

Experiment 14

Date: 19/06/2023

Aim:

Familiarization of Linux Commands

Course Outcome(CO4):

Write shell scripts required for system administration

Procedure:

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

```
fruit="apple"
```

```
case "$fruit" in
```

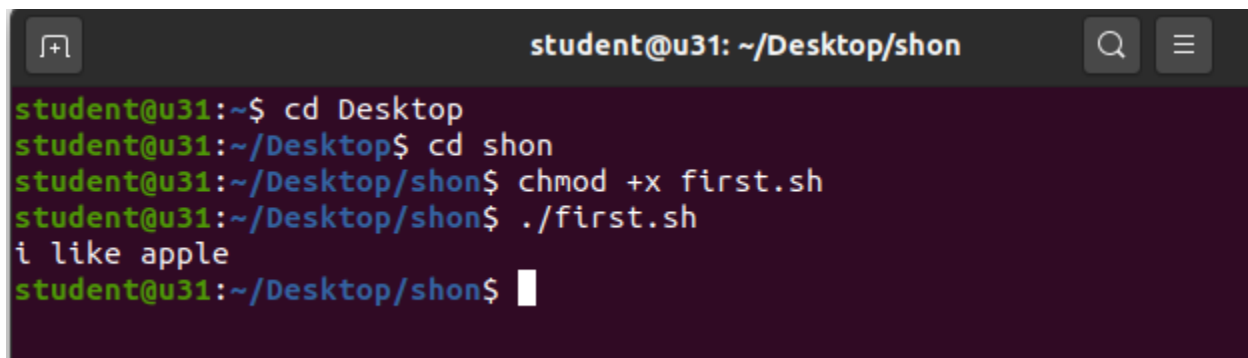
```
    "banana") echo "i like banana";;
```

```
    "orange") echo "i like orange";;
```

```
    "apple") echo "i like apple";;
```

```
Esac
```

Output :

A terminal window with a dark background and light-colored text. The window title bar shows 'student@u31: ~/Desktop/shon'. The terminal content shows a series of commands and their output: 'cd Desktop', 'cd shon', 'chmod +x first.sh', and './first.sh'. The output of the last command is 'i like apple'.

```
student@u31:~$ cd Desktop
student@u31:~/Desktop$ cd shon
student@u31:~/Desktop/shon$ chmod +x first.sh
student@u31:~/Desktop/shon$ ./first.sh
i like apple
student@u31:~/Desktop/shon$
```

Experiment 15

Date: 19/06/2023

Aim:

Familiarization of Linux Commands

Course Outcome(CO4):

Write shell scripts required for system administration

Procedure:

Write a shell script to display the capital of a state using case...esac statement :

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

```
kerala="Trivandram"
```

```
case "$kerala" in
```

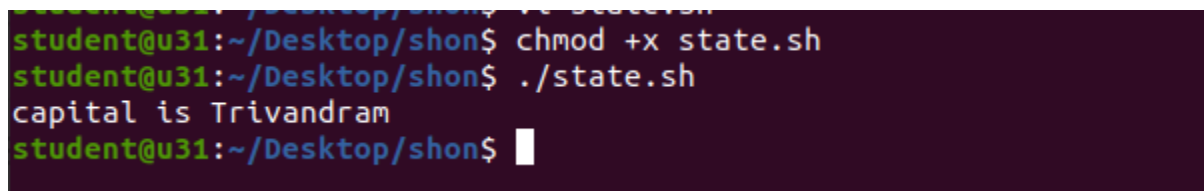
```
    "Kottayam") echo "capital is Kottayam";;
```

```
    "Trivandram") echo "capital is Trivandram";;
```

```
    "Edukki") echo "capital is Edukki";;
```

```
Esac
```

Output:

A terminal window with a dark purple background and light green text. The prompt is 'student@u31:~/Desktop/shon\$'. The user enters 'chmod +x state.sh'. The prompt changes to 'student@u31:~/Desktop/shon\$' and the user enters './state.sh'. The output is 'capital is Trivandram'. The prompt changes to 'student@u31:~/Desktop/shon\$' and there is a white cursor block.

```
student@u31:~/Desktop/shon$ chmod +x state.sh
student@u31:~/Desktop/shon$ ./state.sh
capital is Trivandram
student@u31:~/Desktop/shon$
```

Experiment 16

Date: 19/06/2023

Aim:

Familiarization of Linux Commands

Course Outcome(CO4):

Write shell scripts required for system administration

Procedure:

Write a shell script to display color in Rainbow

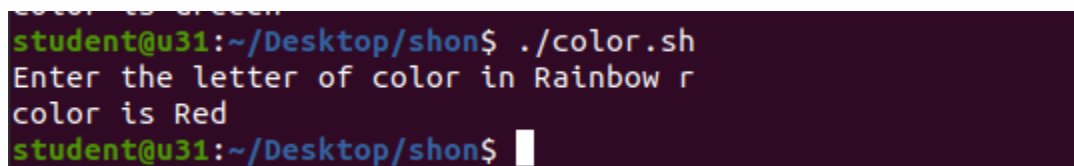
```
#!/bin/bash
```

```
read -p "Enter the letter of color in Rainbow : " color
```

```
case "$color" in
    "v")echo "color is Violet";;
    "i")echo "color is Indigo";;
    "b")echo "color is Blue";;
    "g")echo "color is Green";;
    "y")echo "color is Yellow";;
    "o")echo "color is Orange";;
    "r")echo "color is Red";;
    *)echo "not in VIBGYOR";;
```

```
esac
```

Output :



```
student@u31:~/Desktop/shon$ ./color.sh
Enter the letter of color in Rainbow r
color is Red
student@u31:~/Desktop/shon$
```

Looping statements in Shell Scripting :

Experiment 17

Date: 19/06/2023

Aim:

Familiarization of Linux Commands

Course Outcome(CO4):

Write shell scripts required for system administration

Procedure:

Write a shell script to Print Numbers upto 10 using while loop

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

```
a=0
```

```
while [ $a -lt 10 ]
```

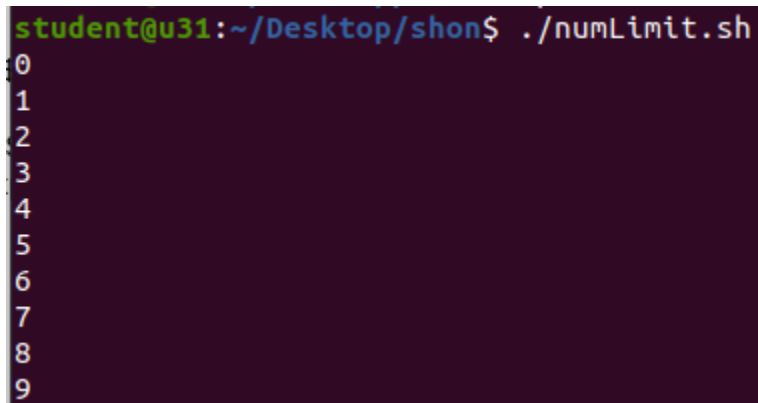
```
do
```

```
    echo $a
```

```
    a=`expr $a + 1`
```

```
done
```

Output :



```
student@u31:~/Desktop/shon$ ./numLimit.sh
0
1
2
3
4
5
6
7
8
9
```

Experiment 18

Date: 19/06/2023

Aim:

Familiarization of Linux Commands

Course Outcome(CO4):

Write shell scripts required for system administration

Procedure:

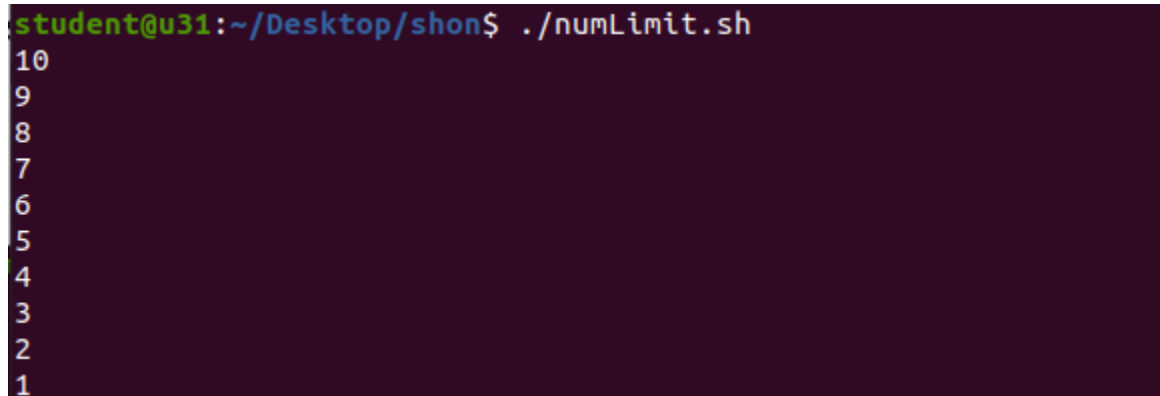
Write a shell script to Print Numbers in reverse order from 10

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

```
a=10
```

```
while [ $a -gt 0 ] (lessthan = lt //greaterthan or equal to = ge //lessthan or equell to = le)
do
    echo $a
    ((a--))
done
```

Output :



```
student@u31:~/Desktop/shon$ ./numLimit.sh
10
9
8
7
6
5
4
3
2
1
```

Experiment 19

Date: 19/06/2023

Aim:

Familiarization of Linux Commands

Course Outcome(CO4):

Write shell scripts required for system administration

Procedure:

Write a shell script to check a num is palindrome or not

```
#!/bin/bash
num=0
read -p "Enter the number : " num
```

```
rev=0
temp=num
rem=0
```

```
while [ $num != 0 ]
do
    ((rem=num%10))
    ((rev=rev*10+rem))
    ((num=num/10))
done
```

```
if [ $rev == $temp ]
then
    echo "Its a palindrome"
else
    echo "Its not a palindrome"
    echo $rev
```

```
Fi
```

For loop

Syntax :

```
for <var> in <value1 value2 ..valueN>
do
    <command1>
    <command2>
```

Done

Eg:

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

```
for i in {1..5}
do
    echo "$i"
Done
```

Question :

27: For loop with break();

```
#!/bin/bash

for ((i=10;i>=0;i--))
do
    if [ $i == 5 ]
    then
        break
    fi
    echo "$i"

done
```

```
mca@u31:~/Desktop/shon$ vi break.sh
mca@u31:~/Desktop/shon$ chmod +x break.sh
mca@u31:~/Desktop/shon$ ./break.sh
10
9
8
7
6
```

28: Display colors using for loop

```
#!/bin/bash

for i in "Blue" "Black" "Orange" "Yellow"
do

    echo "$i"

done
```

```
mca@u31:~/Desktop/shon$ ./color.sh
Blue
Black
Orange
Yellow
mca@u31:~/Desktop/shon$
```

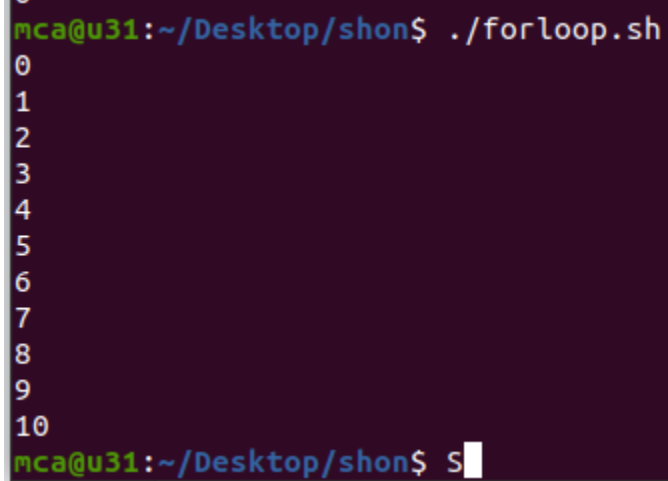
29 :Display num upto 10

```
#!/bin/bash

for ((i=0;i<=10;i++))
do

    echo "$i"
```


done

A terminal window with a dark purple background. The prompt is 'mca@u31:~/Desktop/shon\$'. The command './forloop.sh' has been executed, resulting in a vertical list of numbers from 0 to 10. The prompt is now 'mca@u31:~/Desktop/shon\$' followed by a space and a cursor.

```
mca@u31:~/Desktop/shon$ ./forloop.sh
0
1
2
3
4
5
6
7
8
9
10
mca@u31:~/Desktop/shon$ S
```

30 : Count num in reverse order

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

```
for i in {10..1}
do
```

```
    echo "$i"
```

```
done
```

OR

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

```
for ((i=10;i>=0;i--))
do
```

```
    echo "$i"
```

```
done
```

```
mca@u31:~/Desktop/shon$ ./forloop.sh
10
9
8
7
6
5
4
3
2
1
0
```

Continues —>

Until 👍

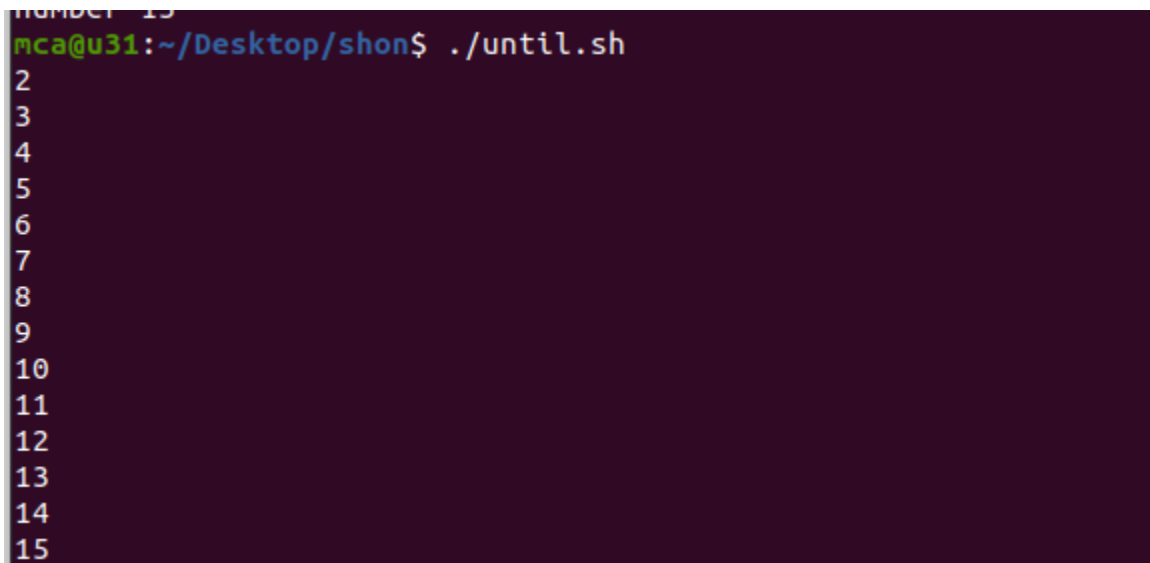
Syntax:

```
Until <condition>
do
    <command 1>
    <command 2>
done
```

37. Write a shell script to display number from 2 to 15 using until loop

```
#!/bin/bash
a
i=2;

until [ $i -gt 15 ];
do
    echo "$i"
    i=$(( i + 1 ))
done
```



The terminal screenshot shows the execution of the shell script. The prompt is `mca@u31:~/Desktop/shon$`. The command `./until.sh` is entered. The output of the script is a list of numbers from 2 to 15, each on a new line. The terminal background is dark purple.

```
mca@u31:~/Desktop/shon$ ./until.sh
2
3
4
5
6
7
8
9
10
11
12
13
14
15
```

Function :

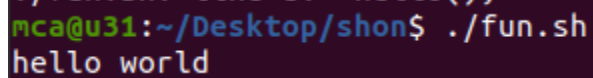
```
#!/bin/bash
```

```
hello(){
```

```
    echo "hello world"
```

```
}
```

```
hello;
```

A terminal window with a dark purple background. The prompt is 'mca@u31:~/Desktop/shon\$'. The user has entered './fun.sh' and the output is 'hello world' on the next line.

```
mca@u31:~/Desktop/shon$ ./fun.sh  
hello world
```

Question

31:shell script to check the number is palindrome or not

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

```
num=0
```

```
read -p "Enter the number : " num
```

```
rev=0
```

```
temp=num
```

```
rem=0
```

```
For [ $num != 0 ]
```

```
do
```

```
    ((rem=num%10))
```

```
    ((rev=rev*10+rem))
```

```
    ((num=num/10))
```

```
done
```

```
if [ $rev == $temp ]
```

```
then
```

```
    echo "Its a palindrome"
```

else

echo "Its not a palindrome"

echo \$rev

Fi

32:shell script to check whether a given number is Armstrong or Not

33:shell script to check whether a number is prime or not

34:shell script for factorial of NUMBER

35:shell script to print Fibonacci series

36:shell script to check if the current year is leap year or not