

ASSIGNMENT

Networking and System Administration Lab

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1. Write a shell script to ask your name, and college name and print it on the screen.

```
echo "enter details and view"
echo enter your name
read name
echo enter your college name
read c
clear
echo Details you entered
echo Name:$name
echo College:$c
```

```
user@user-VirtualBox:~$ bash 1.sh
enter details and view
enter your name
sreya
enter your college name
amal jyothi college
```

```
Details you entered
Name:sreya
College:amal jyothi college
user@user-VirtualBox:~$
```

2. Write a shell script to set a value for a variable and display it on command line interface.

```
echo "Display value of a variable"
a=50
echo $a
```

```
user@user-VirtualBox:~$ bash 2.sh
Display value of a variable
50
user@user-VirtualBox:~$
```

3. Write a shell script to perform addition, subtraction, multiplication, division with two numbers that is accepted from user.

```
echo enter a number
read a
echo enter another number
read b
echo enter operation
echo "\n1.addition \n2.subtraction \n3.multiplication \n4.division"
read op
case "$op" in
"1") echo "a+b=$((a+b));;"
"2") echo "a-b=$((a-b));;"
"3") echo "a*b=$((a*b));;"
"4") echo "a/b=$((a/b));;"
esac
```

4. Write a shell script to check the value of a given number and display whether the number is found or not.

```
echo enter a number
read a
if [ $a -eq 10 ];
then
echo "number found"
else
echo "not found"
fi
```

```
user@user-VirtualBox:~$ bash 4.sh
enter a number
9
not found
```

5. Write a shell script to display current date, calendar.

```
echo "Today is $(date)"
echo "calender:"
cal
```

```
user@user-VirtualBox:~$ bash 5.sh
Today is Saturday 02 October 2021 05:53:45 PM IST
calender:
   October 2021
Su Mo Tu We Th Fr Sa
                1  2
 3  4  5  6  7  8  9
10 11 12 13 14 15 16
17 18 19 20 21 22 23
24 25 26 27 28 29 30
31
```

6. Write a shell script to check a number is even or odd. #!/bin/bash

```
echo enter a number
read n
x=$(( $n % 2 ))
if [ $x -eq 0 ];
then
echo "number is even"
else
echo "number is odd"
fi
```

```
user@user-VirtualBox:~$ bash 6.sh
enter a number
4
number is even
```

7. Write a shell script to check a number is greater than, less than or equal to another number.

```
echo enter first number
read a
echo enter second number
read b
if [ $a -gt $b ];
then
```

```
echo "$a is larger"
elif [ $b -gt $a ];
then
echo "$b is larger"
else
echo "both are equal"
fi
```

8. Write a shell script to find the sum of first 10 numbers.

```
s=0
for ((i=0;i<=10;i++))
do
s=`expr $s + $i`
done
echo "sum of first 10 numbers=$s"
```

```
user@user-VirtualBox:~$ bash 8.sh
sum of first 10 numbers=55
```

9. Write a shell script to find the sum, the average and the product of the four integers entered.

```
echo please enter your first number
read a
echo please enter your second number
read b
echo please enter your third number
read c
echo please enter your fourth number
read d
sum=$(( $a + $b + $c + $d ))
prod=$(( $a * $b * $c * $d ))
avg=$(echo $sum/4 | bc -l)
```

```
echo "the sum is:$sum
echo "the average is:$avg
echo "the product is:$prod
```

```
user@user-VirtualBox:~$ bash 9.sh
please enter your first number
1
please enter your second number
2
please enter your third number
3
please enter your fourth number
4
the sum is:10
the average is:2.50000000000000000000
the product is:24
```

10. Write a shell script to find the smallest of three numbers.

```
echo enter first number
read a
echo enter second number
read b
echo enter third number
read c
if [ $a -lt $b ];
then
if [ $a -lt $c ];
then
echo "$a is smallest"
fi
elif [ $b -lt $c ];
then
echo "$b is smallest"
else
echo "$c is smallest";
fi
```

```
user@user-VirtualBox:~$ bash 10.sh
enter first number
5
enter second number
2
enter third number
6
2 is smallest
```

11. Write a shell program to find factorial of given number.

```
echo enter a number
read n
f=1
for ((i=2;i<=n;i++))
do
f=$((f*i))
done
echo "factorial is $f"
```

```
user@user-VirtualBox:~$ bash 11.sh
enter a number
5
factorial is 120
```

12. Write a shell program to check a number is palindrome or not.

```
echo enter a number
read n
rev=$(echo $n | rev)
if [ $n -eq $rev ];
then
echo "number is palindrome"
else
echo "number is not palindrome"
fi
```

```
user@user-VirtualBox:~$ bash 12.sh
enter a number
1221
number is palindrome
```

13. Write a shell script to find the average of the numbers entered in command line.

```
echo enter size
user@user-VirtualBox:~$ bash 13.sh
enter size
5
enter numbers
6
7
8
9
4
average is 6.8000000000000000000000000000
s=$((s+num))
i=$((i+1))
done
avg=$(echo $s/$n | bc -l)
echo "average is $avg"
```

14. Write a shell program to find the sum of all the digits in a number.

```
echo enter a number
read n
s=0
while [ $n -gt 0 ]
do
mod=$((n%10))
s=$((s+mod))
n=$((n/10))
done
echo "sum of digit is $s"
```

```
user@user-VirtualBox:~$ bash 14.sh
enter a number
678
sum of digit is 21
```


15. Write a shell Script to check whether given year is leap year or not.

```
echo enter year
read y
a=$((y%4))
b=$((y%100))
c=$((y%400))
if [ $a -eq 0 -a $b -ne 0 -o $c -eq 0 ];
then
echo "$y is leap year"
else
echo "$y is leap year"
fi
```

```
user@user-VirtualBox:~$ bash 15.sh
enter year
1994
1994 is leap year
```