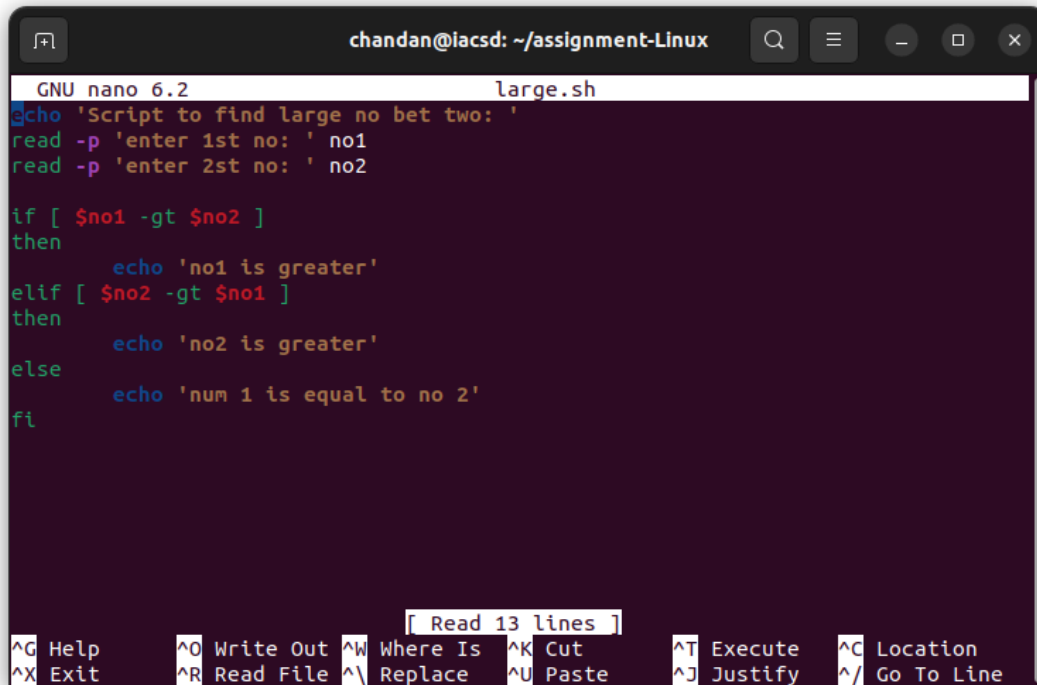


Assignment-3

1. Write a Shell Script to find maximum between two numbers.

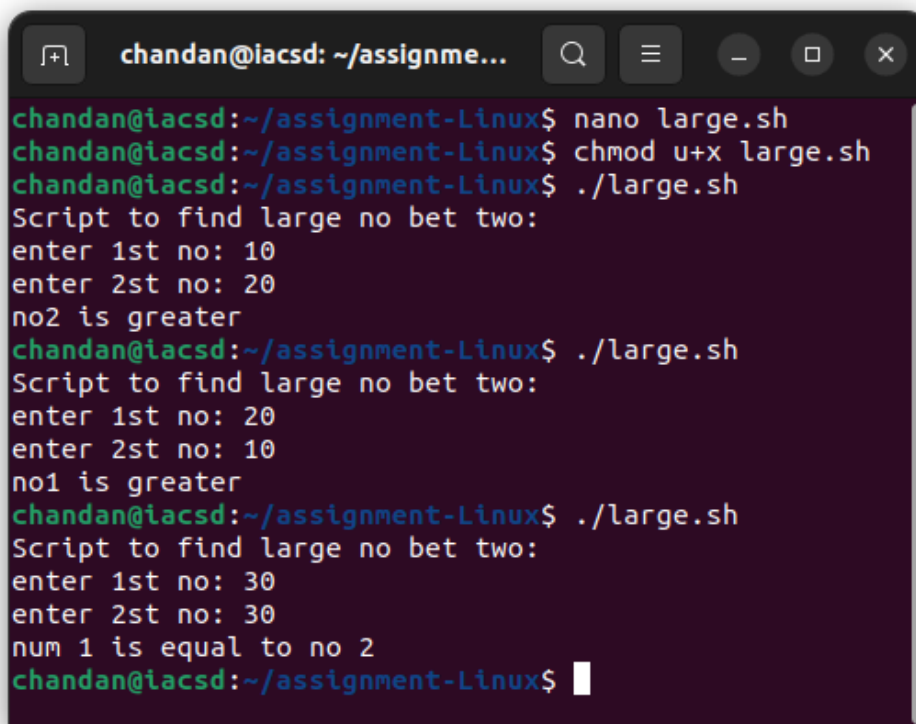


```
chandan@iacsd: ~/assignment-Linux
GNU nano 6.2 large.sh
echo 'Script to find large no bet two: '
read -p 'enter 1st no: ' no1
read -p 'enter 2st no: ' no2

if [ $no1 -gt $no2 ]
then
    echo 'no1 is greater'
elif [ $no2 -gt $no1 ]
then
    echo 'no2 is greater'
else
    echo 'num 1 is equal to no 2'
fi

[ Read 13 lines ]
^G Help      ^O Write Out ^W Where Is  ^K Cut       ^T Execute   ^C Location
^X Exit      ^R Read File ^\ Replace   ^U Paste     ^J Justify   ^_ Go To Line
```

soln :



```
chandan@iacsd: ~/assignment-Linux$ nano large.sh
chandan@iacsd: ~/assignment-Linux$ chmod u+x large.sh
chandan@iacsd: ~/assignment-Linux$ ./large.sh
Script to find large no bet two:
enter 1st no: 10
enter 2st no: 20
no2 is greater
chandan@iacsd: ~/assignment-Linux$ ./large.sh
Script to find large no bet two:
enter 1st no: 20
enter 2st no: 10
no1 is greater
chandan@iacsd: ~/assignment-Linux$ ./large.sh
Script to find large no bet two:
enter 1st no: 30
enter 2st no: 30
num 1 is equal to no 2
chandan@iacsd: ~/assignment-Linux$
```

2. Write a Shell Script to find maximum between three numbers.

```
chandan@iacsd: ~/...
GNU nano 6.2 large_in_3.sh
echo 'Script to find large no bet three: '
read -p 'enter 1st no: ' no1
read -p 'enter 2st no: ' no2
read -p 'enter 3rd no: ' no3

if [ $no1 -gt $no2 ] && [ $no1 -gt $no3 ]
then
    echo 'no1 is greater'
elif [ $no2 -gt $no1 ] && [ $no2 -gt $no3 ]
then
    echo 'no2 is greater'
elif [ $no3 -gt $no1 ] && [ $no3 -gt $no2 ]
then
    echo 'no3 is greater'
else
    echo 'num 1 ,no 2 and no 3 are equal'
fi

^G Help      ^O Write Ou^W Where Is^K Cut
^X Exit      ^R Read Fil^_ Replace ^U Paste
```

```
chandan@iacsd: ~/assignment...
chandan@iacsd:~/assignment-Linux$ nano large_in_3.sh
chandan@iacsd:~/assignment-Linux$ ./large_in_3.sh
Script to find large no bet three:
enter 1st no: 10
enter 2st no: 20
enter 3rd no: 30
no3 is greater
chandan@iacsd:~/assignment-Linux$ ./large_in_3.sh
Script to find large no bet three:
enter 1st no: 10
enter 2st no: 20
enter 3rd no: 10
no2 is greater
chandan@iacsd:~/assignment-Linux$ ./large_in_3.sh
Script to find large no bet three:
enter 1st no: 30
enter 2st no: 20
enter 3rd no: 10
no1 is greater
chandan@iacsd:~/assignment-Linux$ ./large_in_3.sh
Script to find large no bet three:
enter 1st no: 10
enter 2st no: 10
enter 3rd no: 10
num 1 ,no 2 and no 3 are equal
chandan@iacsd:~/assignment-Linux$
```

3. Write a Shell Script to check whether a number is negative, positive or zero.

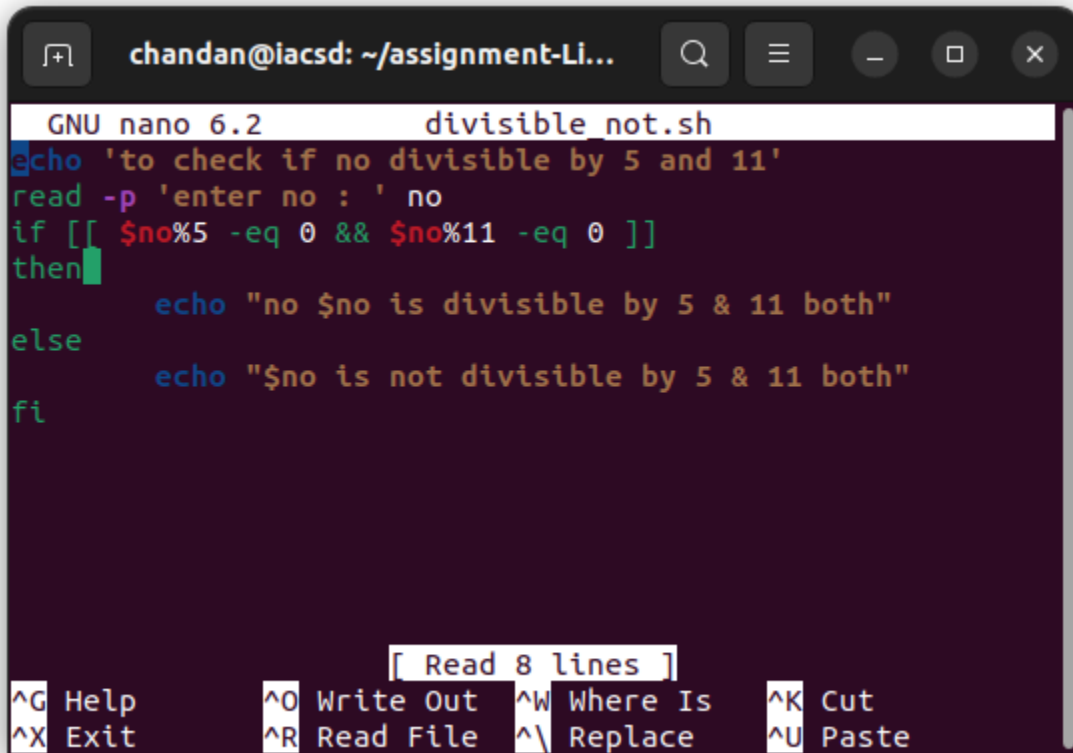
```
chandan@iacsd: ~/assignment-Linux
chandan@iacsd:~/assignment-Linux$ nano identify_no.sh
chandan@iacsd:~/assignment-Linux$ chmod u+x identify_no.sh
chandan@iacsd:~/assignment-Linux$ ./identify_no.sh
script to finding negative positive no
enter no: 10
no is positive
chandan@iacsd:~/assignment-Linux$ ./identify_no.sh
script to finding negative positive no
enter no: -10
no is negative
chandan@iacsd:~/assignment-Linux$ ./identify_no.sh
script to finding negative positive no
enter no: 0
no is zero
chandan@iacsd:~/assignment-Linux$
```

```
GNU nano 6.2 identify_no.sh *
echo 'Script to find if no is positive negative or zero '
read -p 'enter no: ' no1

if [ $no1 -gt 0 ]
then
    echo 'no is positive'
elif [ 0 -gt $no1 ]
then
    echo 'no is negative'
else
    echo 'no is zero'
fi

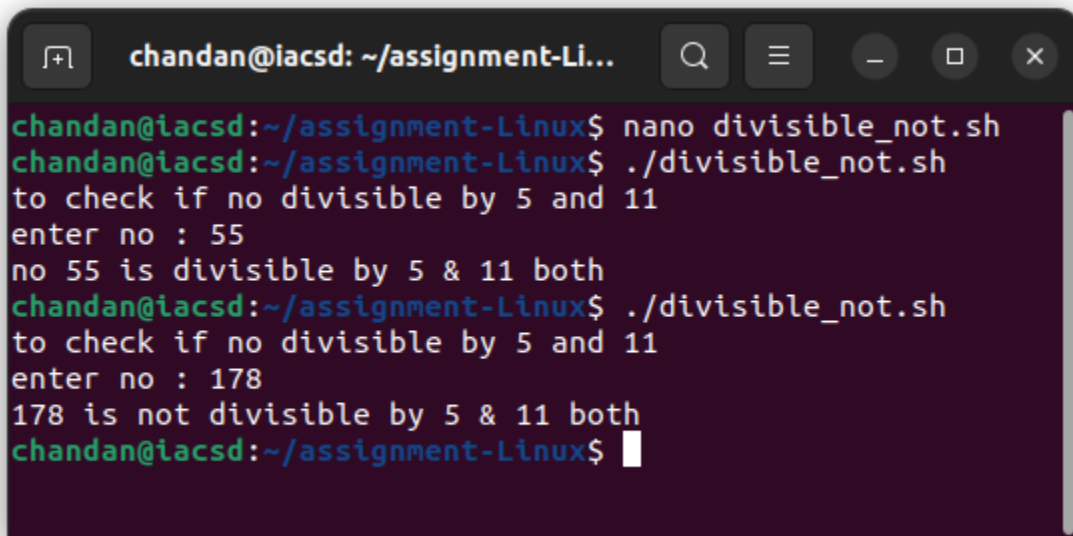
^G Help      ^O Write Out  ^W Where Is   ^K Cut
^X Exit      ^R Read File  ^\ Replace    ^U Paste
```

4. Write a Shell Script to check whether a number is divisible by 5 and 11 or not.



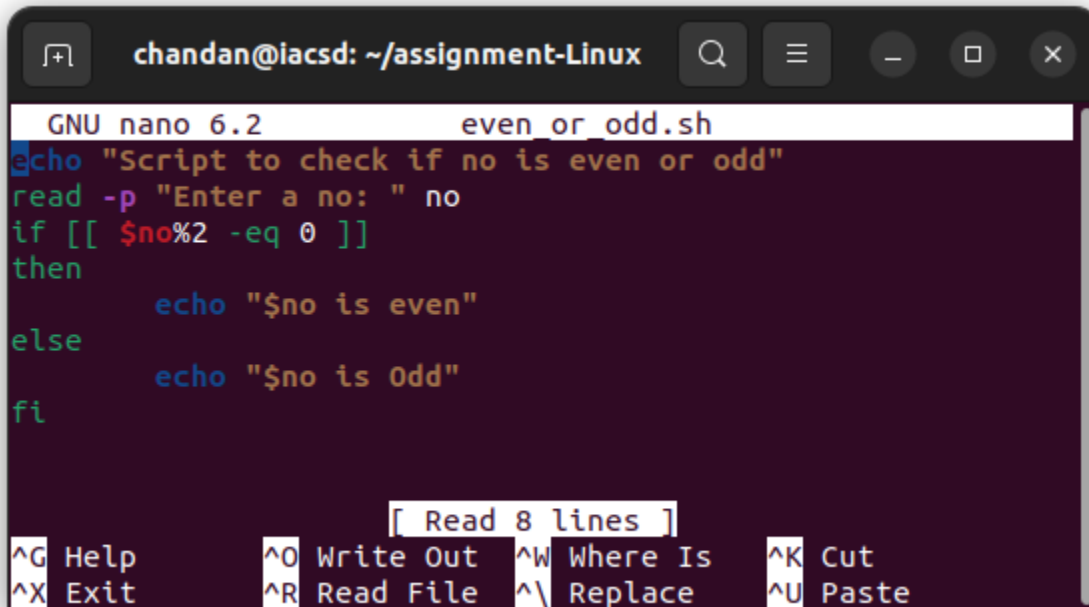
```
chandan@iacsd: ~/assignment-Li...
GNU nano 6.2 divisible_not.sh
echo 'to check if no divisible by 5 and 11'
read -p 'enter no : ' no
if [[ $no%5 -eq 0 && $no%11 -eq 0 ]]
then
    echo "no $no is divisible by 5 & 11 both"
else
    echo "$no is not divisible by 5 & 11 both"
fi

[ Read 8 lines ]
^G Help      ^O Write Out ^W Where Is  ^K Cut
^X Exit      ^R Read File ^\ Replace   ^U Paste
```



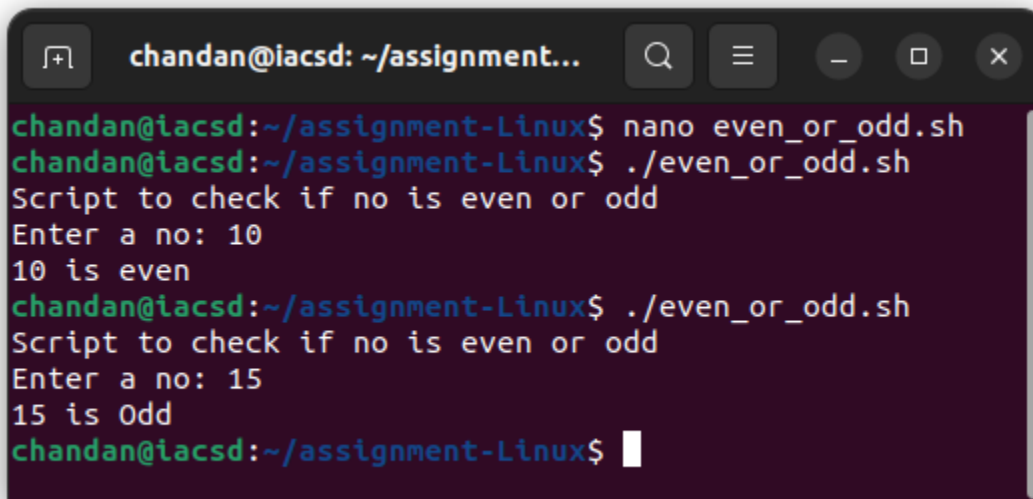
```
chandan@iacsd:~/assignment-Linux$ nano divisible_not.sh
chandan@iacsd:~/assignment-Linux$ ./divisible_not.sh
to check if no divisible by 5 and 11
enter no : 55
no 55 is divisible by 5 & 11 both
chandan@iacsd:~/assignment-Linux$ ./divisible_not.sh
to check if no divisible by 5 and 11
enter no : 178
178 is not divisible by 5 & 11 both
chandan@iacsd:~/assignment-Linux$
```

5. Write a Shell Script to check whether a number is even or odd.



```
chandan@iacsd: ~/assignment-Linux
GNU nano 6.2 even_or_odd.sh
echo "Script to check if no is even or odd"
read -p "Enter a no: " no
if [[ $no%2 -eq 0 ]]
then
    echo "$no is even"
else
    echo "$no is Odd"
fi

[ Read 8 lines ]
^G Help      ^O Write Out ^W Where Is  ^K Cut
^X Exit      ^R Read File ^\ Replace   ^U Paste
```



```
chandan@iacsd: ~/assignment...
chandan@iacsd:~/assignment-Linux$ nano even_or_odd.sh
chandan@iacsd:~/assignment-Linux$ ./even_or_odd.sh
Script to check if no is even or odd
Enter a no: 10
10 is even
chandan@iacsd:~/assignment-Linux$ ./even_or_odd.sh
Script to check if no is even or odd
Enter a no: 15
15 is Odd
chandan@iacsd:~/assignment-Linux$
```

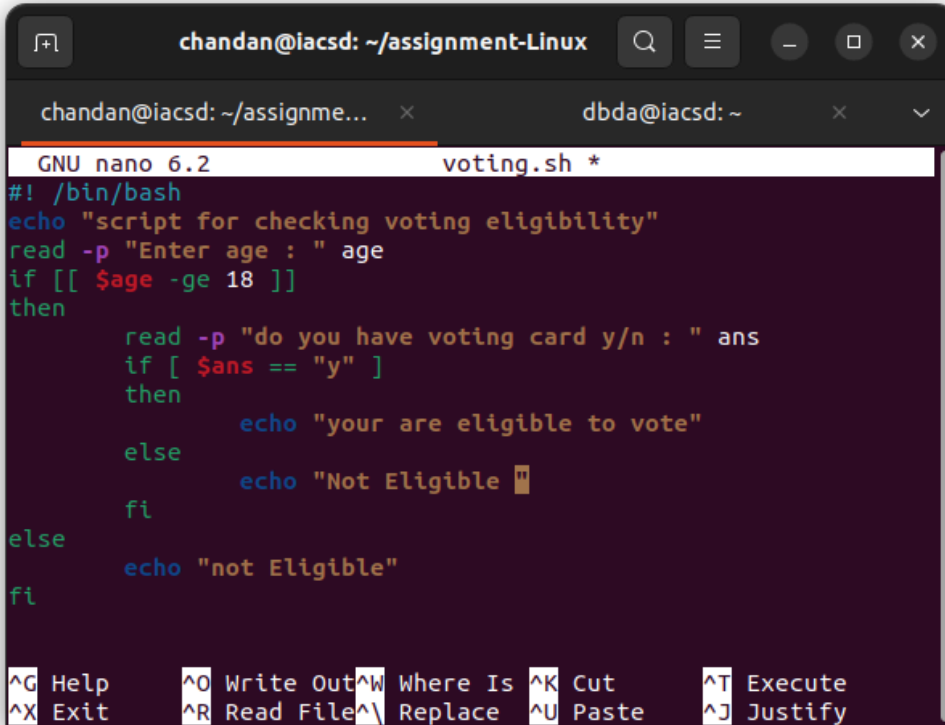
6. Write a Shell Script to check whether a year is leap year or not.

```
chandan@iacsd: ~/assignment-Linux
chandan@iacsd: ~/assign... x dbda@iacsd: ~ x v
chandan@iacsd:~/assignment-Linux$ nano leap_year.sh
chandan@iacsd:~/assignment-Linux$ chmod u+x leap_year.sh
chandan@iacsd:~/assignment-Linux$ ./leap_year.sh
script to check leap year
Enter year yyyy : 2024
2024 is a leap Year
chandan@iacsd:~/assignment-Linux$ ./leap_year.sh
script to check leap year
Enter year yyyy : 1900
1900 is not leap year
chandan@iacsd:~/assignment-Linux$
```

```
chandan@iacsd: ~/assignment-Linux
chandan@iacsd: ~/assignment-Linux x dbda@iacsd: ~ x v
GNU nano 6.2 leap_year.sh
#!/bin/bash
echo "script to check leap year"
read -p "Enter year yyyy : " year
if [[ $year%4 -eq 0 ]]
then
    if [[ $year%100 -eq 0 && $year%400 -ne 0 ]]
    then
        echo "$year is not leap year"
    else
        echo "$year is a leap Year"
    fi
else
    echo "$year not leap year"
fi

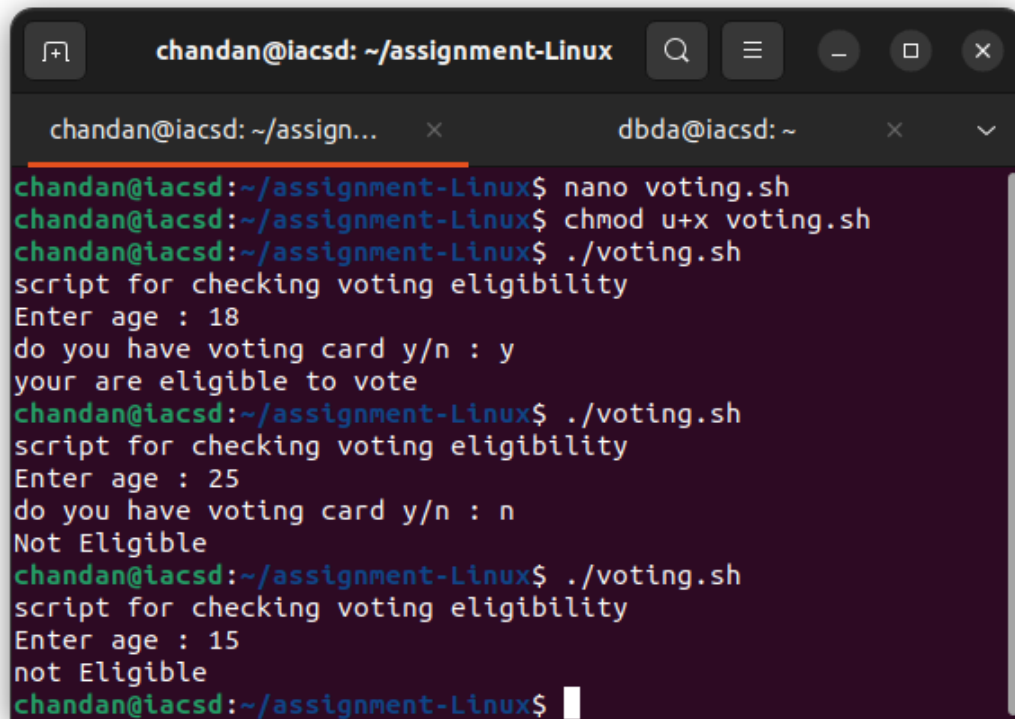
[ Read 15 lines ]
^G Help      ^O Write Out  ^W Where Is   ^K Cut        ^T Execute
^X Exit      ^R Read File  ^\ Replace    ^U Paste      ^J Justify
```

7. Write shell script to check eligibility of candidate for voter id card



```
chandan@iacsd: ~/assignment-Linux
GNU nano 6.2 voting.sh *
#!/bin/bash
echo "script for checking voting eligibility"
read -p "Enter age : " age
if [[ $age -ge 18 ]]
then
    read -p "do you have voting card y/n : " ans
    if [ $ans == "y" ]
    then
        echo "your are eligible to vote"
    else
        echo "Not Eligible"
    fi
else
    echo "not Eligible"
fi

^G Help      ^O Write Out ^W Where Is  ^K Cut      ^T Execute
^X Exit      ^R Read File ^\ Replace   ^U Paste    ^J Justify
```

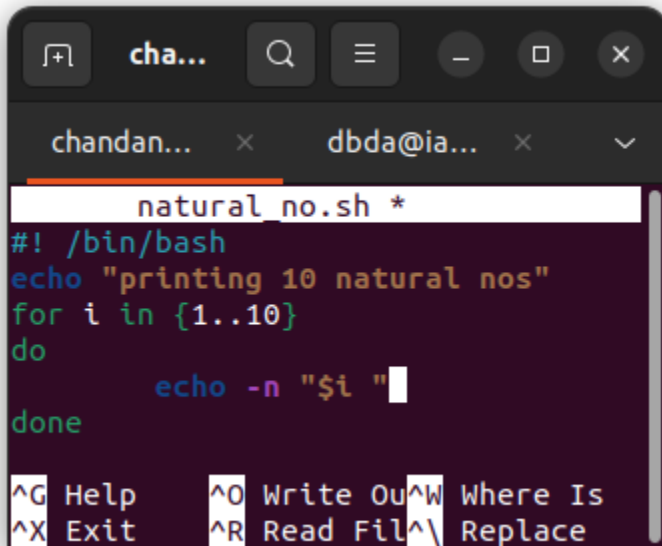


```
chandan@iacsd: ~/assignment-Linux
chandan@iacsd: ~/assignment-Linux$ nano voting.sh
chandan@iacsd: ~/assignment-Linux$ chmod u+x voting.sh
chandan@iacsd: ~/assignment-Linux$ ./voting.sh
script for checking voting eligibility
Enter age : 18
do you have voting card y/n : y
your are eligible to vote
chandan@iacsd: ~/assignment-Linux$ ./voting.sh
script for checking voting eligibility
Enter age : 25
do you have voting card y/n : n
Not Eligible
chandan@iacsd: ~/assignment-Linux$ ./voting.sh
script for checking voting eligibility
Enter age : 15
not Eligible
chandan@iacsd: ~/assignment-Linux$
```

8. Shell Script to display the first 10 natural numbers.

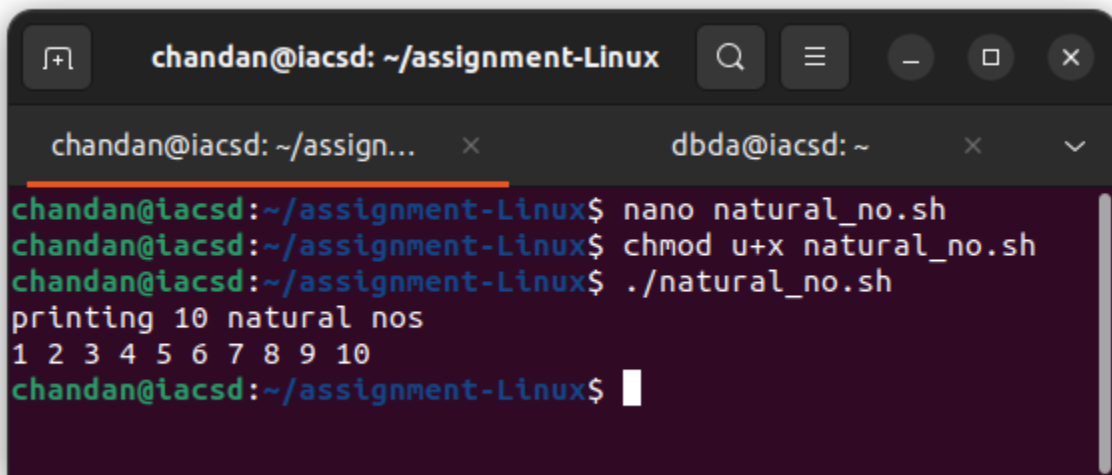
Expected Output :

1 2 3 4 5 6 7 8 9 10



```
natural_no.sh *
#!/bin/bash
echo "printing 10 natural nos"
for i in {1..10}
do
    echo -n "$i "
done
```

^G Help ^O Write Ou^W Where Is
^X Exit ^R Read Fil^_ Replace



```
chandan@iacsd: ~/assignment-Linux
chandan@iacsd:~/assignment-Linux$ nano natural_no.sh
chandan@iacsd:~/assignment-Linux$ chmod u+x natural_no.sh
chandan@iacsd:~/assignment-Linux$ ./natural_no.sh
printing 10 natural nos
1 2 3 4 5 6 7 8 9 10
chandan@iacsd:~/assignment-Linux$
```

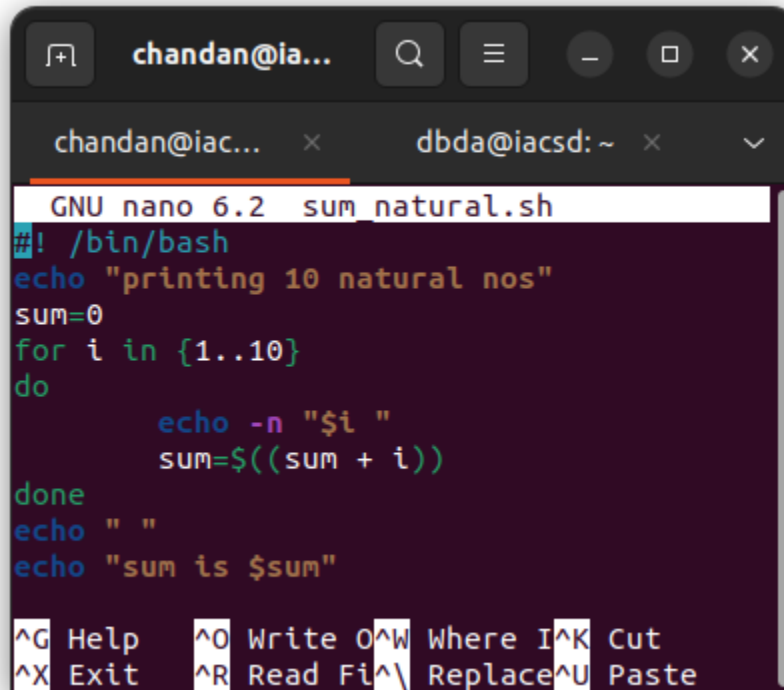

9. Shell Script to compute the sum of the first 10 natural numbers.

Expected Output :

The first 10 natural number is :

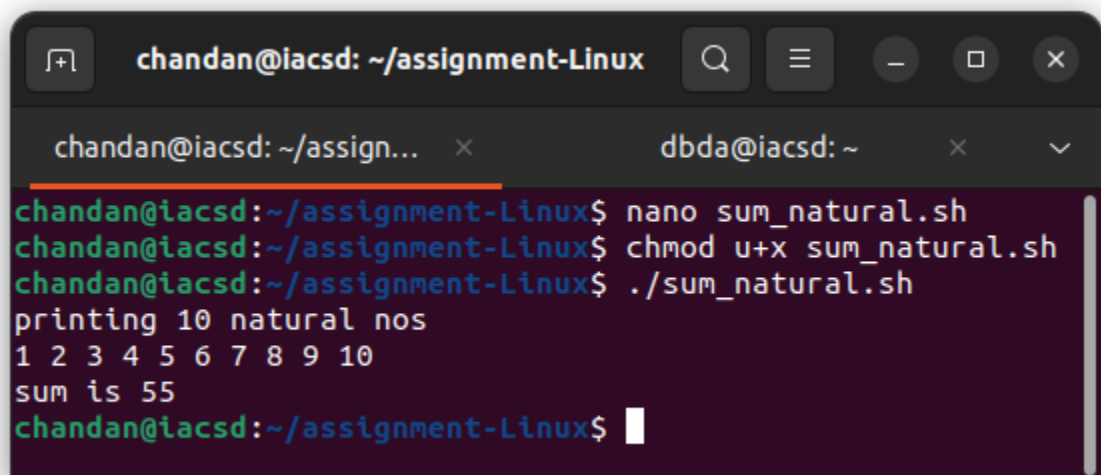
1 2 3 4 5 6 7 8 9 10

The Sum is : 55



```
chandan@ia... dbda@iacsd: ~
GNU nano 6.2 sum_natural.sh
#!/bin/bash
echo "printing 10 natural nos"
sum=0
for i in {1..10}
do
    echo -n "$i "
    sum=$((sum + i))
done
echo " "
echo "sum is $sum"

^G Help      ^O Write O ^W Where I ^K Cut
^X Exit      ^R Read Fi ^\ Replace ^U Paste
```



```
chandan@iacsd: ~/assignment-Linux
chandan@iacsd:~/assignment-Linux$ nano sum_natural.sh
chandan@iacsd:~/assignment-Linux$ chmod u+x sum_natural.sh
chandan@iacsd:~/assignment-Linux$ ./sum_natural.sh
printing 10 natural nos
1 2 3 4 5 6 7 8 9 10
sum is 55
chandan@iacsd:~/assignment-Linux$
```

10. Shell Script to display n terms of natural numbers and their sum.

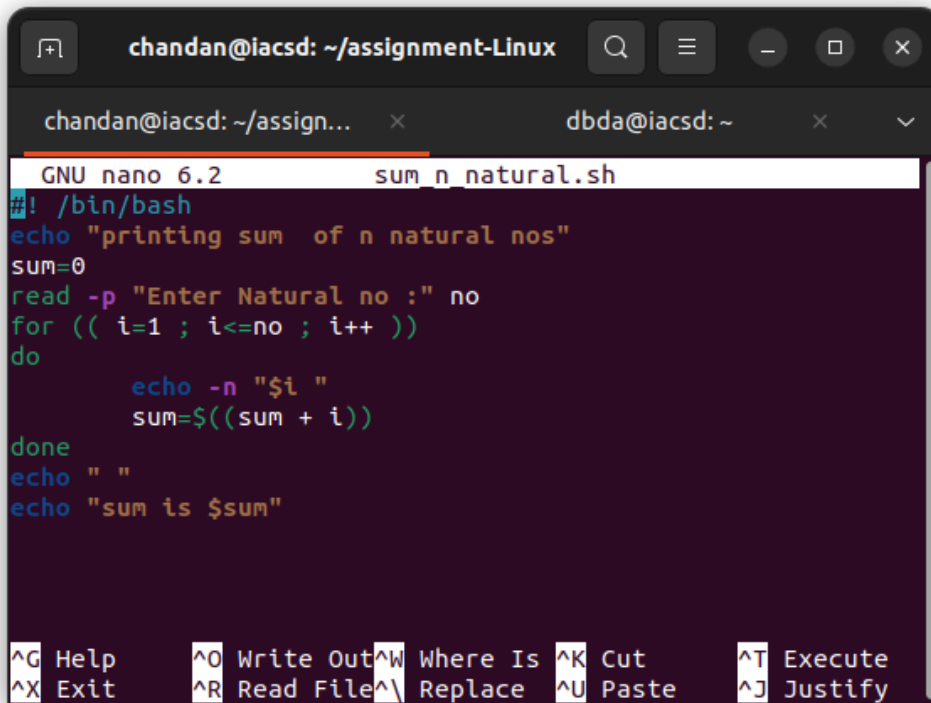
Test Data : 7

Expected Output :

The first 7 natural number is :

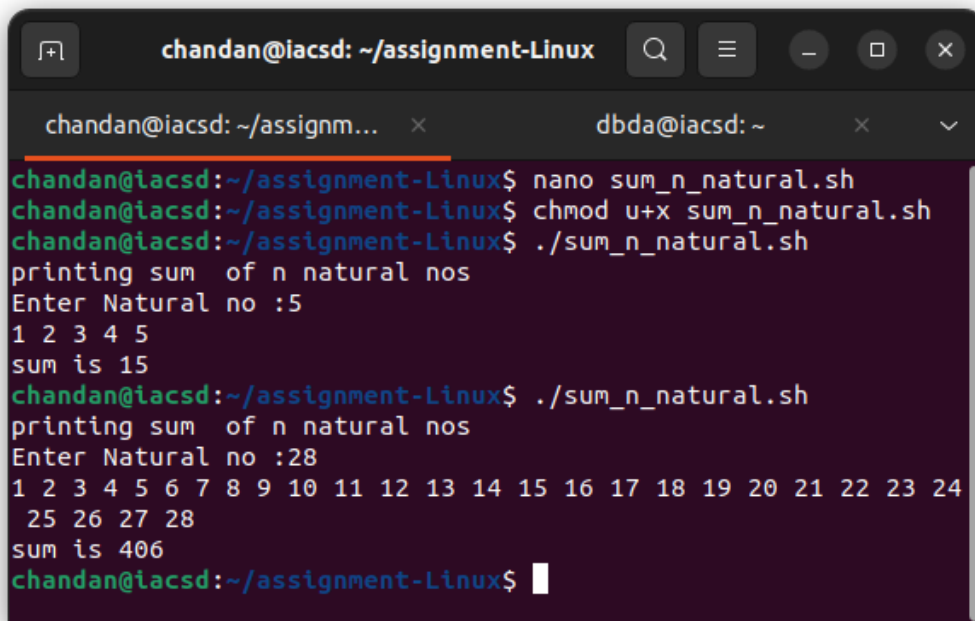
1 2 3 4 5 6 7

The Sum of Natural Number upto 7 terms : 28



```
chandan@iacsd: ~/assignment-Linux
GNU nano 6.2 sum_n_natural.sh
#!/bin/bash
echo "printing sum of n natural nos"
sum=0
read -p "Enter Natural no : " no
for (( i=1 ; i<=no ; i++ ))
do
    echo -n "$i "
    sum=$((sum + i))
done
echo " "
echo "sum is $sum"

^G Help      ^O Write Out ^W Where Is  ^K Cut      ^T Execute
^X Exit      ^R Read File ^\ Replace  ^U Paste    ^J Justify
```



```
chandan@iacsd: ~/assignment-Linux
chandan@iacsd:~/assignment-Linux$ nano sum_n_natural.sh
chandan@iacsd:~/assignment-Linux$ chmod u+x sum_n_natural.sh
chandan@iacsd:~/assignment-Linux$ ./sum_n_natural.sh
printing sum of n natural nos
Enter Natural no :5
1 2 3 4 5
sum is 15
chandan@iacsd:~/assignment-Linux$ ./sum_n_natural.sh
printing sum of n natural nos
Enter Natural no :28
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
sum is 406
chandan@iacsd:~/assignment-Linux$
```

11. Shell Script to read 10 numbers from the keyboard and find their sum and average.

Test Data :

Input the 10 numbers :

Number-1 :2

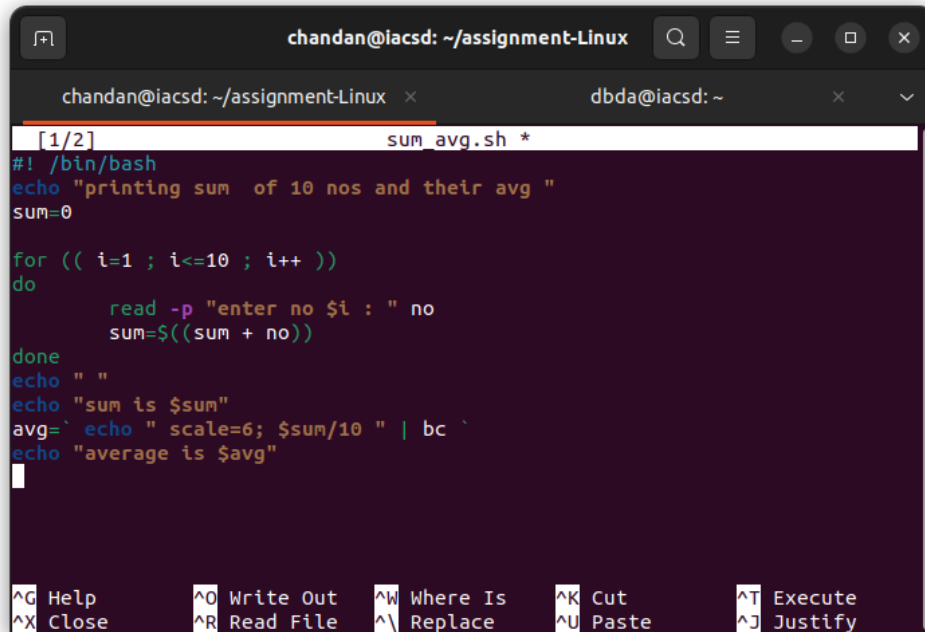
...

Number-10 :2

Expected Output :

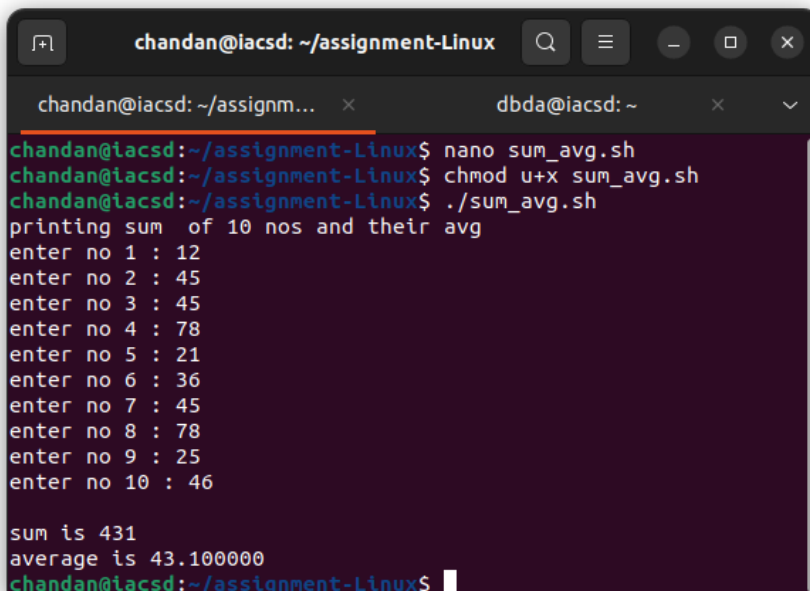
The sum of 10 no is : 55

The Average is : 5.500000



```
chandan@iacsd: ~/assignment-Linux
[1/2] sum_avg.sh *
#!/bin/bash
echo "printing sum of 10 nos and their avg "
sum=0

for (( i=1 ; i<=10 ; i++ ))
do
    read -p "enter no $i : " no
    sum=$((sum + no))
done
echo " "
echo "sum is $sum"
avg=`echo " scale=6; $sum/10 " | bc `
echo "average is $avg"
```



```
chandan@iacsd: ~/assignment-Linux$ nano sum_avg.sh
chandan@iacsd: ~/assignment-Linux$ chmod u+x sum_avg.sh
chandan@iacsd: ~/assignment-Linux$ ./sum_avg.sh
printing sum of 10 nos and their avg
enter no 1 : 12
enter no 2 : 45
enter no 3 : 45
enter no 4 : 78
enter no 5 : 21
enter no 6 : 36
enter no 7 : 45
enter no 8 : 78
enter no 9 : 25
enter no 10 : 46

sum is 431
average is 43.100000
chandan@iacsd: ~/assignment-Linux$
```

12. Shell Script to display the cube of the number up to an integer.

Test Data :

Input number of terms : 5

Expected Output :

Number is : 1 and cube of the 1 is :1

Number is : 2 and cube of the 2 is :8

Number is : 3 and cube of the 3 is :27

Number is : 4 and cube of the 4 is :64

Number is : 5 and cube of the 5 is :125

```
chandan@iacsd: ~/assignment-...
GNU nano 6.2 cube.sh *
echo "printing cube of nos "
sum=0
read -p "Enter no of terms: " n
for (( i=1 ; i<=n ; i++ ))
do
    echo "Number is : $i its cube is : $((i*i*i))"
done
```

```
chandan@iacsd: ~/assignment-Linux$ nano cube.sh
chandan@iacsd: ~/assignment-Linux$ chmod u+x cube.sh
chandan@iacsd: ~/assignment-Linux$ ./cube.sh
printing cube of nos
Enter no of terms: 5
Number is : 1 its cube is : 1
Number is : 2 its cube is : 8
Number is : 3 its cube is : 27
Number is : 4 its cube is : 64
Number is : 5 its cube is : 125
chandan@iacsd: ~/assignment-Linux$
```

13. Shell Script to display the multiplication table for a given integer.

Test Data :

Input the number (Table to be calculated) : 15

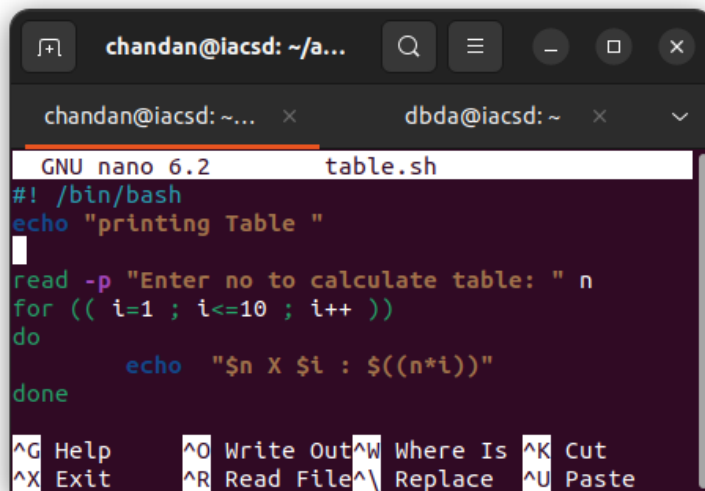
Expected Output :

15 X 1 = 15

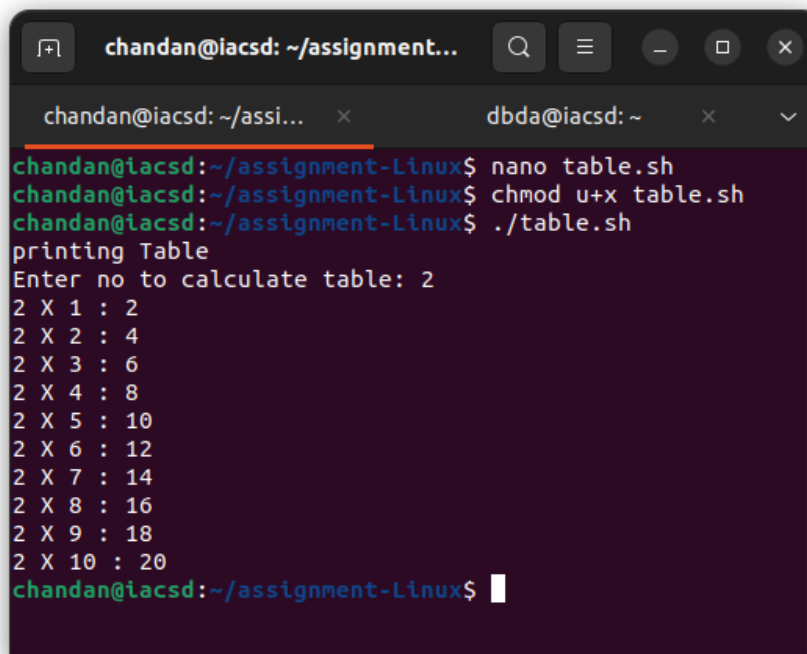
...

...

15 X 10 = 150



```
chandan@iacsd: ~/a...
chandan@iacsd: ~/... x dbda@iacsd: ~ x
GNU nano 6.2 table.sh
#!/bin/bash
echo "printing Table "
read -p "Enter no to calculate table: " n
for (( i=1 ; i<=10 ; i++ ))
do
    echo "$n X $i : $((n*i))"
done
^G Help      ^O Write Out ^W Where Is  ^K Cut
^X Exit      ^R Read File ^\ Replace  ^U Paste
```



```
chandan@iacsd: ~/assignment...
chandan@iacsd: ~/assi... x dbda@iacsd: ~ x
chandan@iacsd:~/assignment-Linux$ nano table.sh
chandan@iacsd:~/assignment-Linux$ chmod u+x table.sh
chandan@iacsd:~/assignment-Linux$ ./table.sh
printing Table
Enter no to calculate table: 2
2 X 1 : 2
2 X 2 : 4
2 X 3 : 6
2 X 4 : 8
2 X 5 : 10
2 X 6 : 12
2 X 7 : 14
2 X 8 : 16
2 X 9 : 18
2 X 10 : 20
chandan@iacsd:~/assignment-Linux$
```

14. Shell Script to display the multiplier table vertically from 1 to n.

Test Data :

Input upto the table number starting from 1 : 8

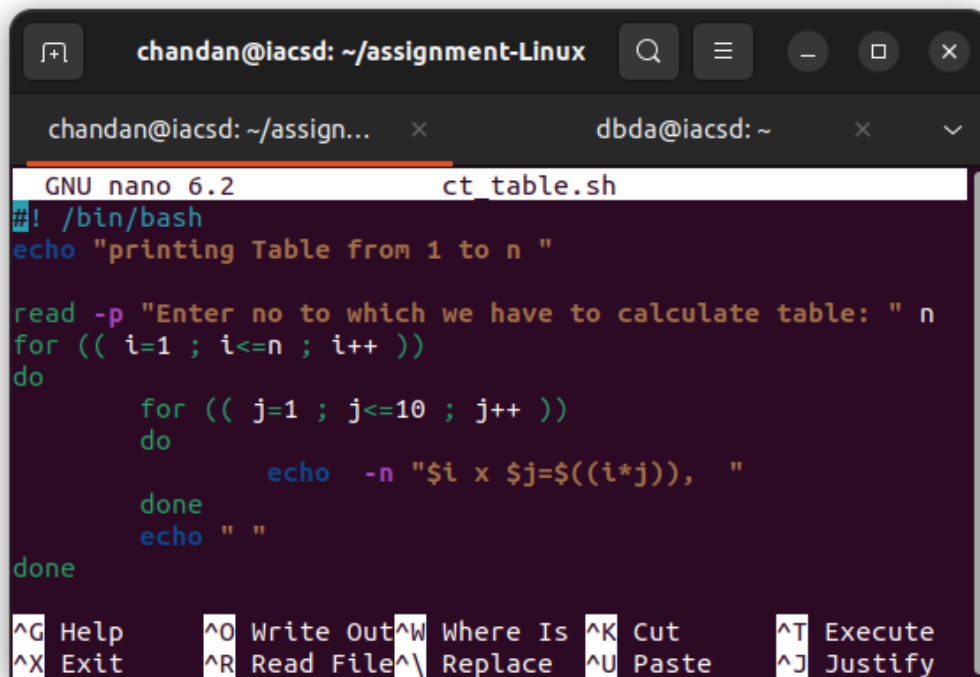
Expected Output :

Multiplication table from 1 to 8

1x1 = 1, 2x1 = 2, 3x1 = 3, 4x1 = 4, 5x1 = 5, 6x1 = 6, 7x1 = 7, 8x1 = 8

...

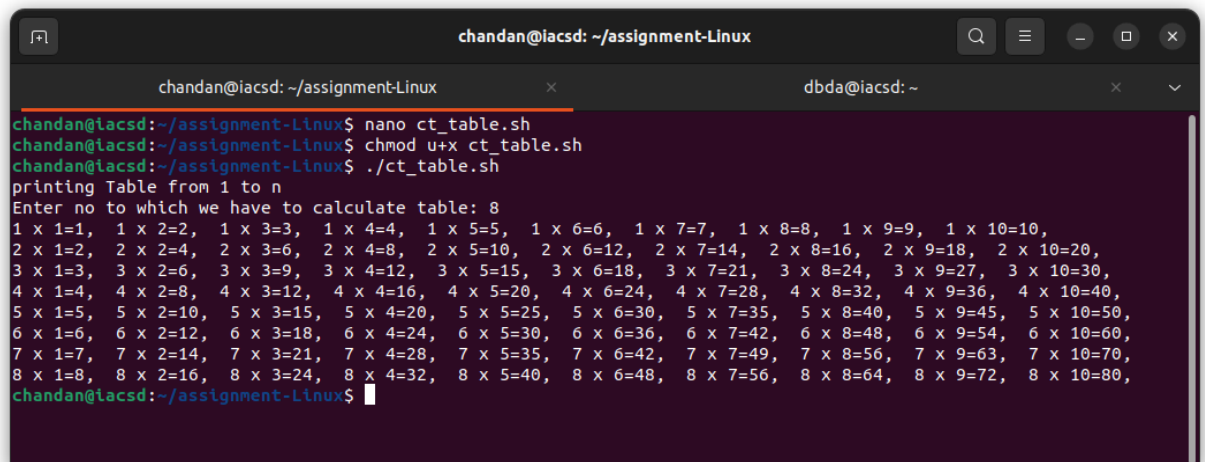
1x10 = 10, 2x10 = 20, 3x10 = 30, 4x10 = 40, 5x10 = 50, 6x10 = 60, 7x10 = 70, 8x10 = 80



```
chandan@iacsd: ~/assignment-Linux
GNU nano 6.2 ct_table.sh
#!/bin/bash
echo "printing Table from 1 to n "

read -p "Enter no to which we have to calculate table: " n
for (( i=1 ; i<=n ; i++ ))
do
    for (( j=1 ; j<=10 ; j++ ))
    do
        echo -n "$i x $j=$((i*j)), "
    done
    echo " "
done

^G Help      ^O Write Out ^W Where Is  ^K Cut       ^T Execute
^X Exit      ^R Read File ^\ Replace   ^U Paste     ^J Justify
```



```
chandan@iacsd: ~/assignment-Linux
chandan@iacsd:~/assignment-Linux$ nano ct_table.sh
chandan@iacsd:~/assignment-Linux$ chmod u+x ct_table.sh
chandan@iacsd:~/assignment-Linux$ ./ct_table.sh
printing Table from 1 to n
Enter no to which we have to calculate table: 8
1 x 1=1, 1 x 2=2, 1 x 3=3, 1 x 4=4, 1 x 5=5, 1 x 6=6, 1 x 7=7, 1 x 8=8, 1 x 9=9, 1 x 10=10,
2 x 1=2, 2 x 2=4, 2 x 3=6, 2 x 4=8, 2 x 5=10, 2 x 6=12, 2 x 7=14, 2 x 8=16, 2 x 9=18, 2 x 10=20,
3 x 1=3, 3 x 2=6, 3 x 3=9, 3 x 4=12, 3 x 5=15, 3 x 6=18, 3 x 7=21, 3 x 8=24, 3 x 9=27, 3 x 10=30,
4 x 1=4, 4 x 2=8, 4 x 3=12, 4 x 4=16, 4 x 5=20, 4 x 6=24, 4 x 7=28, 4 x 8=32, 4 x 9=36, 4 x 10=40,
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,
6 x 1=6, 6 x 2=12, 6 x 3=18, 6 x 4=24, 6 x 5=30, 6 x 6=36, 6 x 7=42, 6 x 8=48, 6 x 9=54, 6 x 10=60,
7 x 1=7, 7 x 2=14, 7 x 3=21, 7 x 4=28, 7 x 5=35, 7 x 6=42, 7 x 7=49, 7 x 8=56, 7 x 9=63, 7 x 10=70,
8 x 1=8, 8 x 2=16, 8 x 3=24, 8 x 4=32, 8 x 5=40, 8 x 6=48, 8 x 7=56, 8 x 8=64, 8 x 9=72, 8 x 10=80,
chandan@iacsd:~/assignment-Linux$
```

15. Shell Script to display the n terms of odd natural numbers and their sum.

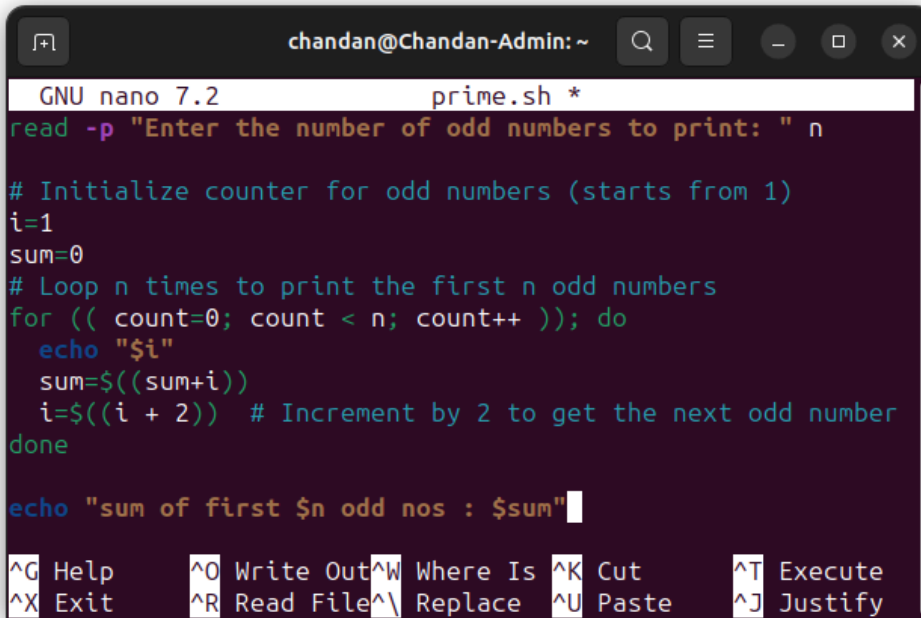
Test Data

Input number of terms : 10

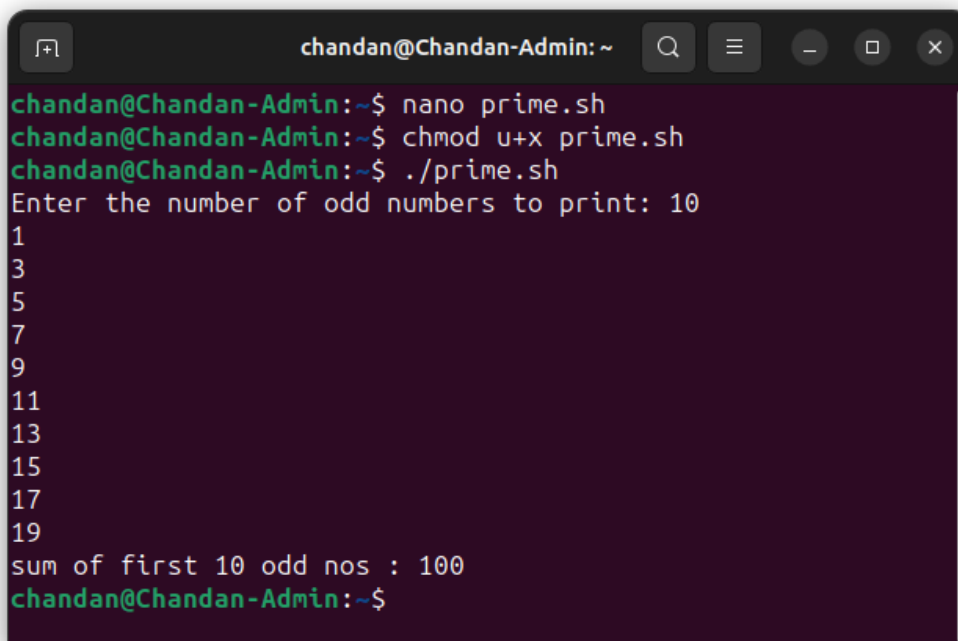
Expected Output :

The odd numbers are :1 3 5 7 9 11 13 15 17 19

The Sum of odd Natural Number upto 10 terms : 100



```
chandan@Chandan-Admin: ~  
GNU nano 7.2 prime.sh *  
read -p "Enter the number of odd numbers to print: " n  
  
# Initialize counter for odd numbers (starts from 1)  
i=1  
sum=0  
# Loop n times to print the first n odd numbers  
for (( count=0; count < n; count++ )); do  
    echo "$i"  
    sum=$((sum+i))  
    i=$((i + 2)) # Increment by 2 to get the next odd number  
done  
  
echo "sum of first $n odd nos : $sum"
```



```
chandan@Chandan-Admin:~$ nano prime.sh  
chandan@Chandan-Admin:~$ chmod u+x prime.sh  
chandan@Chandan-Admin:~$ ./prime.sh  
Enter the number of odd numbers to print: 10  
1  
3  
5  
7  
9  
11  
13  
15  
17  
19  
sum of first 10 odd nos : 100  
chandan@Chandan-Admin:~$
```