NETWORKING & SYSTEM ADMINISTRATION LAB
Shell Programming

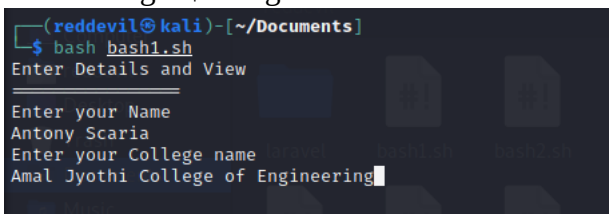
ANTONY SCARIA

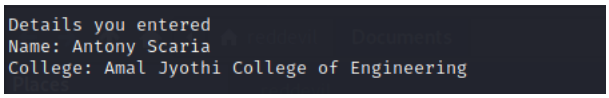
MCA-A SEM-II

ROLL NO:23

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

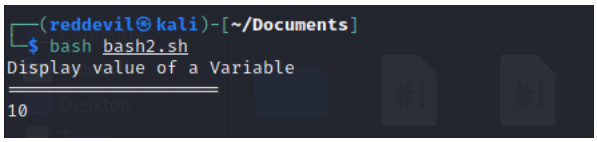
#!/bin/bash
echo " Enter Details and
View" echo
"================" echo
Enter your Name read name
echo Enter your College name
read college
clear
echo Details you entered echo
Name: $name
echo College: $college





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

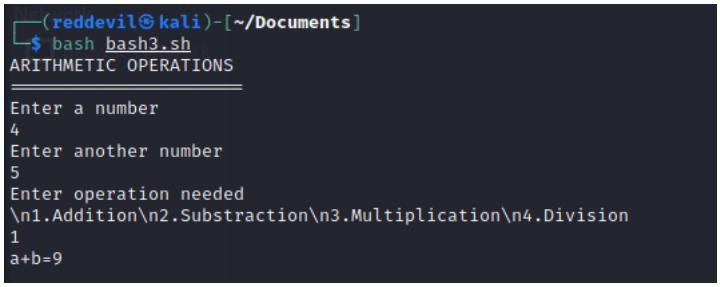
#!/bin/bash echo "Display value of
a Variable " echo
"====================="
a=10 echo "$a"



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

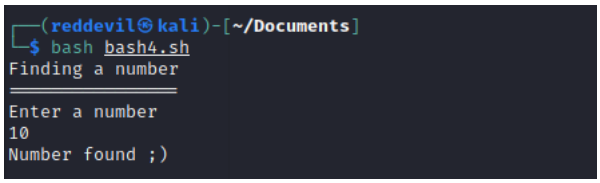
#!/bin/bash
echo "ARITHMETIC
OPERATIONS" echo
"======================"
echo "Enter a number" read a
echo "Enter another number" read
b
baecho "Enter operation needed"

```
echo "\n1.Addition\n2.Substraction\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.

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



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

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

```
┌──(reddevil㉿kali)-[~/Documents]
└─$ bash bash5.sh
Time and Calendar
═══════════════
Today is Sat 02 Oct 2021 08:05:44 AM 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
```

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

```
#!/bin/bash
echo "EVEN OR
ODD" 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
```

```
┌──(reddevil㉿kali)-[~/Documents]
└─$ bash bash6.sh
EVEN OR ODD
══════════
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.

```
#!/bin/bash echo
"Comparing numbers" echo
"================"
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
```

```
┌──(reddevil㉿kali)-[~/Documents]
└─$ bash bash7.sh
Comparing numbers
═══════════════
Enter first number
5
Enter second number
5
Both are Equal
```

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

```
#!/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”
```

```
┌──(reddevil㉿kali)-[~/Documents]
└─$ bash bash8.sh
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
"========================"
echo "Please enter your 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
```

```
┌──(reddevil㉿kali)-[~/Documents]
└─$ bash bash9.sh
AVG, SUM & Product of 4 No.
═══════════════════════
Please enter your first number:
4
Second number:
6
Third number:
3
Fourth number:
2
The sum of these numbers is:  15
The average of these numbers is:  3
The product of these numbers is:  144
```

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

```
#!/bin/bash echo
"LARGEST OF THREE"
echo
"================"
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
```

```
┌──(reddevil㉿kali)-[~/Documents]
└─$ bash bash10.sh
LARGEST OF THREE
═══════════════
Enter first number
5
Enter second number
7
Enter third number
2
7 is big
```

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

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

```
fact=1

for((i=2;i<=num;i++))
      {
            fact=$((fact * i)) #fact = fact * i
       }
echo "Factorial is $fact"
```

```
┌──(reddevil㉿kali)-[~/Documents]
└─$ bash bash11.sh
Factorial
═══════
Enter a number
5
Factorial is 120
```

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

```
#!/bin/bash echo "Palindrome or
Not" echo "================"
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
```

```
┌──(reddevil㉿kali)-[~/Documents]
└─$ bash bash12.sh
Palindrome or Not
═══════════════
Enter number to check
121
Number is Palindrome
```

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

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

```
┌──(reddevil㉿kali)-[~/Documents]
└─$ bash bash13.sh
Average of N numbers
═══════════════════
Enter Size
4
Enter Numbers
1
2
3
4
2.50000000000000000000
```

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

```
#!/bin/bash echo "Sum
of all digits" echo
"============="
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"
```

```
┌──(reddevil㉿kali)-[~/Documents]
└─$ bash bash14.sh
Sum of all digits
═══════════════
Enter a number:
154
Sum of digits is 10
```

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

```
#!/bin/bash

echo "LEAP YEAR OR NOT"

echo

"==============="

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

```
┌──(reddevil㉿kali)-[~/Documents]
└─$ bash bash15.sh
LEAP YEAR OR NOT
═══════════════
Enter the year
2018
2018 is not leap year
```