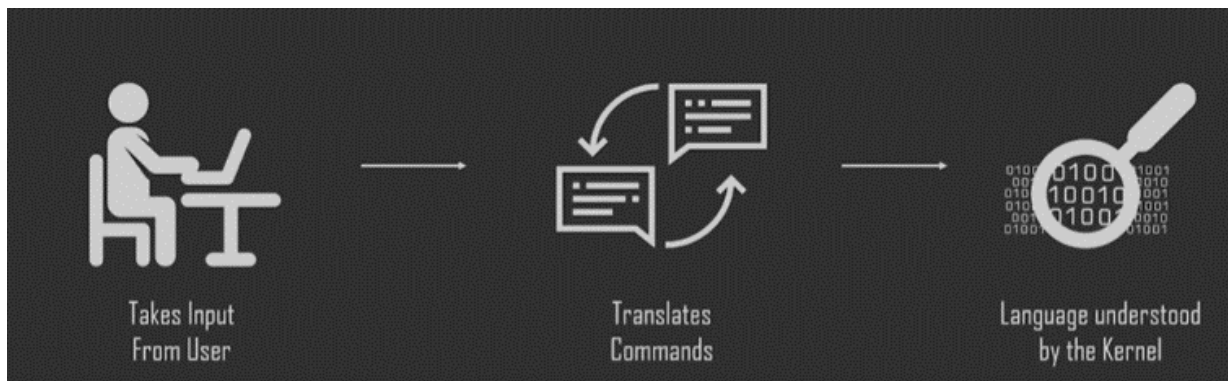


LAB: 2

AIM:

Introduction:

The shell is a command line interpreter. It translates the commands entered by the user and converts them into a language understood by the kernel. Kernel manages resource of Linux O/S. Kernel decides who will use this resource, for how long and when. It runs your programs (or set up to execute binary files).



Computer understand the language of 0's and 1's called binary language, In early days of computing, instruction are provided using binary language, which is difficult for all of us, to read and write. So in O/s there is special program called Shell. Shell accepts your instruction or commands in English and translate it into computers native binary language.

A shell script is a computer program designed to be run by the Unix/Linux shell which could be one of the following:

- The Bourne Shell
- The C Shell
- The Korn Shell

- The GNU Bourne-Again Shell

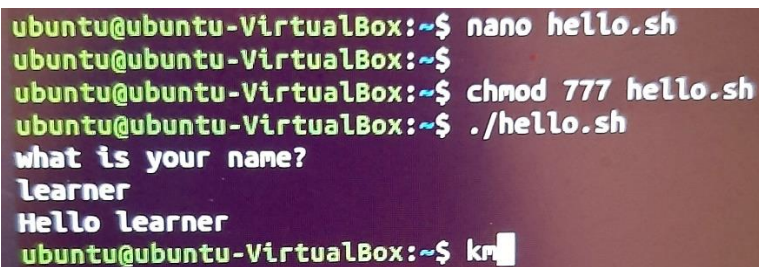
Shell is an environment in which we can run our commands, programs, and shell scripts. There are different flavors of a shell, just as there are different flavors of operating systems. Each flavor of shell has its own

1)Write a shell script to print your name.

```
echo "what is your name?"
```

```
read PERSON
```

```
echo "Hello $PERSON"
```

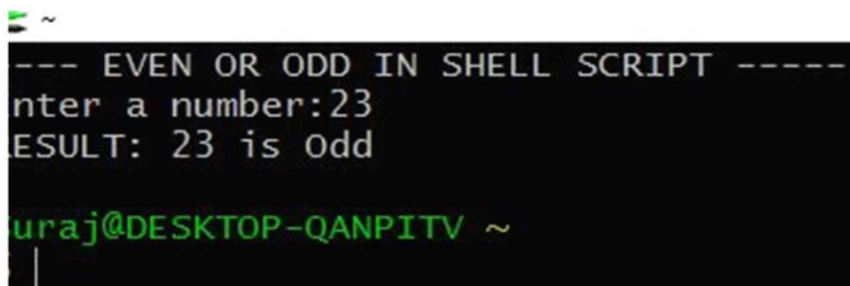
A terminal window with a dark background and light-colored text. The prompt is 'ubuntu@ubuntu-VirtualBox:~\$'. The user enters 'nano hello.sh', then 'chmod 777 hello.sh', and finally './hello.sh'. The script outputs 'what is your name?' and 'Hello learner'. The user then enters 'kn' at the prompt.

```
ubuntu@ubuntu-VirtualBox:~$ nano hello.sh
ubuntu@ubuntu-VirtualBox:~$
ubuntu@ubuntu-VirtualBox:~$ chmod 777 hello.sh
ubuntu@ubuntu-VirtualBox:~$ ./hello.sh
what is your name?
learner
Hello learner
ubuntu@ubuntu-VirtualBox:~$ kn
```

2)Write a shell script to find whether a number is even or odd.

```
clear
echo "---- EVEN OR ODD IN SHELL SCRIPT ----"
echo -n "Enter a number: "
read n
echo -n "RESULT: "
if [ `expr $n % 2` == 0 ]
then
    echo "$n is even"
else
    echo "$n is Odd"
fi
```

OUTPUT:



```
~
--- EVEN OR ODD IN SHELL SCRIPT ----
Enter a number:23
RESULT: 23 is Odd
uraj@DESKTOP-QANPITV ~
|
```

3)Write a script to print a table of a given number.

```
echo "Enter a Number"
read n
i=1

while [ $i -le 10 ]
do
    echo " $n x $i = $(( n * i ))"
    i=$(( i + 1 ))
done
```

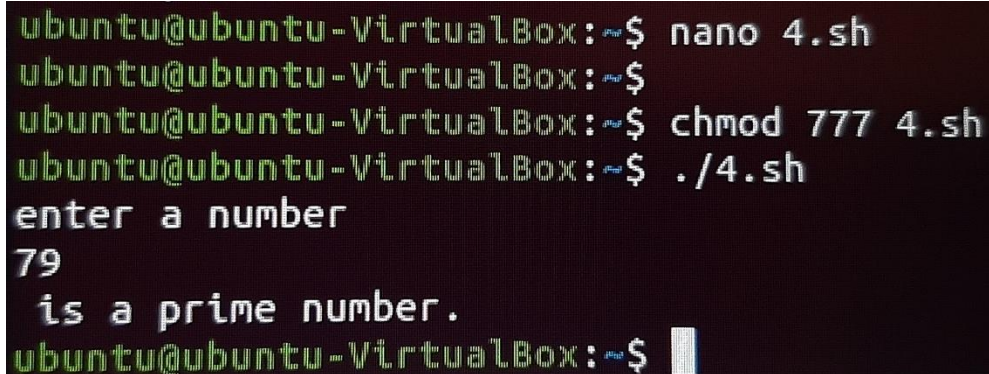
OUTPUT:

```
[cloudera@quickstart Desktop]$ sh table.sh
Enter a Number
5
 5 x 1 = 5
 5 x 2 = 10
 5 x 3 = 15
 5 x 4 = 20
 5 x 5 = 25
 5 x 6 = 30
 5 x 7 = 35
 5 x 8 = 40
 5 x 9 = 45
 5 x 10 = 50
[cloudera@quickstart Desktop]$
```

4)Write a shell script to check whether a given no. is prime or not.

```
echo "enter a number"
read n
for((i=2; i<=num/2; i++))
do
    if [ $((num%i)) -eq 0 ]
    then
        echo "$num is not a prime number."
        exit
    fi
done
echo "$num is a prime number."
```

OUTPUT:

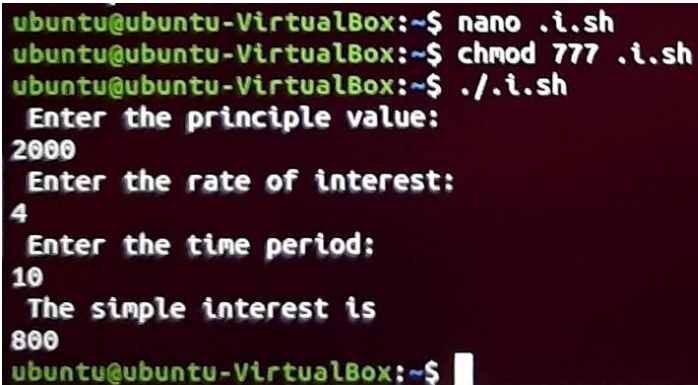


```
ubuntu@ubuntu-VirtualBox:~$ nano 4.sh
ubuntu@ubuntu-VirtualBox:~$
ubuntu@ubuntu-VirtualBox:~$ chmod 777 4.sh
ubuntu@ubuntu-VirtualBox:~$ ./4.sh
enter a number
79
is a prime number.
ubuntu@ubuntu-VirtualBox:~$
```

5) Write a shell script to find the simple interest.

```
echo " Enter the principle value: "  
read p  
echo " Enter the rate of interest:"  
read r  
echo " Enter the time period:"  
read t  
s=`expr $p \* $t \* $r / 100`  
echo " The simple interest is "  
echo $s
```

OUTPUT:



```
ubuntu@ubuntu-VirtualBox:~$ nano .i.sh  
ubuntu@ubuntu-VirtualBox:~$ chmod 777 .i.sh  
ubuntu@ubuntu-VirtualBox:~$ ./i.sh  
Enter the principle value:  
2000  
Enter the rate of interest:  
4  
Enter the time period:  
10  
The simple interest is  
800  
ubuntu@ubuntu-VirtualBox:~$
```

6) Write a shell script to find sum of n numbers.

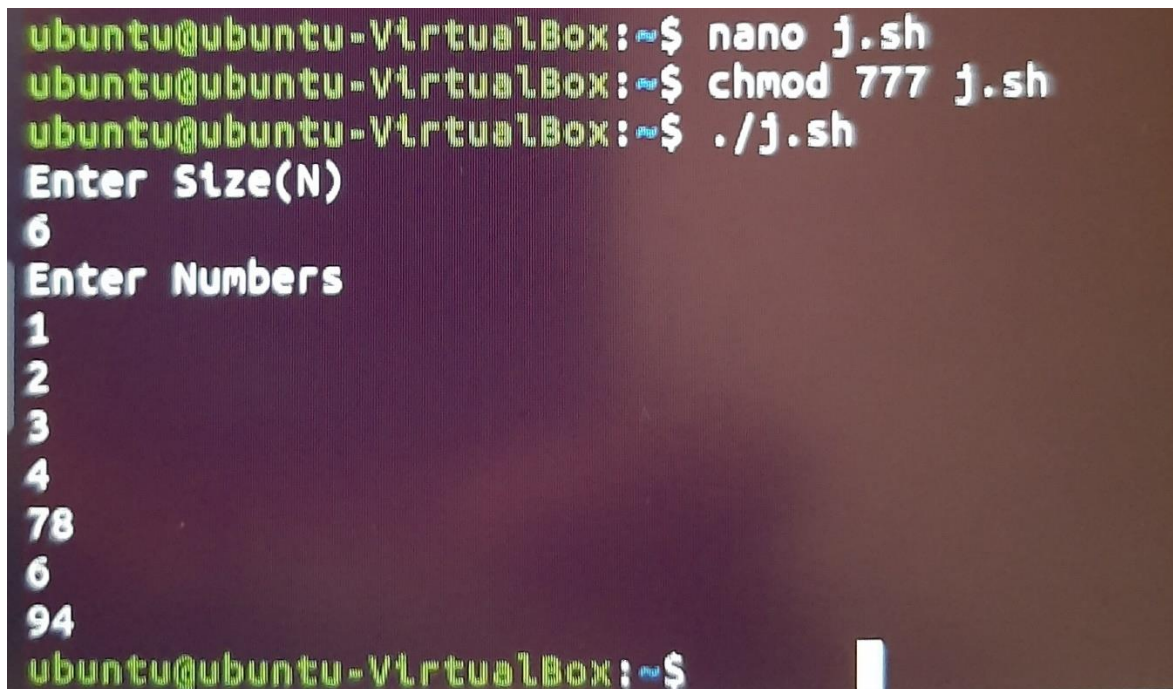
```
echo "Enter Size(N)"
read N

sum=0

echo "Enter Numbers"
for((i=1;i<=N;i++))
do
    read num          #get number
    sum=$((sum + num)) #sum+=num
done

echo $sum
```

OUTPUT:



```
ubuntu@ubuntu-VirtualBox: ~$ nano j.sh
ubuntu@ubuntu-VirtualBox: ~$ chmod 777 j.sh
ubuntu@ubuntu-VirtualBox: ~$ ./j.sh
Enter Size(N)
6
Enter Numbers
1
2
3
4
78
6
94
ubuntu@ubuntu-VirtualBox: ~$
```

The screenshot shows a terminal window where a shell script named 'j.sh' is being executed. The user enters '6' for the size (N) and then enters the numbers '1', '2', '3', '4', '78', '6', and '94' for the numbers to be summed. The final output of the script is '94'.