word 'cat'.

Sol : -

```
root@Swapnil:~/Desktop# cat animals.txt
Dog is a domestic animal
Dog hates cat
Cat drinks milk
Dog is bigger than Cat
Cat is also a domestic animal
root@Swapnil:~/Desktop# grep -c Dog animals.txt
3
root@Swapnil:~/Desktop# grep -v Dog animals.txt | wc -l
2
root@Swapnil:~/Desktop# grep 'Cat$' animals.txt
Dog is bigger than Cat
root@Swapnil:~/Desktop#
```