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Question 1

```
dbda@iacsd:~$ nano max.sh
dbda@iacsd:~$ chmod u+x max.sh
dbda@iacsd:~$ ./max.sh
enter the first number12
enter the second number3
12 is maximum
dbda@iacsd:~$
```

```
GNU nano 6.2 max.sh
#!/bin/bash

echo -n "enter the first number"
read a
echo -n "enter the second number"
read b

if [ $a -gt $b ]
then
    echo "$a is maximum"
else
    echo "$b is maximum"
fi
```

Question 2

```
dbda@iacsd:~$ nano max3.sh
dbda@iacsd:~$ ./max3.sh
Enter first no. 5
Enter second number 7
Enter third number 3
7 is greater
dbda@iacsd:~$
```

```
#!/bin/bash
echo -n "Enter first no. "
read a
echo -n "Enter second number "
read b
echo -n "Enter third number "
read c
if [ $a -gt $b ]
then
    if [ $c -gt $a ]
    then
        echo "$c is greater"
    else
        echo "$a is greater"
    fi
elif [ $c -gt $b ]
then
    echo "$c is greater"
else
    echo "$b is greater"
fi
```

Question 3

```
dbda@iacsd:~$ nano pos.sh
dbda@iacsd:~$ chmod u+x pos.sh
dbda@iacsd:~$ ./pos.sh
enter the number 2
2 is positive
dbda@iacsd:~$
```

```
#!/bin/bash

echo -n "enter the number "
read a

if [ $a -gt 0 ]
then
    echo "$a is positive"
elif [ $a -lt 0 ]
then
    echo "$a is negative"
else
    echo "$a equals to zero"
fi
```

Question 4

```
dbda@iacsd:~$ nano div.sh
dbda@iacsd:~$ ./div.sh
Enter the number 55
55 is divisible by 5 and 11
dbda@iacsd:~$
```

```
#!/bin/bash
echo -n "Enter the number "
read a
if [ $((($a % 5)) -eq 0 ) && [ $((($a % 11)) -eq 0 ) ]
then
    echo "$a is divisible by 5 and 11"
else
    echo "$a is not divisible by 5 and 11"
fi
```

Question 5

```
dbda@iacsd:~$ ./odd.sh
bash: ./odd.sh: Permission denied
dbda@iacsd:~$ chmod u+x odd.sh
dbda@iacsd:~$ ./odd.sh
enter then number 7
7 is odd
dbda@iacsd:~$ ./odd.sh
enter then number 4
4 is even
dbda@iacsd:~$
```

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```
#!/bin/bash

echo -n "enter then number "
read a
if [ $((($a % 2)) -eq 0 ) ]
then
    echo "$a is even"
else
    echo "$a is odd"
fi
```

Question 6

```
every 4th year is leap year
dbda@iacsd:~$ nano leap.sh
dbda@iacsd:~$
dbda@iacsd:~$ ./leap.sh
Enter the year 2024
2024 is leap year
dbda@iacsd:~$

#!/bin/bash
echo -n "Enter the year "
read y
if [ $((($y % 4)) -eq 0 ) ] || [ $((($y % 400)) -eq 0 ) ]
then
    echo "$y is leap year"
else
    echo "$y is not leap year"
fi
```

Question 7

```
dbda@iacsd:~$ nano vote.sh
dbda@iacsd:~$ chmod u+x vote.sh
dbda@iacsd:~$ ./vote.sh
enter the your age5
you are not eligible for vote
dbda@iacsd:~$ ./vote.sh
enter the your age45
you are eligible for vote
dbda@iacsd:~$

#!/bin/bash

echo -n "enter the your age"
read a
if [ $a -ge 18 ]
then
    echo "you are eligible for vote"
else
    echo "you are not eligible for vote"
fi
```

Question 8

```
dbda@iacsd:~$ nano loop10.sh
dbda@iacsd:~$ ./loop10.sh
bash: ./loop10.sh: Permission denied
dbda@iacsd:~$ chmod u+x loop.sh
chmod: cannot access 'loop.sh': No such file or directory
dbda@iacsd:~$ chmod u+x loop10.sh
dbda@iacsd:~$ ./loop10.sh
1
2
3
4
5
6
7
8
9
10
```

```
#!/bin/bash
for a in {1..10}
do
    echo "$a"
done
```

Question 9

```
dbda@iacsd:~$ nano sum10.sh
dbda@iacsd:~$ ./sum10.sh
First ten natural number is
1 2 3 4 5 6 7 8 9 10
The Sum is 55
dbda@iacsd:~$
```

```
#!/bin/bash

echo "First ten natural number is "
echo {1..10}

sum=0
for i in {1..10}
do
    sum=`expr $sum + $i`
done

echo "The Sum is $sum"
```

Question 10

```
dbda@iacsd:~$ nano ursum.sh
dbda@iacsd:~$ ./ursum.sh
Enter number for sum 7
1234567
Sum of 7 is 28
```

```
#!/bin/bash
echo -n "Enter number for sum "
read a
sum=0
#echo {1..$a}
for((i=1;i<=$a;i++))
do
    echo -n "$i"
done
for((i=0;i<=$a;i++))
do
    sum=`expr $sum + $i`
done
echo ""
echo "Sum of $a is $sum"
```

Question 11

```
dbda@iacsd:~$ nano input.sh
dbda@iacsd:~$ ./input.sh
Number- 1 10
Number- 2 20
Number- 3 30
Number- 4 40
Number- 5 50
Number- 6 60
Number- 7 70
Number- 8 80
Number- 9 90
Number- 10 100
sum of 10 is 550
The average is 55
```

```
#!/bin/bash
sum=0
for i in {1..10}
do
    echo -n "Number- $i "
    read a
    sum=`expr $sum + $a`
done

echo "sum of 10 is $sum"
b=`expr $sum / 10`

echo "The average is $b"
```

Question 12

```
dbda@iacsd:~$ nano cube.sh
dbda@iacsd:~$ ./cube.sh
Enter the number
5
The number is 1 and it's cube is 1
The number is 2 and it's cube is 8
The number is 3 and it's cube is 27
The number is 4 and it's cube is 64
The number is 5 and it's cube is 125
dbda@iacsd:~$ nano cube.sh
dbda@iacsd:~$

#!/bin/bash
echo "Enter the number "
read n
for((i=1;i<=n;i++))
do
    a=`expr "$i" \* "$i" \* "$i"`
    echo "The number is $i and it's cube is $a"
done
```

Question 13

```
dbda@iacsd:~$ ./table.sh
enter the number2
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

#!/bin/bash

echo -n "enter the number"
read a
for((i=1;i<=10;i++))
do
    t=`expr "$a" \* "$i"`
    echo "$a x $i = $t"
done
```

Question 14

```
dbda@iacsd:~$ nano vert.sh
dbda@iacsd:~$ ./vert.sh
Input upto the table no. starting from 1 8
1 X 1 = 1 , 2 X 1 = 2 , 3 X 1 = 3 , 4 X 1 = 4 , 5 X 1 = 5 , 6 X 1 = 6 , 7 X 1 = 7 , 8 X 1 = 8 ,
1 X 2 = 2 , 2 X 2 = 4 , 3 X 2 = 6 , 4 X 2 = 8 , 5 X 2 = 10 , 6 X 2 = 12 , 7 X 2 = 14 , 8 X 2 = 16 ,
1 X 3 = 3 , 2 X 3 = 6 , 3 X 3 = 9 , 4 X 3 = 12 , 5 X 3 = 15 , 6 X 3 = 18 , 7 X 3 = 21 , 8 X 3 = 24 ,
1 X 4 = 4 , 2 X 4 = 8 , 3 X 4 = 12 , 4 X 4 = 16 , 5 X 4 = 20 , 6 X 4 = 24 , 7 X 4 = 28 , 8 X 4 = 32 ,
1 X 5 = 5 , 2 X 5 = 10 , 3 X 5 = 15 , 4 X 5 = 20 , 5 X 5 = 25 , 6 X 5 = 30 , 7 X 5 = 35 , 8 X 5 = 40 ,
1 X 6 = 6 , 2 X 6 = 12 , 3 X 6 = 18 , 4 X 6 = 24 , 5 X 6 = 30 , 6 X 6 = 36 , 7 X 6 = 42 , 8 X 6 = 48 ,
1 X 7 = 7 , 2 X 7 = 14 , 3 X 7 = 21 , 4 X 7 = 28 , 5 X 7 = 35 , 6 X 7 = 42 , 7 X 7 = 49 , 8 X 7 = 56 ,
1 X 8 = 8 , 2 X 8 = 16 , 3 X 8 = 24 , 4 X 8 = 32 , 5 X 8 = 40 , 6 X 8 = 48 , 7 X 8 = 56 , 8 X 8 = 64 ,
1 X 9 = 9 , 2 X 9 = 18 , 3 X 9 = 27 , 4 X 9 = 36 , 5 X 9 = 45 , 6 X 9 = 54 , 7 X 9 = 63 , 8 X 9 = 72 ,
1 X 10 = 10 , 2 X 10 = 20 , 3 X 10 = 30 , 4 X 10 = 40 , 5 X 10 = 50 , 6 X 10 = 60 , 7 X 10 = 70 , 8 X 10 = 80
```

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```
#!/bin/bash
echo -n "Input upto the table no. starting from 1 "
read n
for((i=1;i<=10;i++))
do
    for((j=1;j<=n;j++))
    do
        mul=`expr "$j" "*" "$i"`
        echo -n "$j X $i = $mul , "
    done
done
echo ""
done
```

Question 15

```
dbda@iacsd:~$ nano oddnum.sh
dbda@iacsd:~$ ./oddnum.sh
enter the number 10
The odd numbers are 1 , 3 , 5 , 7 , 9 , 11 , 13 , 15 , 17 , 19 ,
sum of odd natural numbers 100
```

```
#!/bin/bash

echo -n "enter the number "
read a
n=`expr $a * 2`
echo -n "The odd numbers are "
for((i=1;i<=$n;i=i+2))
do
    echo -n "$i , "
    sum=`expr $sum + $i`
done
echo ""
echo "sum of odd natural numbers $sum"
```

