Lab Activity - 12

-Networking & System Administration Lab

Submitted by,

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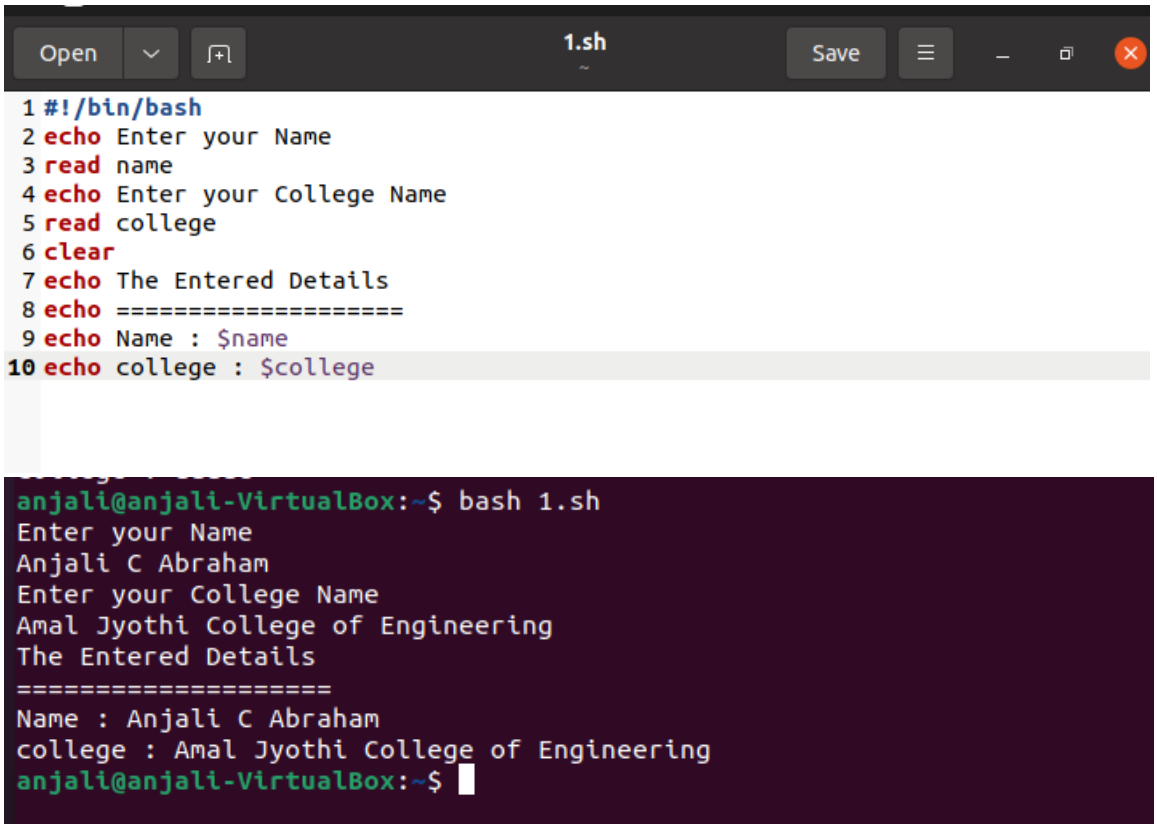
Shell Scripting Lab Assignments

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



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

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

Open 3.sh Save

```
#!/bin/bash
echo "ARITHMETIC OPERATIONS"
echo "---------------------"
echo "Enter a Number"
read a
echo "Enter second Number"
read b
echo -e "\n 1.Addition \n 2.Subtraction \n 3.Multiplication \n 4.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
```

```
anjali@anjali-VirtualBox:~$ bash 3.sh
ARITHMETIC OPERATIONS
---------------------
Enter a Number
25
Enter second Number
5

 1.Addition
 2.Subtraction
 3.Multiplication
 4.Division
1
a+b=30
anjali@anjali-VirtualBox:~$
```

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

Open 4.sh Save

```
#!/bin/bash
echo "Enter a Number"
read a
if [ $a == 10 ] ;then
   echo "Number found "
else
   echo "Number not found "
fi

```

```
anjali@anjali-VirtualBox:~$ gedit 4.sh
anjali@anjali-VirtualBox:~$ bash 4.sh
Enter a Number
5
Number not found
anjali@anjali-VirtualBox:~$
```

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

Open 5.sh Save

```
#!/bin/bash
echo "Time And Calendar"
echo "-----------------"
echo "Today is $(date) "
echo " "
echo "Calendar :"
cal
```

```
anjali@anjali-VirtualBox:~$ bash 5.sh
Time And Calendar
-----------------
Today is Sunday 03 October 2021 07:19:03 PM IST

Calendar :
    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
anjali@anjali-VirtualBox:~$
```

6. Write a shell script to check a number is even or odd.

Open 6.sh Save

```
#!/bin/bash
echo "Odd OR Even"
echo "------------"
echo "Enter a Number"
read n
x=$(( $n % 2 ))
if [ $x -eq 0 ] ;then
   echo "Number is Even"
else
    echo "Number is Odd"
fi
```

```
anjali@anjali-VirtualBox:~$ bash 6.sh
Odd OR Even
------------
Enter a Number
100
Number is Even
anjali@anjali-VirtualBox:~$ bash 6.sh
Odd OR Even
------------
Enter a Number
125
Number is Odd
anjali@anjali-VirtualBox:~$
```

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

Open 7.sh Save

```
#!/bin/bash
echo "Enter first number"
read a
echo "Enter second number"
read b
if [ $a -gt $b ] ;then
 echo " $a is Greater "
elif [ $b -gt $a ] ;then
 echo " $b is Greater "
else
 echo " Both are Equal"
fi
```

```
anjali@anjali-VirtualBox:~$ gedit 7.sh
anjali@anjali-VirtualBox:~$ bash 7.sh
Enter first number
34
Enter second number
67
 67 is Greater
anjali@anjali-VirtualBox:~$
```

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

Open 8.sh Save

```
#!/bin/bash
echo "Sum of Numbers"
echo "-------------"
s=0
for (( i = 1; i <= 10; i++ ))
do
  s=`expr $s + $i`
done
echo "Sum of first 10 numbers = $s"
```

```
anjali@anjali-VirtualBox:~$ gedit 8.sh
anjali@anjali-VirtualBox:~$ bash 8.sh
Sum of Numbers
-------------
Sum of first 10 numbers = 55
anjali@anjali-VirtualBox:~$
```

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

Open 9.sh Save

```
#!/bin/bash
echo " Enter the first Number : "
read a
echo " Enter the second Number : "
read b
echo " Enter the third Number : "
read c
echo " Enter the fourth Number : "
read d
sum=$(( $a + $b + $c + $d ))
avg=$(echo $sum / 4 | bc -l)
product=$(( $a * $b * $c * $d ))
echo "The sum of numbers : "$sum
echo "The average of numbers : "$avg
echo "The product of numbers : "$product
```

```
anjali@anjali-VirtualBox:~$ gedit 9.sh
anjali@anjali-VirtualBox:~$ bash 9.sh
 Enter the first Number :
13
 Enter the second Number :
56
 Enter the third Number :
23
 Enter the fourth Number :
45
The sum of numbers : 137
The average of numbers : 34.25000000000000000000
The product of numbers : 753480
anjali@anjali-VirtualBox:~$
```

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

Open 10.sh Save

```
#!/bin/bash
echo "Enter first number"
read a
echo "Enter second number"
read b
echo "Enter third number"
read c
if [ $a -gt $b ] ;then
if [ $a -gt $c ] ;then
 echo "$a is big"
else
 echo "$c is big"
fi
elif [ $b -gt $c ] ;then
 echo "$b is big"
else
 echo "$c is big"
fi
```

```
anjali@anjali-VirtualBox:~$ gedit 10.sh
anjali@anjali-VirtualBox:~$ bash 10.sh
Enter first number
30
Enter second number
69
Enter third number
12
69 is big
anjali@anjali-VirtualBox:~$
```

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

Open 11.sh Save

```
#!/bin/bash
echo "Enter a number"
read num
fact=1
for(( i=2; i<=num; i++ ))
 {
  fact=$((fact *i)) #fact=fact*i
  }
echo "Factorial is $fact"
```

```
anjali@anjali-VirtualBox:~$ bash 11.sh
Enter a number
5
Factorial is 120
anjali@anjali-VirtualBox:~$
```

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

Open 12.sh Save

```
#!/bin/bash
echo "Enter number"
read n
rev=$(echo $n | rev)
if [ $n -eq $rev ] ; then
 echo "Number is Palindrome"
else
 echo "Number is not Palindrome"
fi
```

```
anjali@anjali-VirtualBox:~$ gedit 12.sh
anjali@anjali-VirtualBox:~$ bash 12.sh
Enter number
123321
Number is Palindrome
anjali@anjali-VirtualBox:~$
```

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

Open 13.sh Save

```
#!/bin/bash
echo "Enter Size"
read n
i=1
sum=0
echo "Enter Numbers : "
while [ $i -le $n ]
do
 read num
 sum=$((sum+num))
 i=$((i+1))
done
avg=$(echo $sum / $n | bc -l )
echo $avg
```

```
anjali@anjali-VirtualBox:~$ gedit 13.sh
anjali@anjali-VirtualBox:~$ bash 13.sh
Enter Size
3
Enter Numbers :
12
13
14
13.00000000000000000000
anjali@anjali-VirtualBox:~$
```

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

Open 14.sh Save

```
#!/bin/bash
echo "Enter a number : "
read num
sum=0
while [ $num -gt 0 ]
do
 mod=$((num%10))
 sum=$((sum+mod))
 num=$((num/10))
done
echo "Sum of digits is $sum"
```

```
anjali@anjali-VirtualBox:~$ gedit 14.sh
anjali@anjali-VirtualBox:~$ bash 14.sh
Enter a number :
12345
Sum of digits is 15
anjali@anjali-VirtualBox:~$
```

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

Open 15.sh Save

```
#!/bin/bash
echo "Enter the year"
read y
a=`expr $y % 4`
b=`expr $y % 100`
c=`expr $y % 400`
if [ $a -eq 0 -a $b -ne 0 -o $c -eq 0 ] ; then
 echo "$y is leap year"
else
 echo "$y is not leap year"
fi
```

```
anjali@anjali-VirtualBox:~$ gedit 15.sh
anjali@anjali-VirtualBox:~$ bash 15.sh
Enter the year
1998
1998 is not leap year
anjali@anjali-VirtualBox:~$ bash 15.sh
Enter the year
2000
2000 is leap year
anjali@anjali-VirtualBox:~$
```