

# **Networking & System Administration Lab**

## **Shell Scripting**

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**RMCA-B S2**

**Roll No:11**

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

```
#!/bin/bash
echo "enter your name";read you;
echo "enter college name"; read college;
clear
echo Details you entered
echo $you;
echo $college
```

```
(root@kali)~/college/network
# vi ques1.sh

(root@kali)~/college/network
# bash ques1.sh
enter your name
NIMISHA JAMES
enter college name
Amal Jyothi College of Engineering
```

```
Details you entered  
NIMISHA JAMES  
Amal Jyothi College of Engineering  
  
(root@kali)~[/college/network]  
#
```

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

```
#!/bin/bash  
sum=10  
echo "number is $sum"  
  
~  
~  
~  
~  
~  
~  
~  
~  
~
```

```
(root@kali)~[/college/network]  
# bash ques2.sh  
number is 10  
  
(root@kali)~[/college/network]  
#
```

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

```
#!/bin/bash
echo "enter two numbers";
read a b;
echo "addition $((a+b))";
echo "subtraction $((a-b))";
echo "division $((a/b))";
echo "multiplication $((a*b))"
```

```
(root@kali)~[~/college/network]
# bash ques3.sh
enter two numbers
100 500
addition 600
subtraction -400
division 0
multiplication 50000
```

```
(root@kali)~[~/college/network]
#
```

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

```
File Actions Edit View Help
#!/bin/bash
echo "enter a number"
read a
if [[ $a -eq 10 ]]
then
    echo "number found"
else
    echo "number not found"
fi
```

```
(root@kali)~/college/network
# bash ques4.sh
enter a number
10
number found
```

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

```
#!/bin/bash
echo "$(date)";
echo "calnder :";
cal
```

```

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

```

```

(root@kali)~[~/college/network]
$ bash ques6.sh
enter a number
5
5 is odd

```

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

```

#!/bin/bash
echo "enter a number";
read a;
if [[ $a -gt 10 ]]
then
    echo "number is grater than 10";
fi
if [[ $a -le 10 ]]
then
    echo "number is less than or equal to 10"
fi

```

```
(root@kali)~[~/college/network]
# bash ques7.sh
enter a number
100
number is grater than 10
```

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

```
#!/bin/bash
sum=0
n=10
echo "sum of first 10 numbers";
for ((i=1;i <= $n;i++ ))
do
    sum=$((sum+i))
done
echo "$sum";
```

```
(root@kali)~[~/college/network]
# bash ques8.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.

```
#!/bin/bash
echo "enter four numbers";
read a b c d;
sum=$((a+b+c+d))
echo "sum is $sum";
avg=$((sum/4))
echo "average is $avg";
pro=$((a*b*c*d))
echo "product is $pro";
```

```
(root@kali)~[~/college/network]
# bash ques9.sh
enter four numbers
2 4 5 12
sum is 23
average is 5
product is 480
```

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

```
File Actions Edit View Help
#!/bin/bash
echo "enter three numbers"
read a b c;
if [[ $a -lt $b ]]
then
    echo "$a is smaller";

elif [[ $b -lt $c ]]
then
    echo "$b is smaller";
else
    echo "$c is smaller";
fi
~
~
~
```

```
(root@kali)~[~/college/network]
# bash ques10.sh
enter three numbers
4 500 123
4 is smaller
```

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

```
#!/bin/bash
echo "enter a number";
read a;
fact=1;
while [ $a -ge 1 ]
do
    fact=$((fact * $a))
    a=$((a-1))
done
echo "factorial is $fact"
~
~
~
~
~
```

```
(root@kali)~[~/college/network]
# bash ques11.sh
enter a number
4
factorial is 24
```



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

```
#!/bin/bash
echo "enter a number";
read a;
pali=$a;
num=0;
while [ $a -gt 0 ]
do
    digit=$((a%10));
    num=$((num*10))+digit;
    a=$((a/10));
done
if [[ $num -eq $pali ]]
then
    echo "$pali is palindrome";
else
    echo "$pali is not palindrome";
fi
~
~
~
```

```
(root@kali) - [~/college/network]
# bash ques12.sh
enter a number
6
6 is palindrome
```

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

```
#!/bin/bash
echo "enter number of numbers";
read n;
sum=0;
echo "enter numbers";
for((i=0;i<n;i++))
do
    read a;
    sum=$((sum + a));
done
avg=$((sum/n));
echo "average is $avg"
~
~
~
~
```

```
(root@kali)~[~/college/network]
# bash ques13.sh
enter number of numbers
2
enter numbers
5
77
average is 41
```

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

```
#!/bin/bash
echo "enter a number";
read a;
pali=$a;
num=0;
while [ $a -gt 0 ]
do
    digit=$((a%10));
    num=$((digit+num));
    a=$((a/10));
done
echo "sum of digits of $pali is $num";
~
~
~
~
~
~
~
```

```
(root@kali)~[~/college/network]
# bash ques14.sh
enter a number
167
sum of digits of 167 is 14
```

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

```
File Actions Edit View Help
#!/bin/bash
echo "enter the year";
read a;
year=$((a%4));
if [[ $year -eq 0 ]]
then
    echo "$a is leap year";
else
    echo "$a is a normal year";
fi
~
~
~
~
~
~
```

```
(root@kali)-[~/college/network]
# bash ques15.sh
enter the year
2020
2020 is leap year

(root@kali)-[~/college/network]
# bash ques15.sh
enter the year
2022
2022 is a normal year

(root@kali)-[~/college/network]
#
```