Institute of Engineering & Management
Department of Computer Science & Engineering
Operating System Lab for 3rd year 6th semester 2019
Code: CS 693

Date: 06/02/19

WEEK-2

Assignment-1

Problem Statement: Complete the following-

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).

CLI code:

```
a) date +%r
b) date -d "2009-05-02" +%A
```

Screen-Shot:

Fig: 1-(a)

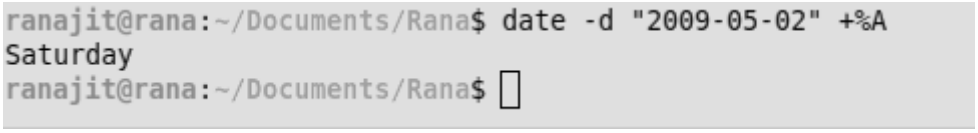


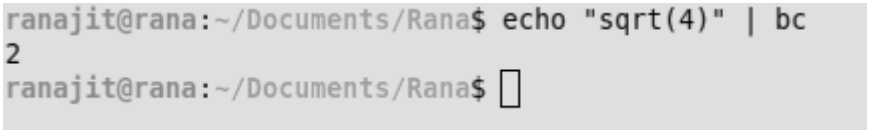
Fig: 1-(b)

Assignment-2

Problem Statement: Write the command to find the square root of 4

CLI code: `echo "sqrt(4)" | bc`

Screen-Shot:



Assignment-3

Problem Statement: 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.

CLI code:

```
A=5
b=6
z=15
echo "( $A * $b ) + ( $z / $A )"
```

Screen-Shot:

```
ranajit@rana:~/Documents/Rana$ A=5
ranajit@rana:~/Documents/Rana$ b=6
ranajit@rana:~/Documents/Rana$ z=15
ranajit@rana:~/Documents/Rana$ echo "( $A * $b ) + ( $z / $A )" | bc
33
ranajit@rana:~/Documents/Rana$
```

Assignment-4

Problem Statement: How can we sort a list of numbers in a file (both ascending and descending order)?

CLI code:

```
sort -n numbers.txt
```

```
sort -n numbers.txt
```

Screen-Shot:

```
ranajit@rana:~/Documents/Rana$ sort -n numbers.txt
0
1
5
12
23
56
100
ranajit@rana:~/Documents/Rana$ sort -n -r numbers.txt
100
56
23
12
5
1
0
ranajit@rana:~/Documents/Rana$
```

Assignment-5

Problem Statement: 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.

CLI code:

```
a) sort -k 1 students.dat
```

```
b) sort -k 2 students.dat
```

```
c) grep "CSE" students.dat
```

Screen-Shot:

```
ranajit@rana:~/Documents/Rana$ sort -k 1 students.dat
101 Debesh CSE 2nd
105 Anik CSE 1st
105 Anik CSE 2nd
108 Aniket IT 1st
200 Mainak ECE 2nd
ranajit@rana:~/Documents/Rana$
```

Fig: 5-(a)

```
ranajit@rana:~/Documents/Rana$ sort -k 2 students.dat
105 Anik CSE 1st
105 Anik CSE 2nd
108 Aniket IT 1st
101 Debesh CSE 2nd
200 Mainak ECE 2nd
ranajit@rana:~/Documents/Rana$
```

Fig: 5-(b)

```
ranajit@rana:~/Documents/Rana$ grep "CSE" students.dat
105 Anik CSE 2nd
101 Debesh CSE 2nd
105 Anik CSE 1st
ranajit@rana:~/Documents/Rana$
```

Fig: 5-(c)

Assignment-6

Problem Statement: Show the last 2 lines of the file *animals.txt*

CLI code: `tail -2 animals.txt`

Screen-Shot:

```
ranajit@rana:~/Documents/Rana$ tail -2 animals.txt
Dog is bigger than Cat
Cat is also a domestic animal
ranajit@rana:~/Documents/Rana$
```

Assignment-7

Problem Statement: Show the first 3 lines of the file *animals.txt.*

CLI code: `head -3 animals.txt`

Screen-Shot:

```
ranajit@rana:~/Documents/Rana$ head -3 animals.txt
Dog is a domestic animal
Dog hates cat
Cat drinks milk
ranajit@rana:~/Documents/Rana$
```

Assignment-8

Problem Statement: List only the directory files in your current directory.

CLI code: `ls -d */`

Screen-Shot:

```
ranajit@rana:~/Documents/Rana$ ls -d */
folder1/  folder2/
ranajit@rana:~/Documents/Rana$
```

Assignment-9

Problem Statement: Count the number of directories in your current directory.

CLI code: `ls -d */ | wc -w`

Screen-Shot:

```
ranajit@rana:~/Documents/Rana$ ls -d */ | wc -w
2
ranajit@rana:~/Documents/Rana$
```

Assignment-10

Problem Statement: Create a file *animals.txt* with the following text-

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'.

CLI code:

a) `grep "Dog" animals.txt | wc -l`

b) `grep -v "Dog" animals.txt | wc -l`

c) `grep -i "cat$" animals.txt`

Screen-Shot:

```
ranajit@rana:~/Documents/Rana$ grep "Dog" animals.txt | wc -l
3
ranajit@rana:~/Documents/Rana$
```

Fig: 10-(a)

```
ranajit@rana:~/Documents/Rana$ grep -v "Dog" animals.txt | wc -l
2
ranajit@rana:~/Documents/Rana$
```

Fig: 10-(b)

```
ranajit@rana:~/Documents/Rana$ grep -i "cat$" animals.txt
Dog hates cat
Dog is bigger than Cat
ranajit@rana:~/Documents/Rana$
```

Fig: 10-(c)