ASSIGNMENT

-Shell Scripting Lab Assignments

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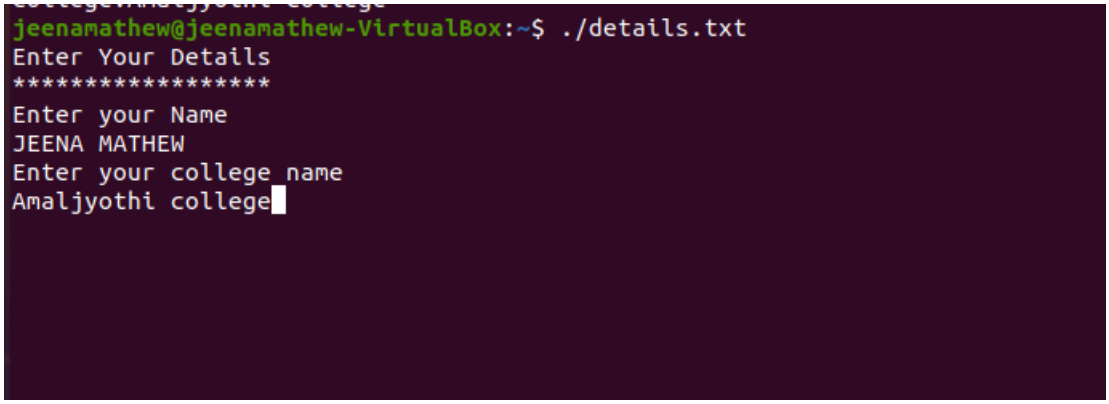
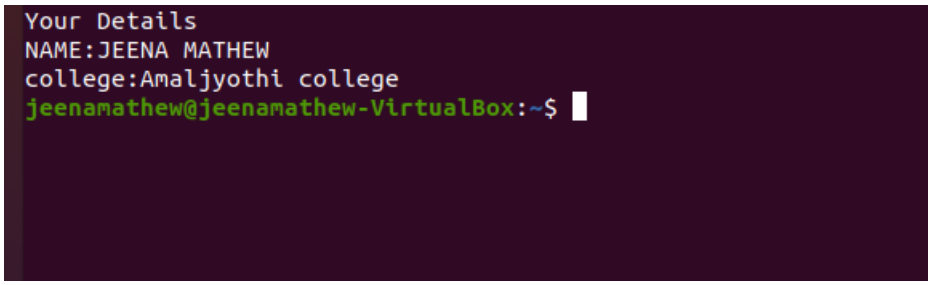
Shell Scripting Lab Assignments

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

screen.

```
#!/bin/bash
echo " Enter Details ”
echo "******************"
echo Enter your NAME
read NAME
echo Enter your College name
read college
clear
echo Your Details
echo Name: $NAME
echo College: $college
```





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

line interface.

```
#!/bin/bash

echo " value of varible "

x=10

echo "$x"
```

```
jeenamathew@jeenamathew-VirtualBox:~$ chmod u+x var.txt
jeenamathew@jeenamathew-VirtualBox:~$ ./var.txt
 value of varible
10
jeenamathew@jeenamathew-VirtualBox:~$
```

3. Write a shell script to perform addition, substation, multiplication, division

with two numbers that is accepted from user.

```
#!/bin/bash

echo "arithemetic opertations"


echo "Enter a number"

read x

echo "Enter another number"

read y

echo "Select operation"

echo "\n1.Addition\n2.Substraction\n3.Multiplication\n4.Division"

read op

case "$op" in

"1") echo "x+y="$(($x+$y));;

"2") echo "x-y="$(($x-$y));;

"3") echo "x*y="$(($x*$y));;

"4") echo "x/y="$(($x/$y));;

esac
```

```
jeenamathew@jeenamathew-VirtualBox:~$ chmod u+x arithoperation.txt
jeenamathew@jeenamathew-VirtualBox:~$ ./arithoperation.txt
arithemetic opertations
Enter a number
5
Enter another number
9
Select operation
\n1.Addition\n2.Substraction\n3.Multiplication\n4.Division
1
x+y=14
jeenamathew@jeenamathew-VirtualBox:~$ gedit arithopertation.txt
^C
jeenamathew@jeenamathew-VirtualBox:~$ ./arithoperation.txt
arithemetic opertations
Enter a number
8
Enter another number
8
Select operation
\n1.Addition\n2.Substraction\n3.Multiplication\n4.Division
2
x-y=0
jeenamathew@jeenamathew-VirtualBox:~$ ./arithoperation.txt
arithemetic opertations
Enter a number
10
Enter another number
12
Select operation
\n1.Addition\n2.Substraction\n3.Multiplication\n4.Division
3
x*y=120
jeenamathew@jeenamathew-VirtualBox:~$ ./arithoperation.txt
arithemetic opertations
Enter a number
12
Enter another number
6
Select operation
\n1.Addition\n2.Substraction\n3.Multiplication\n4.Division
4
x/y=2
jeenamathew@jeenamathew-VirtualBox:~$
```

4. Write a shell script to check the value of a given number and display

whether the number is found or not.

```
#!/bin/bash

echo "Finding a number"

echo "Enter a number"

read a

if [ $a == 5 ]; then

    echo "Number is found ;)"
```

else

echo "Number is NOT found !"

fi

```
jeenamathew@jeenamathew-VirtualBox:~$ chmod u+x num.txt
jeenamathew@jeenamathew-VirtualBox:~$ ./num.txt
Finding a number
Enter a number
4
Number is NOT found !
jeenamathew@jeenamathew-VirtualBox:~$
```

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

#!/bin/bash

echo "Time and Calendar"

echo "Today is $(date)"

echo ""

echo "Calendar :"

cal

```
jeenamathew@jeenamathew-VirtualBox:~$ chmod u+x date.txt
jeenamathew@jeenamathew-VirtualBox:~$ ./date.txt
Time and Calendar
Today is Sat 02 Oct 2021 01:58:22 PM EDT

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
jeenamathew@jeenamathew-VirtualBox:~$
```

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

#!/bin/bash

echo "Even OR Odd"

echo "Enter a number"

read n

x=$(($n%2))

if [$x -eq 0]; then

echo "Number is Even"

else

echo "Number is odd"

fi

```
jeenamathew@jeenamathew-VirtualBox:~$ gedit
^C
jeenamathew@jeenamathew-VirtualBox:~$ chmod u+x odd.txt
jeenamathew@jeenamathew-VirtualBox:~$ ./odd.txt
Even OR Odd
Enter a number
7
Number is odd
jeenamathew@jeenamathew-VirtualBox:~$
```

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

another number.

#!/bin/bash

echo "Check numbers"

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

```
jeenamathew@jeenamathew-VirtualBox:~$ chmod u+x check.txt
jeenamathew@jeenamathew-VirtualBox:~$ ./check.txt
Check numbers
Enter first number:
5
Enter second number:
6
6 is greater
jeenamathew@jeenamathew-VirtualBox:~$
```

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

#!/bin/bash

```
echo "Sum of Numbers "

t=0

for (( i=1;i<=10;i++ ))

do

t=`expr $t + $i`

done

echo “sum of first 10 numbers = $t”
```

```
jeenamathew@jeenamathew-VirtualBox:~$ chmod u+x sum.txt
jeenamathew@jeenamathew-VirtualBox:~$ ./sum.txt
Sum of Numbers
“sum of first 10 numbers = 55”
jeenamathew@jeenamathew-VirtualBox:~$
```

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

```
#!/bin/bash

echo  "AVG, SUM & Product of 4 No:"

echo "enter first number: "

read a

echo "Second number: "

read b

echo "Third number: "

read c

echo "Fourth number: "

read d

sum=$(($a + $b + $c + $d))

avg=$(echo $sum / 4 | bc -l )

prod=$(($a * $b * $c * $d))

echo "The sum of these numbers is: " $sum

echo "The average of these numbers is: " $avg
```

echo "The product of these numbers is: " $prod

```
^C
jeenamathew@jeenamathew-VirtualBox:~$ chmod u+x number.txt
jeenamathew@jeenamathew-VirtualBox:~$ ./number.txt
AVG, SUM & Product of 4 No:
enter first number:
23
Second number:
34
Third number:
55
Fourth number:
66
The sum of these numbers is:  178
The average of these numbers is:  44.50000000000000000000
The product of these numbers is:  2838660
jeenamathew@jeenamathew-VirtualBox:~$
```

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

```
echo "enter a: "

read a

echo "enter b : "

read b

echo "enter c : "

read c

s=$a

if [ $b -lt $s ]

then

s=$b

fi

if [ $c -lt $s ]

then

s=$c

fi

echo Smallest of $a $b $c is $s
```

```
jeenamathew@jeenamathew-VirtualBox:~$ chmod u+x small.txt
jeenamathew@jeenamathew-VirtualBox:~$ ./small.txt
enter a:
3
enter b :
6
enter c :
4
Smallest of 3 6 4 is 3
jeenamathew@jeenamathew-VirtualBox:~$
```

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

```
#!/bin/bash

echo "Factorial"

echo "Enter a number"

read num

fact=1

for((i=2;i<=num;i++))

    {

        fact=$((fact * i))  #fact = fact * i

     }

echo "Factorial is $fact"
```

```
jeenamathew@jeenamathew-VirtualBox:~$ chmod u+x factorial.txt
jeenamathew@jeenamathew-VirtualBox:~$ ./factorial.txt
Factorial
Enter a number
10
Factorial is 3628800
jeenamathew@jeenamathew-VirtualBox:~$
```

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

```
#!/bin/bash

echo "Palindrome or Not"

echo "Enter number to check"

read n

rev=$(echo $n | rev)
```

```
if [ $n -eq $rev ]; then
    echo "Number is Palindrome"
else
    echo "Number is not Palindrome"
fi
```

```
jeenamathew@jeenamathew-VirtualBox:~$ ./paliandro.txt
Palindrome or Not
Enter number to check
44444
Number is Palindrome
jeenamathew@jeenamathew-VirtualBox:~$
```

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

```
#!/bin/bash
echo "Average of N numbers"
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
```

```
jeenamathew@jeenamathew-VirtualBox:~$ ./avg.txt
Average of N numbers
Enter Size
5
Enter Numbers
20
20
30
40
50
32.0000000000000000000
jeenamathew@jeenamathew-VirtualBox:~$
```

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

```
#!/bin/bash

echo "Sum of all digits"

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"
```

```
jeenamathew@jeenamathew-VirtualBox:~$ chmod u+x sumdigit.txt
jeenamathew@jeenamathew-VirtualBox:~$ ./sumdigit.txt
Sum of all digits
Enter a number:
44
Sum of digits is 8
```

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

```
#!/bin/bash

echo "LEAP YEAR OR NOT"

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
```

```
jeenamathew@jeenamathew-VirtualBox:~$ chmod u+x leapyr.txt
jeenamathew@jeenamathew-VirtualBox:~$ ./leapyr.txt
LEAP YEAR OR NOT
Enter the year
2000
2000 is leap year
jeenamathew@jeenamathew-VirtualBox:~$ ./leapyr.txt
LEAP YEAR OR NOT
Enter the year
2021
2021 is not leap year
jeenamathew@jeenamathew-VirtualBox:~$
```