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Linux assignment 03

Write a Shell Script to find maximum between two numbers.

```
#! /bin/bash
echo "enter number one: "
read n1
echo "enter number two: "
read n2

echo "numbers are $n1 $n2"

#to find maximum between two number

if [ $n1 -gt $n2 ]
then
echo "$n1 is maximum"
else
echo "$n2 is maximum"
fi
echo "END OF SCRIPT"
```

```
dbda@iacsd:~$ ./1.sh
enter number one:
10
enter number two:
5
numbers are 10 5
10 is maximum
END OF SCRIPT
```

Write a Shell Script to find maximum between three numbers.

```
#! /bin/bash
echo "enter number one: "
read n1
echo "enter number two: "
read n2
echo "enter number theree: "
read n3
echo "numbers are $n1 $n2 $n3"

#to find maximum between three numbers

if [ $n1 -gt $n2 ] && [ $n1 -gt $n3 ]
then
echo "$n1 is maximum"

elif [ $n2 -gt $n1 ] && [ $n2 -gt $n3 ]
then
echo "$n2 is maximum"

else
                                    [ Read 25
```

```
dbda@iacsd:~$ ./1.sh
enter number one:
10
enter number two:
12
enter number theree:
14
numbers are 10 12 14
14 is maximum
```

```
#! /bin/bash
echo "enter number: "
read n1

#to find maximum between three numbers

if [ $n1 -gt 0 ]
then
echo "$n1 is positive"

elif [ $n1 -lt 0 ]
then
echo "$n1 is negative"

else
echo "$n1 is zero"
fi
echo "END OF SCRIPT"
```

```
dbda@iacsd:~$ nano 1.sh
dbda@iacsd:~$ ./1.sh
enter number:
-1
-1 is negative
END OF SCRIPT
dbda@iacsd:~$ ./1.sh
enter number:
1
1 is positive
END OF SCRIPT
dbda@iacsd:~$ ./1.sh
enter number:
0
0 is zero
END OF SCRIPT
```

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

```
#! /bin/bash
echo "Enter Number : "
read n1

sum=`expr $n1 % 5`
sum1=`expr $n1 % 11`

if [ $sum -eq 0 ]
then
echo "$n1 is divisble by 5"

elif [ $sum1 -eq 0 ]
then
echo "$n1 is divisible by 11"

else
echo "not divisible"

fi
echo "END OF SCRIPT"
```

```
dbda@iacsd:~$ ./2.sh
Enter Number :
25
25 is divisble by 5
END OF SCRIPT
dbda@iacsd:~$ ./2.sh
Enter Number :
66
66 is divisible by 11
END OF SCRIPT
dbda@iacsd:~$ ./2.sh
Enter Number :
13
not divisible
END OF SCRIPT
```

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

```
#! /bin/bash
echo "Enter Number : "
read n1

sum=`expr $n1 %  2`


if [ $sum -eq 0 ]
then
echo "$n1 is even"



else
echo "$n1 is odd"

fi
echo "END OF SCRIPT"
```

```
dbda@iacsd:~$ ./2.sh
Enter Number :
5
5 is odd
END OF SCRIPT
dbda@iacsd:~$ ./2.sh
Enter Number :
4
4 is even
END OF SCRIPT
```

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

```
#! /bin/bash
echo "Enter Year : "
read n1

sum=`expr $n1 %  4`
sum1=`expr $n1 % 400`
sum2=`expr $n1 % 100`


if [ $sum -eq 0 ] && [ $sum2 -ne 0 ] || [ $sum1 -eq 0 ]
then
echo "$n1 is leap year"



else
echo "$n1 is not a leap year"

fi
echo "END OF SCRIPT"
```

```
dbda@iacsd:~$ ./2.sh
Enter Year :
2024
2024 is leap year
END OF SCRIPT
dbda@iacsd:~$ 2023
2023: command not found
dbda@iacsd:~$ ./2.sh
Enter Year :
2023
2023 is not a leap year
END OF SCRIPT
```

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

```
#! /bin/bash
echo "enter your age: "
read n

if [ $n -ge 18 ]
then
echo "eligible"

else
echo "not eligible"
 fi
echo "END OF SCRIPT"
```

```
dbda@iacsd:~$ ./3.sh
enter your age:
18
eligible
END OF SCRIPT
dbda@iacsd:~$ 17
17: command not found
dbda@iacsd:~$ ./3.sh
enter your age:
17
not eligible
END OF SCRIPT
```

Shell Script to display the first 10 natural numbers.

Expected Output :

1 2 3 4 5 6 7 8 9 10

```
GNU nano 6.2
#! /bin/bash
for i in {1..10}
do
echo $i
done
```

```
dbda@iacsd:~$ ./4.sh
1
2
3
4
5
6
7
8
9
10
```

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

```
#! /bin/bash
num=0

for i in {1..10}
do
echo "number - $i : " $i

num=`expr $num + $i`
done
avg=` echo "scale=3; $num / 10" | bc `

echo "sum is : $num"
echo "average is : $avg"
```

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

```
#! /bin/bash
echo "enter number"

read n
sum=0
for (( i=1 ; i<=$n ; i++ ))

do
echo $i
sum=`expr $sum + $i`

done
echo "sum of first $n is  $sum"
```

```
dbda@iacsd:~$ ./5.sh
enter number
7
1
2
3
4
5
6
7
sum of first 7 is  28
```

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

```
#! /bin/bash
num=0

for i in {1..10}
do
echo "number - $i : " $i

num=`expr $num + $i`
done
avg=` echo "scale=3; $num / 10" | bc `

echo "sum is : $num"
echo "average is : $avg"
```

```
dbda@iacsd:~$ ./6.sh
number - 1 :  1
number - 2 :  2
number - 3 :  3
number - 4 :  4
number - 5 :  5
number - 6 :  6
number - 7 :  7
number - 8 :  8
number - 9 :  9
number - 10 :  10
sum is : 55
average is : 5.500
```

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

```
#~! /bin/bash
echo "enter terms"
read n


for(( i=1 ; i<=$n ; i++ ))
do


cube=` echo "$i*$i*$i" | bc`


echo "NUmber is : $i cube of $i is : $cube"
done
```

```
dbda@iacsd:~$ ./7.sh
enter terms
5
NUmber is : 1 cube of 1 is : 1
NUmber is : 2 cube of 2 is : 8
NUmber is : 3 cube of 3 is : 27
NUmber is : 4 cube of 4 is : 64
NUmber is : 5 cube of 5 is : 125
```

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

```
  GNU nano 6.2
#~! /bin/bash
echo "enter terms"
read n


for(( i=1 ; i<=$n ; i++ ))
do


mul=` echo "$n*$i" | bc`


echo "$n x $i = $mul "
done
```

```
dbda@iacsd:~$ nano 7.sh
dbda@iacsd:~$ ./7.sh
enter terms
15
15 x 1 = 15
15 x 2 = 30
15 x 3 = 45
15 x 4 = 60
15 x 5 = 75
15 x 6 = 90
15 x 7 = 105
15 x 8 = 120
15 x 9 = 135
15 x 10 = 150
15 x 11 = 165
15 x 12 = 180
15 x 13 = 195
15 x 14 = 210
15 x 15 = 225
```

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

```
  GNU nano 6.2
#! /bin/bash
echo -n "enter number: "
read n
for i in {1..10}
do
for (( j=1 ; j<=$n ; j++ ))
do
mul=` echo "$j*$i" | bc `
echo -n "$j x $i = $mul  "
done
echo  -e " "

done
```

```
dbda@iacsd:~$ ./9.sh
enter number: 5
1 x 1 = 1  2 x 1 = 2  3 x 1 = 3  4 x 1 = 4  5 x 1 = 5
1 x 2 = 2  2 x 2 = 4  3 x 2 = 6  4 x 2 = 8  5 x 2 = 10
1 x 3 = 3  2 x 3 = 6  3 x 3 = 9  4 x 3 = 12  5 x 3 = 15
1 x 4 = 4  2 x 4 = 8  3 x 4 = 12  4 x 4 = 16  5 x 4 = 20
1 x 5 = 5  2 x 5 = 10  3 x 5 = 15  4 x 5 = 20  5 x 5 = 25
1 x 6 = 6  2 x 6 = 12  3 x 6 = 18  4 x 6 = 24  5 x 6 = 30
1 x 7 = 7  2 x 7 = 14  3 x 7 = 21  4 x 7 = 28  5 x 7 = 35
1 x 8 = 8  2 x 8 = 16  3 x 8 = 24  4 x 8 = 32  5 x 8 = 40
1 x 9 = 9  2 x 9 = 18  3 x 9 = 27  4 x 9 = 36  5 x 9 = 45
1 x 10 = 10  2 x 10 = 20  3 x 10 = 30  4 x 10 = 40  5 x 10 = 50
```

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

```
#! /bin/bash
sum=0
echo "enter terms"
read n
for (( i=1 ; i<=$n ; i=i+2 ))
do
echo $i
sum=`expr $sum + $i`

done
echo "sum of odd number is $sum"
```

```
dbda@iacsd:~$ ./8.sh
enter terms
20
1
3
5
7
9
11
13
15
17
19
sum of odd number is 100
```