

ASSIGNMENT

-Shell Scripting Lab Assignment

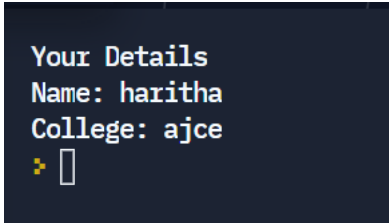
Submitted By:

HarithaKrishnan
RMCA:S2:A
RollNo:40

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
```



```
Your Details
Name: haritha
College: ajce
>
```

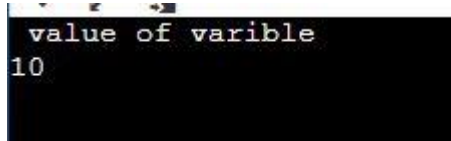
2. Write a shell script to set a value for a variable and display it on command line interface.

```
#!/bin/bash

echo " value of variable "
```

```
x=10
```

```
echo "$x"
```



```
value of variable
10
```

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

```
#!/bin/bash
```

```
echo "arithmetic operations"
```

```
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
```

```

user@user-VirtualBox:~$ gedit
^C
user@user-VirtualBox:~$ chmod u+x bash2.txt
user@user-VirtualBox:~$ ./bash2.txt
arithmetic operations
Enter a number
5
Enter another number
3
Select operation
\n1.Addition\n2.Substraction\n3.Multiplication\n4.Division
1
x+y=8
user@user-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

```

```

user@user-VirtualBox:~$ chmod u+x bash3.t
user@user-VirtualBox:~$ ./bash3.txt
Finding a number
Enter a number
3
Number is NOT found !
user@user-VirtualBox:~$ ./bash3.txt
Finding a number
Enter a number
5
Number is found ;)
user@user-VirtualBox:~$ █

```

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

```

#!/bin/bash

```

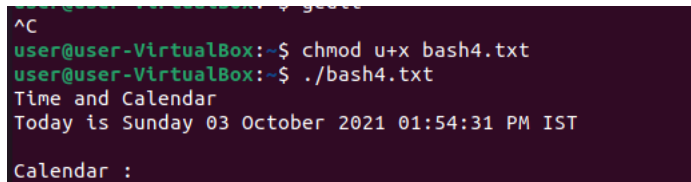
```
echo "Time and Calendar"
```

```
echo "Today is $(date)"
```

```
echo ""
```

```
echo "Calendar :"
```

```
cal
```



```
^C
user@user-VirtualBox:~$ chmod u+x bash4.txt
user@user-VirtualBox:~$ ./bash4.txt
Time and Calendar
Today is Sunday 03 October 2021 01:54:31 PM IST
Calendar :
```

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))
```

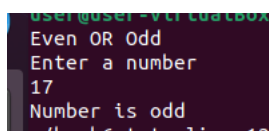
```
if [ $x -eq 0 ]; then
```

```
echo "Number is Even"
```

```
else
```

```
echo "Number is odd"
```

```
fi
```

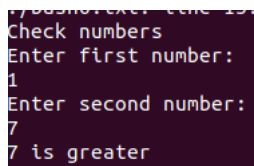


```
user@user-VirtualBox:~$ ./bash6.txt
Even OR Odd
Enter a number
17
Number is odd
#bash6.txt: line 12
```

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
```



```
7/08/2024 10:10:10 AM
Check numbers
Enter first number:
1
Enter second number:
7
7 is greater
```

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"
```

```
user@user-VirtualBox:~$ ./bash8.  
Sum of Numbers  
"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.

```
#!/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
```

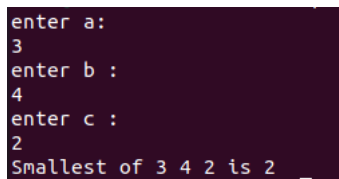
```
echo "The average of these numbers is: " $avg
```

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

```
AVG, SUM & Product of 4 No:  
enter first number:  
67  
Second number:  
78  
Third number:  
89  
Fourth number:  
34  
The sum of these numbers is: 268  
The average of these numbers is: 67.00000000000000000000  
The product of these numbers is: 15813876
```

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
```



```
enter a:  
3  
enter b :  
4  
enter c :  
2  
Smallest of 3 4 2 is 2
```

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

```
#!/bin/bash  
echo "Factorial"  
echo "Enter a number"
```



```

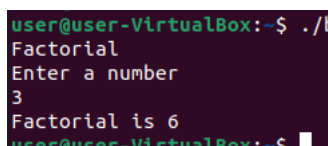
read num

fact=1

for((i=2;i<=num;i++))
{
    fact=$((fact * i)) #fact = fact * i
}

echo "Factorial is $fact"

```



```

user@user-VirtualBox:~$ ./t
Factorial
Enter a number
3
Factorial is 6
user@user-VirtualBox:~$

```

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

```

#!/bin/bash

echo "Palindrome or Not"

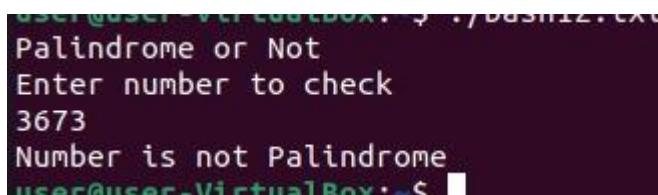
echo "Enter number to check"

read n

rev=$(echo $n | rev)

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

```



```

user@user-VirtualBox:~$ ./bash12.c
Palindrome or Not
Enter number to check
3673
Number is not Palindrome
user@user-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))
```

$$i = (i + 1) \% n$$

done

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

```
echo $avg
```

```
user@user-VirtualBox:~$ ./bas
Average of N numbers
Enter Size
2
Enter Numbers
3
3
3.00000000000000000000000000000000
user@user-VirtualBox:~$
```

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

```
#!/bin/bash
```

```
echo "Sum of all digits"
```

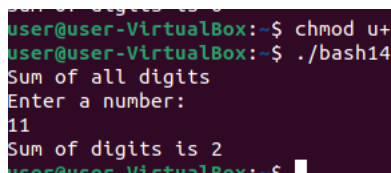
```
echo "Enter a number:"
```

```
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"
```



A terminal window screenshot showing the execution of a shell script. The prompt is 'user@user-VirtualBox:~\$'. The user enters 'chmod u+...' and then './bash14'. The script outputs 'Sum of all digits' and 'Enter a number:'. The user enters '11'. The script outputs 'Sum of digits is 2'.

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`

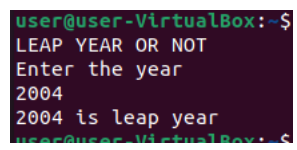
b=`expr $y % 100`

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
```

A terminal window with a dark background and light green text. The prompt is 'user@user-VirtualBox:~\$'. The script output is 'LEAP YEAR OR NOT', followed by the prompt 'Enter the year'. The user has entered '2004', and the script has output '2004 is leap year'. The prompt is now 'user@user-VirtualBox:~\$'.

```
user@user-VirtualBox:~$  
LEAP YEAR OR NOT  
Enter the year  
2004  
2004 is leap year  
user@user-VirtualBox:~$
```