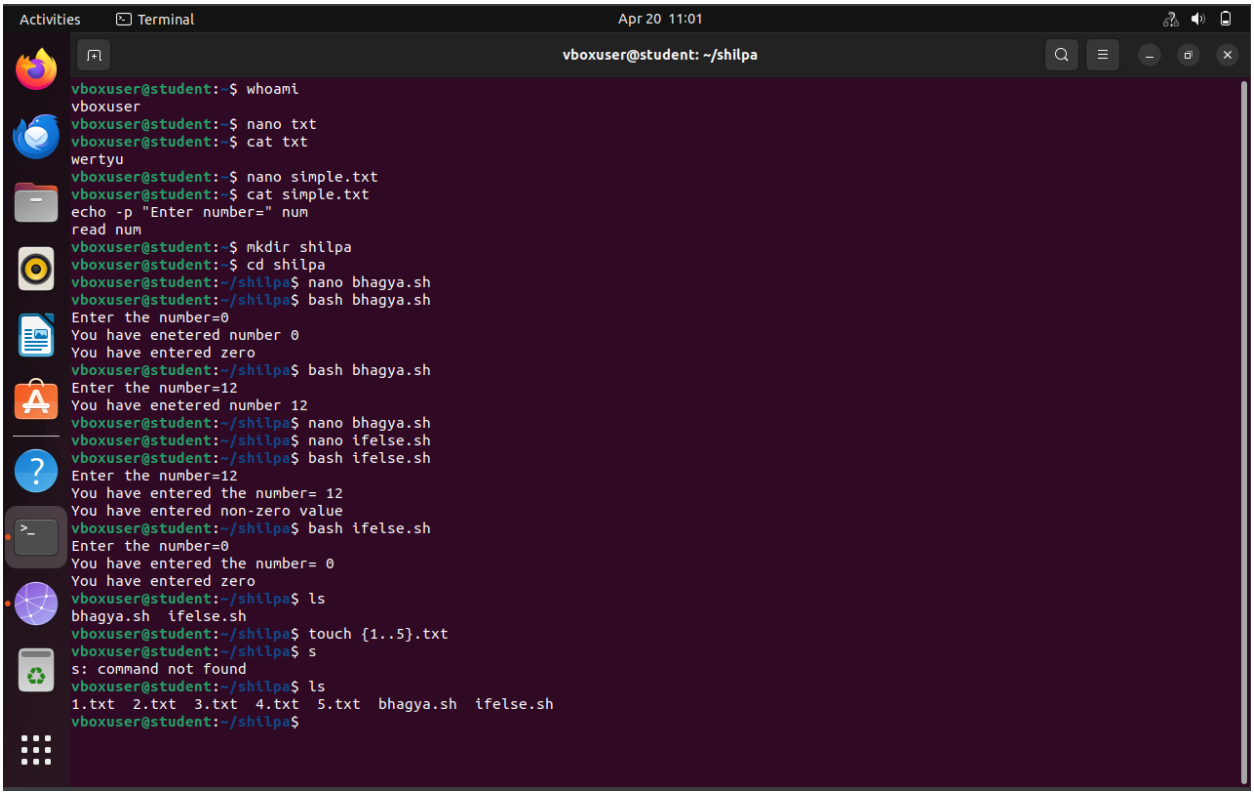
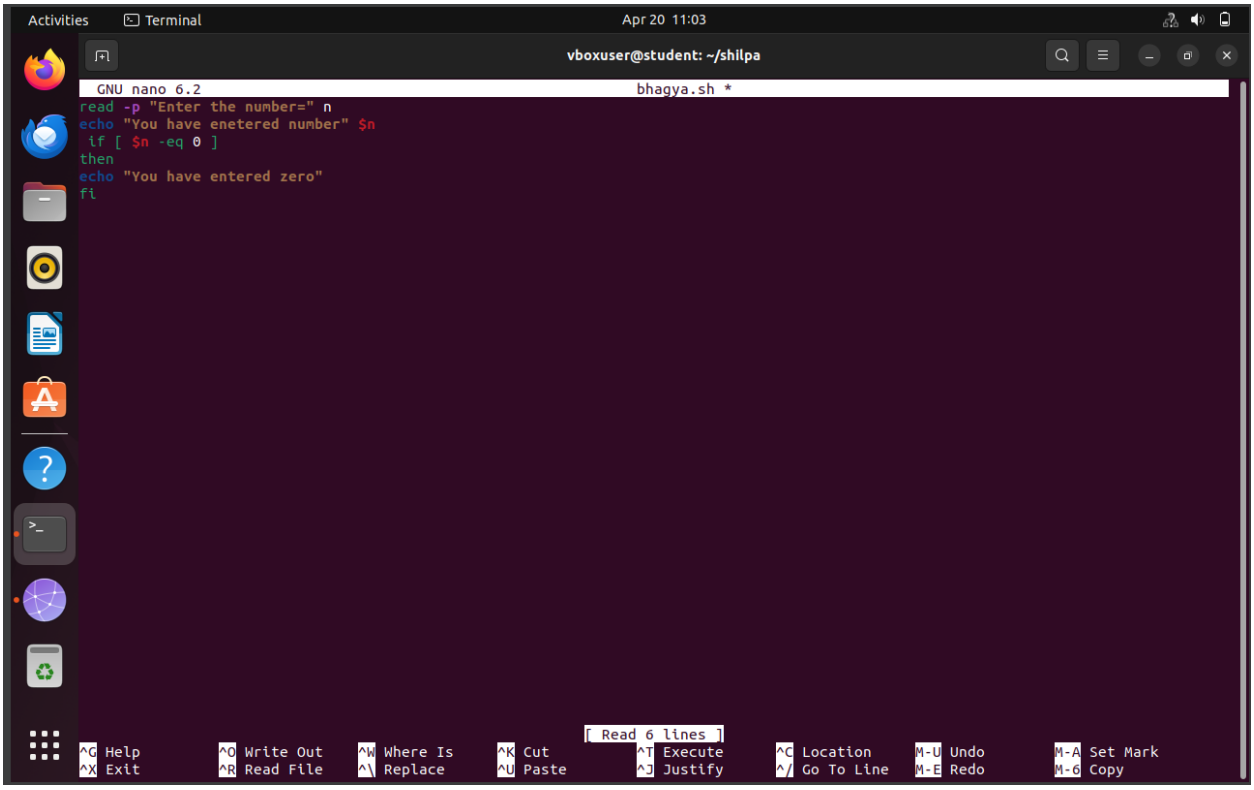
OS ASSIGNMENT

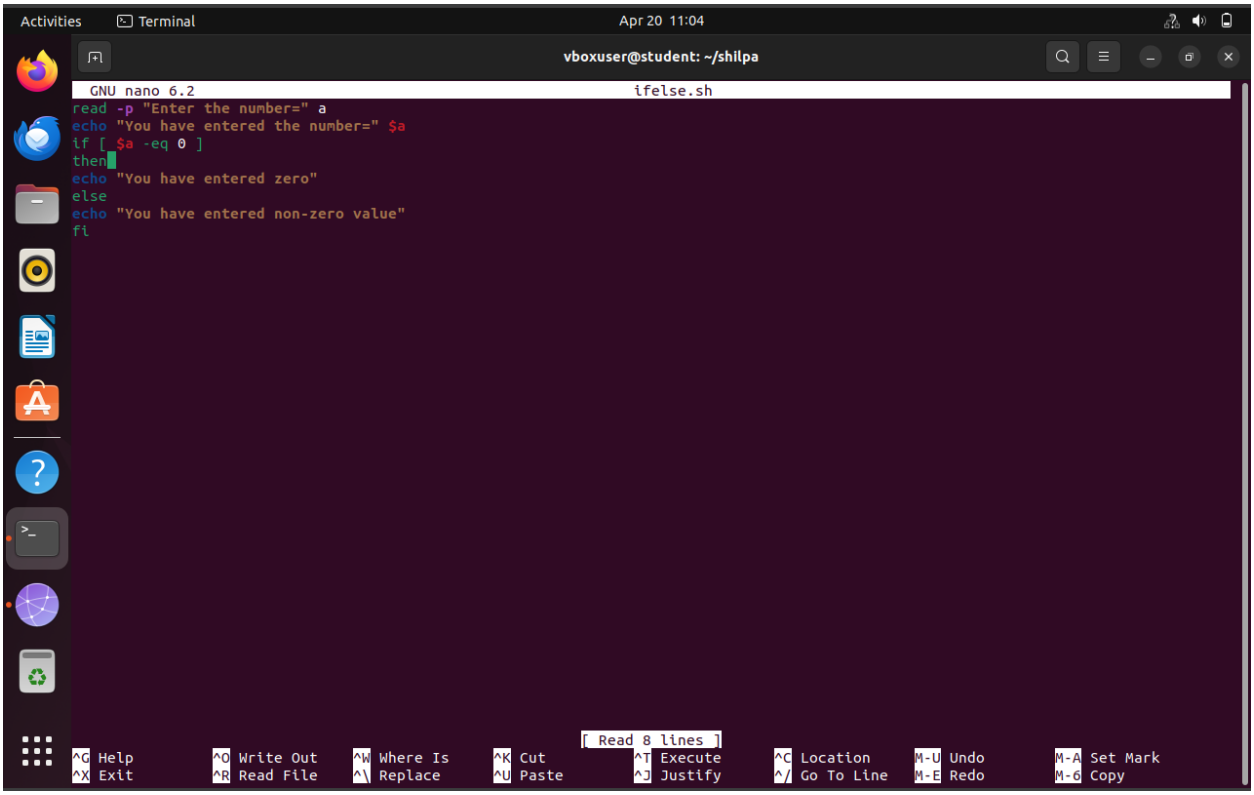
1]Basic commands and creating files :



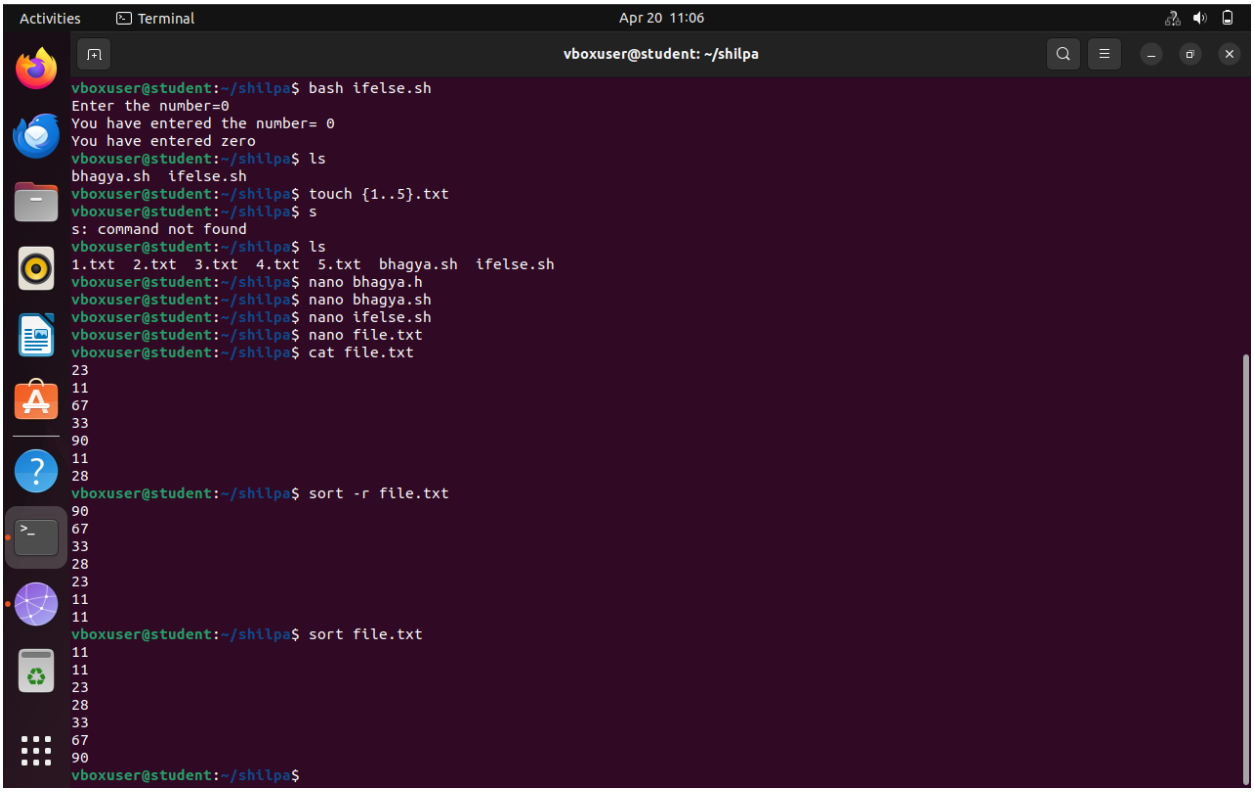
2] If condition:



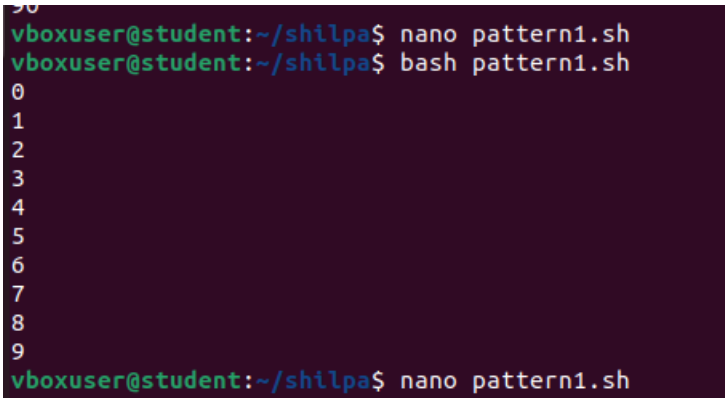
3]If-else condition:

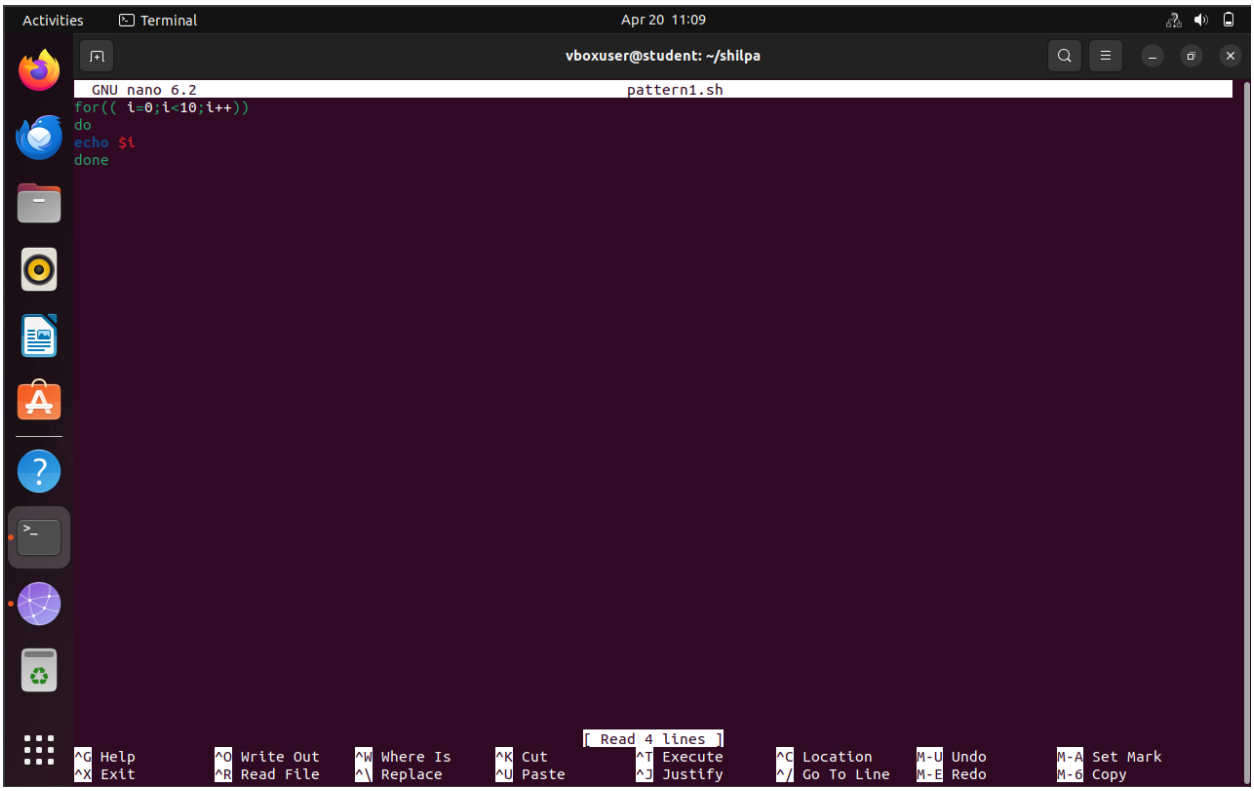


4]Sorting:

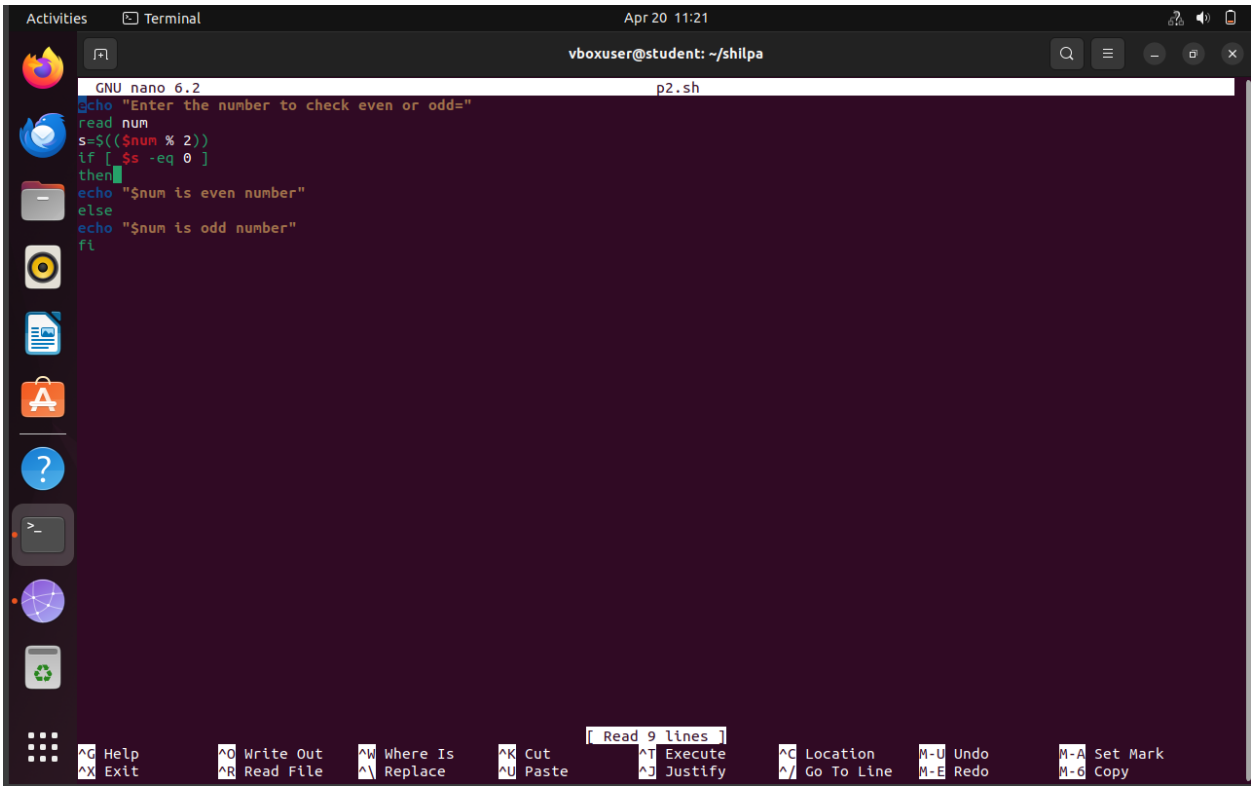


5]for loop:



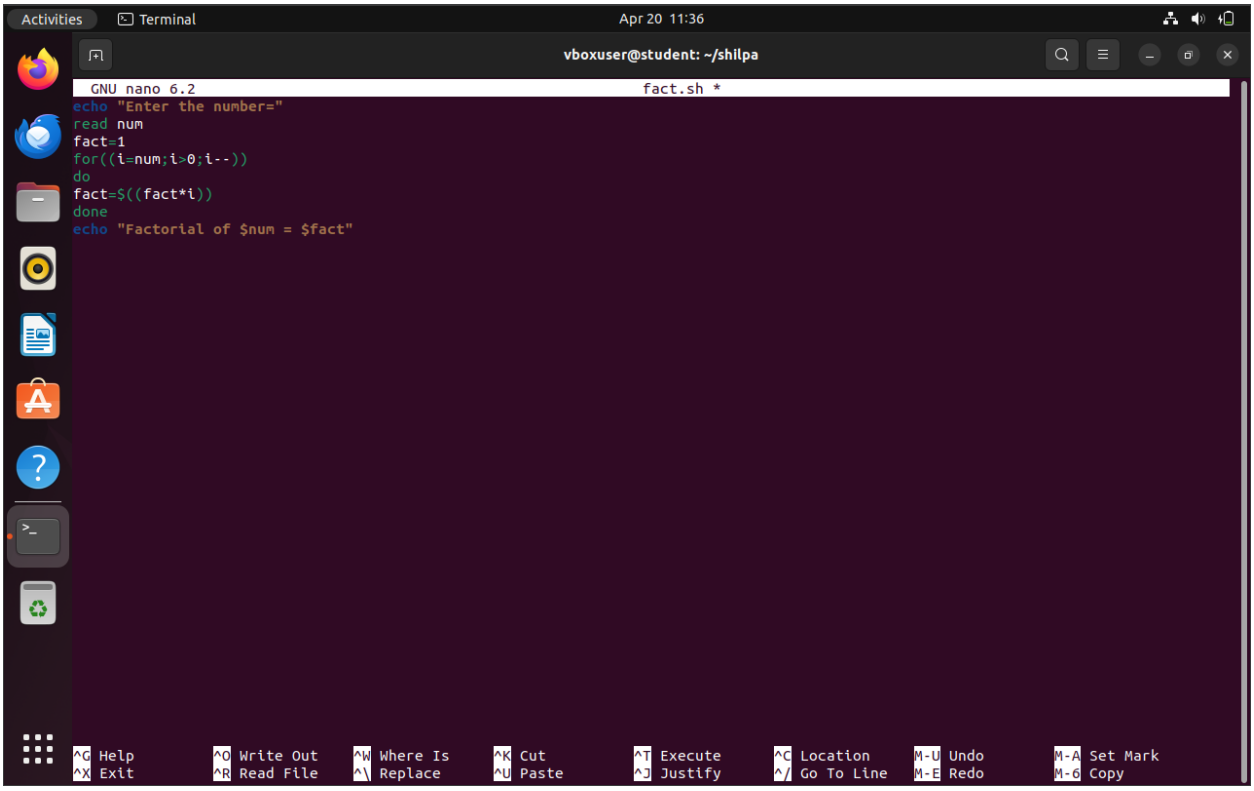


6]Even odd numbers:



```
vboxuser@student:~/shilpa$ nano p2.sh
vboxuser@student:~/shilpa$ nano p2.sh
vboxuser@student:~/shilpa$ bash p2.sh
Enter the number to check even or odd=
24
24 is even number
vboxuser@student:~/shilpa$ bash p2.sh
Enter the number to check even or odd=
13
13 is odd number
vboxuser@student:~/shilpa$ nano p2.sh
vboxuser@student:~/shilpa$
```

7]Factorial num:

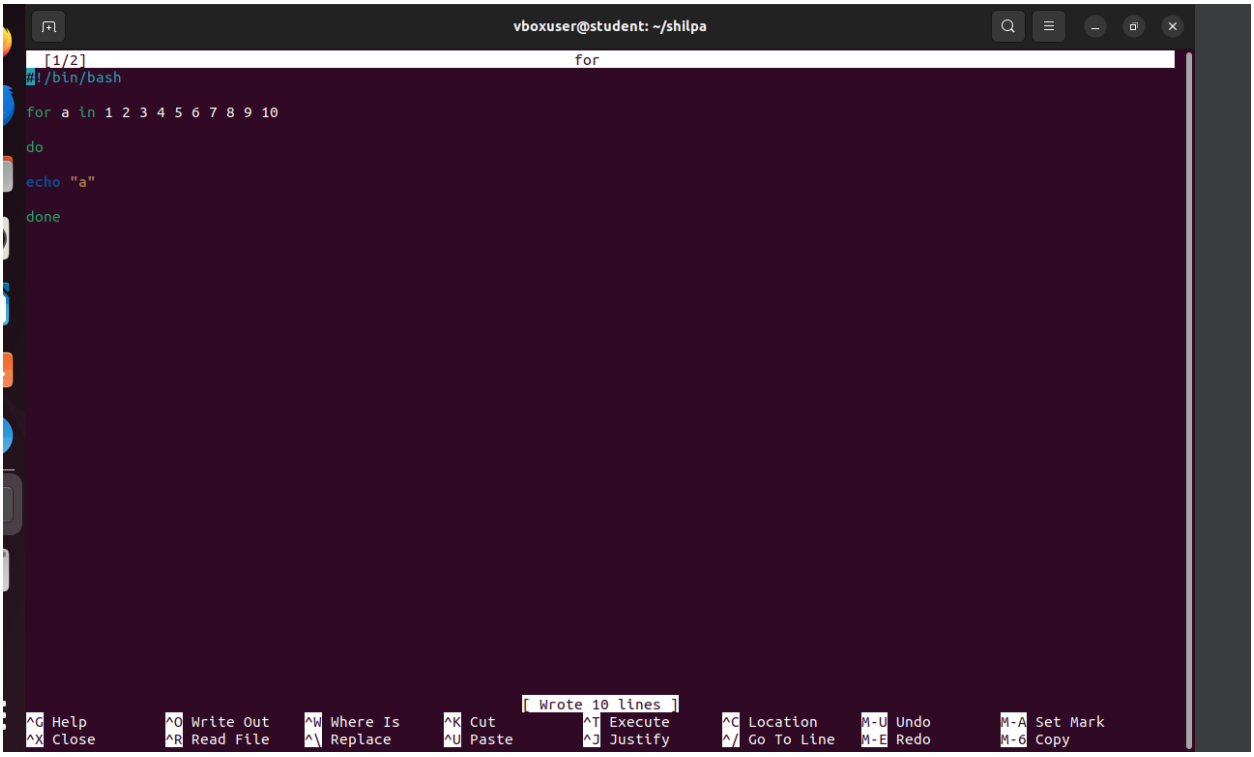


```
vboxuser@student:~/shilpa$ nano fact.sh
vboxuser@student:~/shilpa$ bash fact.sh
Enter the number=
5
Factorial of 5 = 120
vboxuser@student:~/shilpa$ nano fact.sh
vboxuser@student:~/shilpa$ bash fact.sh
Enter the number=
3
Factorial of 3 = 6
vboxuser@student:~/shilpa$ nano fact.sh
vboxuser@student:~/shilpa$ bash fact.sh
Enter the number=
5
Factorial of num = 120
vboxuser@student:~/shilpa$ nano fact.sh
vboxuser@student:~/shilpa$
```

8]Case program:

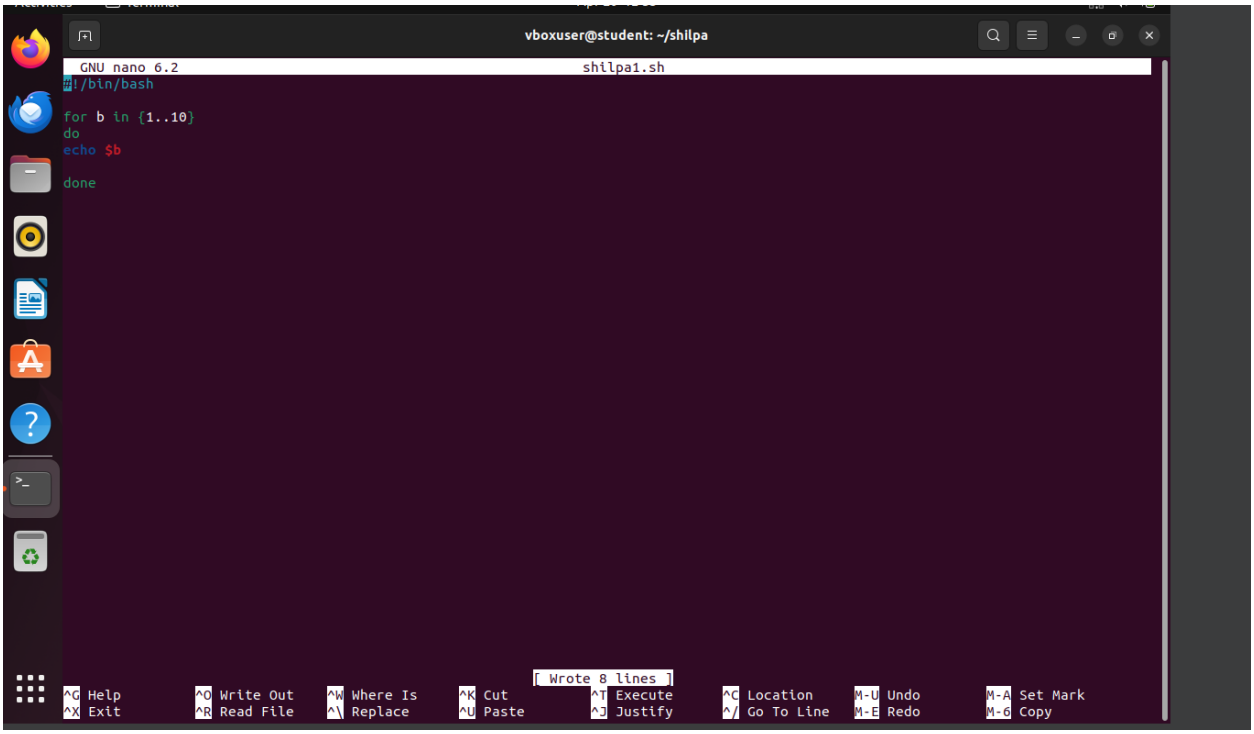
```
vboxuser@student:~/shilpa$ nano case.sh
vboxuser@student:~/shilpa$ bash case.sh
1.english
 2.Hindi
 3.Marathi
choose an option=1
welcome to IACSD
vboxuser@student:~/shilpa$
vboxuser@student:~/shilpa$ bash case.sh
1.english
 2.Hindi
 3.Marathi
choose an option=3
IACSD madhe apla swagta aahe
vboxuser@student:~/shilpa$ nano if.sh
vboxuser@student:~/shilpa$ nano if.sh
vboxuser@student:~/shilpa$ bash if.sh
```

9]For loop:



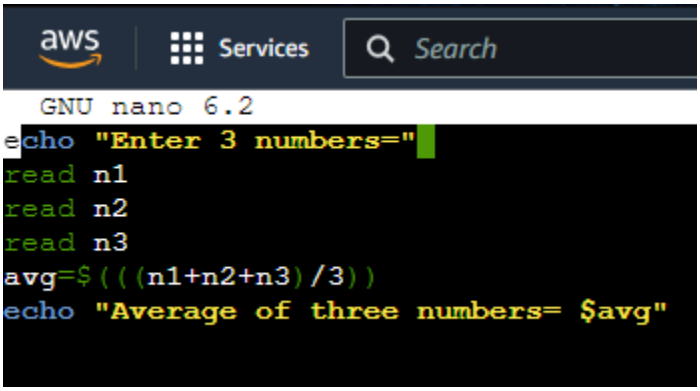
```
vboxuser@student:~/shilpa$ nano while.sh
vboxuser@student:~/shilpa$ nano for .sh
vboxuser@student:~/shilpa$ bash for .sh
a
a
a
a
a
a
a
a
a
a
vboxuser@student:~/shilpa$ nano for .sh
```

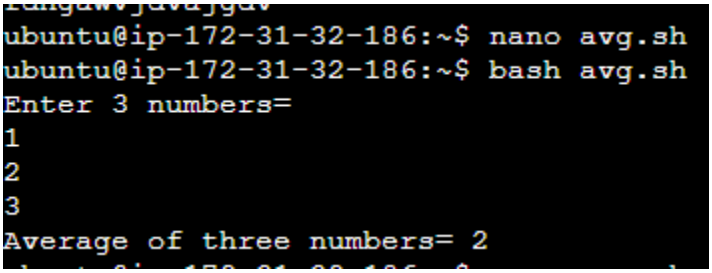
10]for loop:



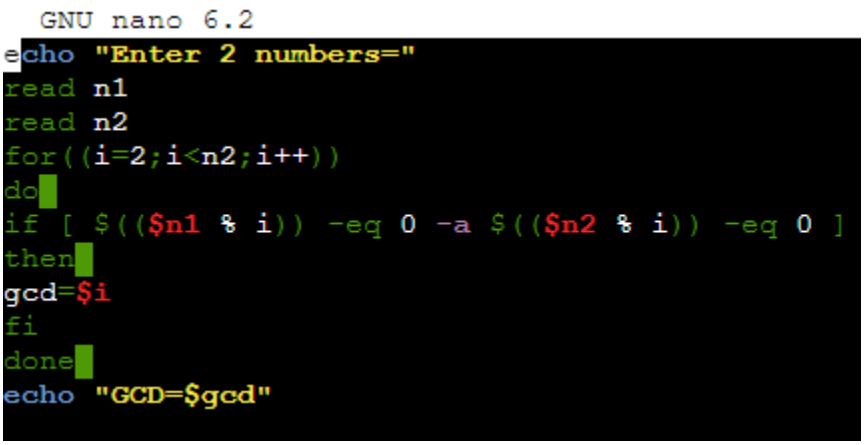

```
{1.........10}
vboxuser@student:~/shilpa$ nano shilpa1.sh
vboxuser@student:~/shilpa$ nano shilpa1.sh
vboxuser@student:~/shilpa$ bash shilpa1.sh
1
2
3
4
5
6
7
8
9
10
vboxuser@student:~/shilpa$ nano shilpa1.sh
vboxuser@student:~/shilpa$
```

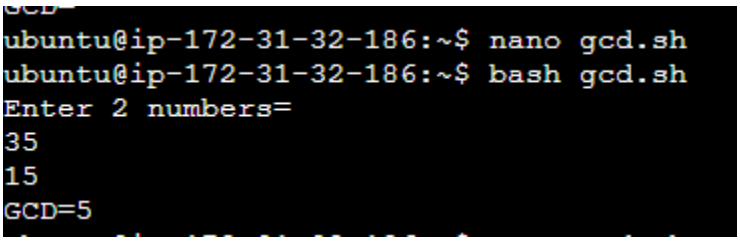
11]Average of numbers:





12]GCD of two numbers:





13]Sum of digit:

```
  GNU nano 6.2                                                  sum1.sh
echo "Enter the number="
read n
sum=0
rem=0
while [ $n -gt 0 ]
do
rem=$(($n % 10))
sum=$(($sum + $rem))
n=$(($n / 10))
done
echo "SUM=" $sum
```

```
ubuntu@ip-172-31-32-186:~$ nano sum1.sh
ubuntu@ip-172-31-32-186:~$ bash sum1.sh
Enter the number=
123
SUM= 6
ubuntu@ip-172-31-32-186:~$ nano sum1.sh
ubuntu@ip-172-31-32-186:~$ bash sum1.sh
Enter the number=
378
SUM= 18
ubuntu@ip-172-31-32-186:~$
```

14]Numbers printing:

```
  GNU nano 6.2
echo "Enter the number="
read n
for((i=0;i<=n;i++))
do
echo "Numbers=" $i
done
```

```
ubuntu@ip-172-31-32-186:~$ nano sum.sh
ubuntu@ip-172-31-32-186:~$ bash sum.sh
Enter the number=
10
Numbers= 0
Numbers= 1
Numbers= 2
Numbers= 3
Numbers= 4
Numbers= 5
Numbers= 6
Numbers= 7
Numbers= 8
Numbers= 9
Numbers= 10
```

15]Maximum number:

```
  GNU nano 6.2                                                    minmax.sh
echo "Enter the 3 numbers="
read n1
read n2
read n3
if [ $n1 -gt $n2 ] && [ $n1 -gt $n3 ]
then
echo "$n1 is max number"
elif [ $n2 -gt $n1 ] && [ $n2 -gt $n3 ]
then
echo "$n2 is max number"
else
echo "$n3 is max"
fi
```

```
ubuntu@ip-172-31-32-186:~$ nano minmax.sh
ubuntu@ip-172-31-32-186:~$ bash minmax.sh
Enter the 3 numbers=
23
56
23
56 is max number
ubuntu@ip-172-31-32-186:~$ nano minmax.sh
ubuntu@ip-172-31-32-186:~$
```

16]Reverse the given number:

```
  GNU nano 6.2                                                  rev.sh
echo "Enter the number="
read n
rev=0
rem=0
while [ $n -gt 0 ]
do
rem=$(($n % 10))
rev=$(($rev * 10 + $rem))
n=$(($n / 10))
done
echo "Reverse=" $rev
```

```
ubuntu@ip-172-31-32-186:~$ nano rev.sh
ubuntu@ip-172-31-32-186:~$ bash rev.sh
Enter the number=
134
Reverse= 431
```

PATTERN:

17]

```
aws   Services   Search                                          [Alt+S]
  GNU nano 6.2                                                pattern1.sh
for((row=1;row<=4;row++))
do
for((col=1;col<=row;col++))
do
echo -n  "*"
done
echo ""
done
```

```
ubuntu@ip-172-31-6-50:~$ nano pattern1.sh
ubuntu@ip-172-31-6-50:~$ bash pattern1.sh
*
**
***
****
ubuntu@ip-172-31-6-50:~$
```

18]

```
  GNU nano 6.2                                                pattern2.sh
for((row=1;row<=5;row++))
do
for((col=5;col>row;col--))
do
echo -n "#"
done
echo " "
done
```

```
ubuntu@ip-172-31-6-50:~$ nano pattern2.sh
ubuntu@ip-172-31-6-50:~$ bash pattern2.sh
####
###
##
#
```

19]


```
  GNU nano 6.2                                                pattern4.sh
num=1
for((row=1;row<=5;row++))
do
for((col=5;col>0;col--))
do
echo -n "$num"
num=$(($num + 1))
done
num=1
echo " "
done
```

```
ubuntu@ip-172-31-6-50:~$ nano pattern4.sh
ubuntu@ip-172-31-6-50:~$ bash pattern4.sh
12345
12345
12345
12345
12345
```

20]

```
  GNU nano 6.2                                                pattern3.sh
num=1
for((row=1;row<=5;row++))
do
for((j=1;j<=$row;j++))
do
echo -n "$num"
num=$(($num + 1))
done
num=1
echo " "
done
```

```
ubuntu@ip-172-31-6-50:~$ nano pattern3.sh
ubuntu@ip-172-31-6-50:~$ bash pattern3.sh
1
12
123
1234
12345
```

21]

```
  GNU nano 6.2                                                pattern4.sh
num=1
for((row=1;row<=5;row++))
do
for((col=5;col>row;col--))
do
echo -n "$num"
num=$(($num + 1))
done
num=1
echo " "
done
```

```
ubuntu@ip-172-31-6-50:~$ nano pattern4.sh
ubuntu@ip-172-31-6-50:~$ bash pattern4.sh
1234
123
12
1
```