1. Write a program to take command line input and check number is odd or even.

```
import java.util.Scanner;   class
PRG_01
{
        public static void main(String [] args)
        {
                int A;
                Scanner sc = new Scanner(System.in);
                System.out.print("Enter any No. : ");
        A = sc.nextInt();
                if(A%2==0)
                System.out.println("The value "+A+" is even.");
                else
                System.out.println("The value "+A+" is odd.");

        }
}
```

Output :

```
Enter any No. : 15
The value 15 is odd.
```

2. Write a program to take command line input and sum of 2 number.

```
import java.util.Scanner;   class
PRG_02
{
        public static void main(String args[])
        {
                int x, y, sum;
                Scanner sc = new Scanner(System.in);
        System.out.print("Enter the first No. : ");
x = sc.nextInt();
                System.out.print("Enter the second No. : ");
        y = sc.nextInt();               sum = sum(x, y);
                System.out.println("The sum of two numbers x and y is: " + sum);
        }
        public static int sum(int a, int b)
        {
                int sum = a + b;
return sum;
        }
}
```

Output :

Enter the first No. : 12

Enter the second No. : 12

The sum of two numbers x and y is: 24

3. Write a program to take command line input and calculate a Simple Interest.

```
import java.util.Scanner; class
PRG_03
 {
   public static void main (String args[])
    {
                float p, r,  n,  si;
                Scanner s=new Scanner(System.in);
                System.out.print("Enter Value For Princip Amount :");
p=s.nextFloat();
                System.out.print("Enter Value For Number Of Month :");
n=s.nextFloat();
  System.out.print("Enter     Value     For     Rate     :");
r=s.nextFloat();     si  = (p*r*n)/100;
                System.out.println("Simple Interest is : " +si);
    }
}
```

Output :

Enter Value For Princip Amount :100000

Enter Value For Number Of Month :12

Enter Value For Rate :2

Simple Interest is : 24000.0

4. Write a Program to take command line input and Check Number is Positive or Negative.

```
import java.util.Scanner;  class
PRG_04
{
        public static void main(String [] a)
        {
                int b;
                Scanner sc = new Scanner(System.in);
        System.out.print("Enter any No. : ");
b = sc.nextInt();
                if(b>0)
                {
                        System.out.println(b+" is Positive.");
                }
```

```
            else
            {
                System.out.println(b+" is Nagetive.");
            }
        }
}
```

Output :

Enter any No. : 5 5

is Positive.

5. Write a Program to take command line input and Check Year is Leap Year or Not.

```
import java.util.Scanner; class
PRG_05
{
        public static void main(String[] args)
        {
            int year;
            boolean leap = false;
            Scanner s=new Scanner(System.in);
System.out.print("Enter any year : ");
year=s.nextInt();
```

```
            if (year % 4 == 0)
            {
                if (year % 100 == 0)
                {
                    if (year % 400 == 0)
                    leap = true;
                    else
                        leap = false;
                }
                else
                leap = true;
            }
            else
            leap = false;
        if (leap)
            System.out.println(year + " is a leap year.");
            else
            System.out.println(year + " is not a leap year.");
        }
}
```

Output :

Enter any year : 2015

2015 is not a leap year.

6. Write a program to take command line input and find the Character Is Vowel or Not.

```
import java.util.Scanner; class
PRG_06
{
        public static void main(String [] args)
        {
                char a;
                Scanner sc=new Scanner(System.in);
System.out.print("Enter any  Character :");          a =
sc.next().charAt(0);
                if(a == 'a' || a == 'e' || a == 'i' || a == 'o' || a == 'u' || a == 'A' || a ==
'E' || a == 'I' || a == 'O' || a == 'U' )
                        System.out.println(a +" is vowel");
else
        System.out.println(a+ " is consonant");
        }
}
```

Output :

```
Enter any  Character :o o
is vowel
```

7. Write a program to reverse a given number using while loop.

```
import java.util.Scanner; class
PRG_07
{
        public static void main(String[] args)
        {
                int n , r = 0;
                System.out.print("Enter any No. to reverse :
");              Scanner sc = new Scanner(System.in);
n = sc.nextInt();               while(n != 0)
                {
                        int re = n % 10;
                r = r * 10 + re;
        n = n/10;
                }
                System.out.println("The reverse of the given number is : " + r);
        }
}
```

Output :

```
Enter any No. to reverse : 123
The reverse of the given number is : 321
```

8. Write a program to reverse a given number using for loop.

```
import java.util.Scanner; class
PRG_08
{
        public static void main(String[] args)
        {
                int n,i,r = 0;
                System.out.print("Enter any No. to reverse : ");
        Scanner sc = new Scanner(System.in);                    n
= sc.nextInt();                 for(i=1;n!=0;i++)
                {
                        int re = n % 10;
                r = r * 10 + re;
        n = n/10;
                }
                System.out.println("The reverse of the given number is : " + r);
        }
}
```

Output :

```
Enter any No. to reverse : 456
The reverse of the given number is : 654
```

9. Write a program to check number is Armstrong or Not

```
import java.util.Scanner; class
PRG_09
{
   public static void main(String[] args)
        {
      int n, oN, r, re = 0;
                Scanner sc = new Scanner(System.in);
        System.out.print("Enter the No. : ");
n = sc.nextInt();
      oN = n;
while (oN != 0)
      {
         r = oN % 10;          re
+= Math.pow(r, 3);
oN /= 10;
      }
      if(re == n)
         System.out.println(n + " is an Armstrong number.");
else
         System.out.println(n + " is not an Armstrong number.");
   }
}
```

Output :

Enter the No. : 153

153 is an Armstrong number.

10. Write a to check number is Prime number or not.

```
import java.util.Scanner; public
class PRG_10
{
        public static void main(String args[])
        {
                int i,n,m=0,flag=0;
                Scanner sc = new
Scanner(System.in);
System.out.print("Enter any No. : ");          n =
sc.nextInt();                  m=n/2;
if(n==0||n==1)
                {
                        System.out.println(n+" is not prime number");
                }
                else
                {
```

```
                    for(i=2;i<=m;i++)
            {
if(n%i==0)                          {
                                    System.out.println(n+" is not prime number");
                                    flag=1;
                    break;
                            }
            }
if(flag==0)
                    {
                            System.out.println(n+" is prime number");
                    }
            }
        }
}
```

Output :

Enter any No. : 17

17 is prime number

11. Write a program to check given string is Palindrome or not

```
import java.util.Scanner; class
PRG_11
```

```
{
        public static void main(String[] args)
        {
                Scanner sc=new Scanner(System.in);
                String str, reverseStr = "";
                System.out.print("Enter any  string :");
        str = sc.nextLine();                    int strLength
= str.length();                 for (int i = (strLength - 1);
i >=0; --i)
                {
                        reverseStr = reverseStr + str.charAt(i);
                }
                if (str.toLowerCase().equals(reverseStr.toLowerCase()))
                {
                        System.out.println(str + " is a Palindrome String.");
                }
                else
                {
                        System.out.println(str + " is not a Palindrome String.");
                }
        }
}
```

Output :

Enter any string :naman naman

is a Palindrome String.

12. Write a program in java to display the pattern like right angle triangle using an asterisk.

```
*
*  *
*  *  * *  *  *  *
*  *  *  *  *
```

```
import java.util.Scanner; class
PRG_12
{
        public static void main(String [] args)
        {
                int i,a,b=0;
                Scanner sc=new Scanner(System.in);
        System.out.print("Enter any No. : ");
a = sc.nextInt();               for(b=1;b<=a;b++)
                {
                        for(i=1;i<=b;i++)
                        {
                                System.out.print(" * ");
                        }
```

```
                System.out.println("\n");
            }

        }
}
```

Output :

```
Enter any No. : 5
 *
* *
* * *
* * * *
* * * * *
```

13. Write a program in java to make such a pattern like a pyramid with numbers increased by 1.

```
        1
      2   3
    4   5   6
  7   8   9   10
```

```
import java.util.Scanner; class
PRG_13
{
```

```
        public static void main(String [] args)
        {
                int i,a,b,n=1;
                Scanner sc=new Scanner(System.in);
        System.out.print("Enter any No. : ");
a = sc.nextInt();               for(b=1;b<=a;b++)
                {
                        for(i=1;i<=a;i++)
                        {
                                if((b+i)<=a)
                                {
                                        System.out.print(" ");
                                }
                                else
                                {
                                        System.out.print(n+" ");
                                        n++;
                                }
                        }
                        System.out.println("\n");
                }

        }
}
```

Output :

```
Enter any No. : 4
      1
   2   3
 4   5   6
7   8   9   10
```

14. Write a C Program to display the pattern using the alphabet.

```
A   B   C   D   E
A   B   C   D
A   B   C
A   B
A
```

```
import java.util.Scanner;
class PRG_14
{
        public static void main(String [] args)
        {
```

```
                int i,a,b=0;
char c;
                Scanner sc=new Scanner(System.in);
                System.out.print("Enter any No. : ");
                a = sc.nextInt();
for(b=a;b>=1;b--)
                {
                        c='A';
                        for(i=1;i<=b;i++)
                        {
                                System.out.print(c+" ");
                                c++;
                        }
                        System.out.println("\n");
                }
        }
}
```

Output :

```
Enter any No. : 5
A   B   C   D   E
A   B   C   D
A   B   C
A   B
```

A

15. Write a program to take command line input and print factorial of given number.

```
import java.util.Scanner; class
PRG_15
{
        public static void main(String args[])
      {
            int n, c, f = 1;
            System.out.print("Enter an integer to calculate its factorial : ");
      Scanner in = new Scanner(System.in);                n = in.nextInt();
      if (n < 0)
    System.out.println("Number should be non-negative.");    else
            {
                  for (c = 1; c <= n; c++)
            f = f*c;
                  System.out.println("Factorial of "+n+" is = "+f);
            }
      }
}
```

Output :

Enter an integer to calculate its factorial : 5

Factorial of 5 is = 120

16. Write a program to display Fibonacci series.

```
import java.util.Scanner; public
class PRG_16
{
        public static void main(String[] args)
        {
                int n, a = 0, b = 0, c = 1;
        Scanner s = new Scanner(System.in);
System.out.print("Enter value of n : ");                    n
= s.nextInt();
        System.out.print("Fibonacci Series : ");
for(int i = 1; i <= n; i++)
        {                       a
= b;                    b = c;
        c = a + b;
                        System.out.print(a+",");
                }
                System.out.print("\b.");
        }
}
```

Output :

Enter value of n : 5

Fibonacci Series : 0,1,1,2,3.