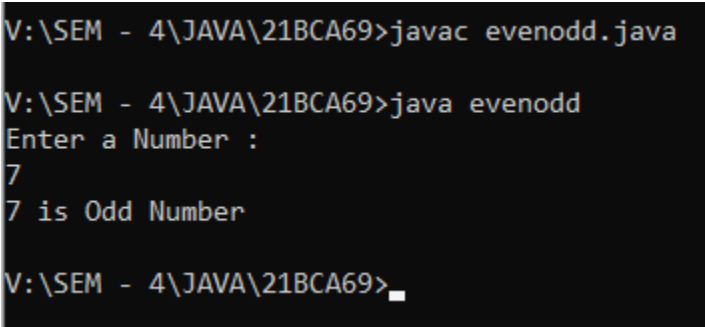# 1.Write a program to take command line input and check if the number is odd or even.

CODE :-

```
import java.util.*;
class evenodd
{
        public static void main(String args[])
        {
                int no;
                Scanner s=new Scanner(System.in);
                System.out.println("Enter a Number :");
                no=s.nextInt();
                if(no%2==0)
                {
                        System.out.println(no+" is Even Number");
                }
                else
                {
                        System.out.println(no+" is Odd Number");
                }
        }
}
```
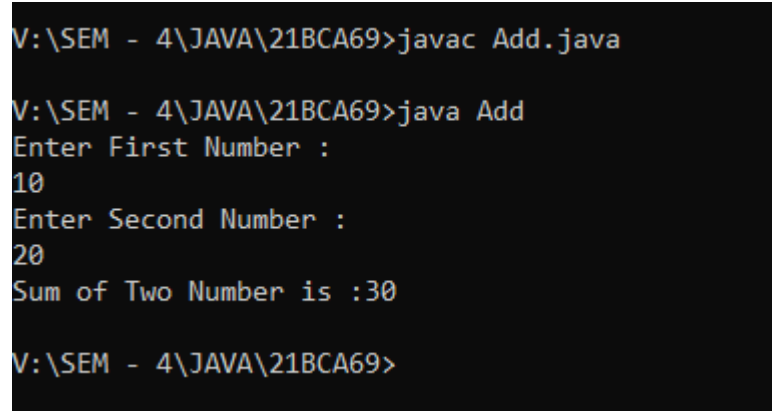
OUTPUT :-

2. Write a program to take input and sum of 2 Numbers.

CODE :-

```java
import java.util.*;
class Add
{
        public static void main(String args[])
        {
                int no1,no2,sum;
                Scanner s=new Scanner(System.in);
                System.out.println("Enter First Number :");
                no1=s.nextInt();
                System.out.println("Enter Second Number :");
                no2=s.nextInt();
                sum=no1+no2;
                System.out.println("Sum of Two Number is :"+sum);
        }
}
```

OUTPUT :-

```
V:\SEM - 4\JAVA\21BCA69>javac Add.java

V:\SEM - 4\JAVA\21BCA69>java Add
Enter First Number :
10
Enter Second Number :
20
Sum of Two Number is :30

V:\SEM - 4\JAVA\21BCA69>
```

3. Write a program to take input and calculate a Simple Interest.
CODE :-

```
import java.util.*;
class simpleintrest
{
        public static void main(String args[])
        {
                float P, R, T,SI;
                Scanner s=new Scanner(System.in);
                System.out.println("Enter The Principal :");
                P=s.nextFloat();
                System.out.println("Enter The Rate of Interest :");
                R=s.nextFloat();
                System.out.println("Enter The Time of Period :");
                T=s.nextFloat();
                SI = (P * T * R) / 100;
                System.out.println("Simple Interest = " + SI);
        }
}
```
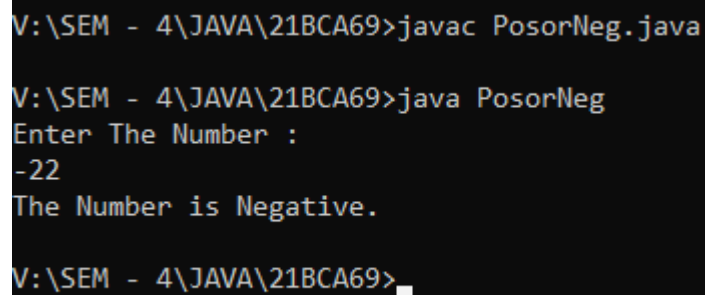
OUTPUT : -

```
V:\SEM - 4\JAVA\21BCA69>javac simpleintrest.java

V:\SEM - 4\JAVA\21BCA69>java simpleintrest
Enter The Principal :
5000
Enter The Rate of Intrest :
2
Enter The Time of Period :
3
Simple Interest = 300.0

V:\SEM - 4\JAVA\21BCA69>
```

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

CODE :-

```java
import java.util.*;
class PosorNeg
{
        public static void main(String[] args)
        {
                int no;
                Scanner n=new Scanner(System.in);
                System.out.println("Enter The Number :");
                no=n.nextInt();
                if(no>0)
                {
                        System.out.println("The Number is Positive.");
                }
                else if(no<0)
                {
                        System.out.println("The Number is Negative.");
                }
        }
}
```
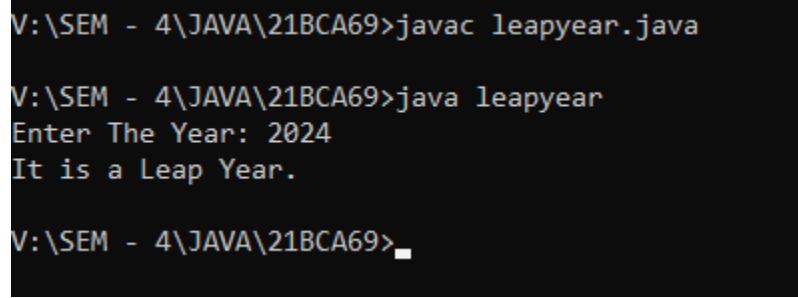
OUTPUT: -

```
V:\SEM - 4\JAVA\21BCA69>javac PosorNeg.java

V:\SEM - 4\JAVA\21BCA69>java PosorNeg
Enter The Number :
-22
The Number is Negative.

V:\SEM - 4\JAVA\21BCA69>
```

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

CODE :-
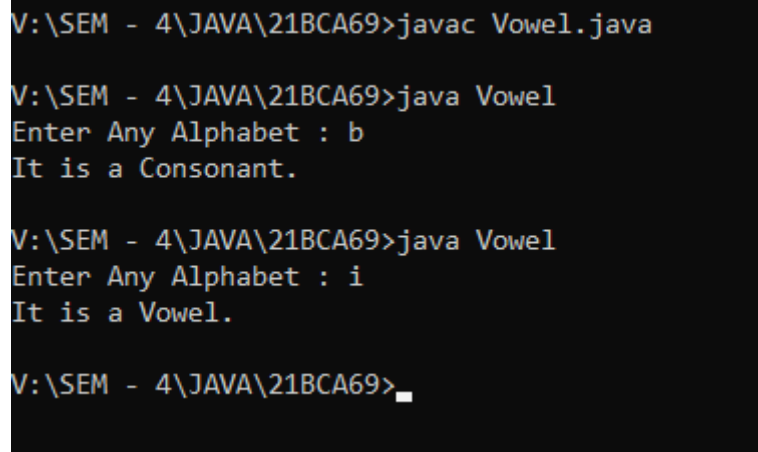
```
import java.util.*;
class leapyear
{
        public static void main(String[] args)
        {
        int year;
        Scanner scan = new Scanner(System.in);
        System.out.print("Enter The Year: ");
        year = scan.nextInt();
        if(year%4==0 && year%100!=0)
        System.out.println("It is a Leap Year.");
        else if(year%400==0)
        System.out.println("It is a Leap Year.");
        else
        System.out.println("It is Not a Leap Year.");
        }
}
```

OUTPUT: -

```
V:\SEM - 4\JAVA\21BCA69>javac leapyear.java

V:\SEM - 4\JAVA\21BCA69>java leapyear
Enter The Year: 2024
It is a Leap Year.

V:\SEM - 4\JAVA\21BCA69>
```

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

CODE :-

```java
import java.util.*;
public class Vowel
{
        public static void main(String[] args)
        {
                char ch;
                Scanner s= new Scanner(System.in);
                System.out.print("Enter Any Alphabet : ");
                ch = s.next().charAt(0);
                if(ch=='a' || ch=='e' || ch=='i' || ch=='o' || ch=='u' ||
                ch=='A' || ch=='E' || ch=='I' || ch=='O' || ch=='U')
                System.out.println("It is a Vowel.");
                else
                System.out.println("It is a Consonant.");
        }
}
```
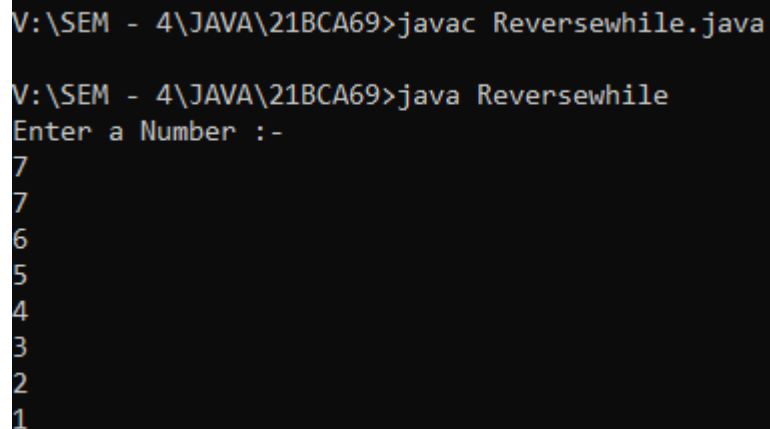
OUTPUT :-

```
V:\SEM - 4\JAVA\21BCA69>javac Vowel.java

V:\SEM - 4\JAVA\21BCA69>java Vowel
Enter Any Alphabet : b
It is a Consonant.

V:\SEM - 4\JAVA\21BCA69>java Vowel
Enter Any Alphabet : i
It is a Vowel.

V:\SEM - 4\JAVA\21BCA69>
```

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

CODE :-

```java
import java.util.*;
class Reversewhile
{
        public static void main(String args[])
        {
                int a,i;
                Scanner n=new Scanner(System.in);
                System.out.println("Enter a Number :-");
                a=n.nextInt();
                i=a;
                while(i != 0)
                {
                        System.out.println(i);
                        i--;
                }
        }
}
```
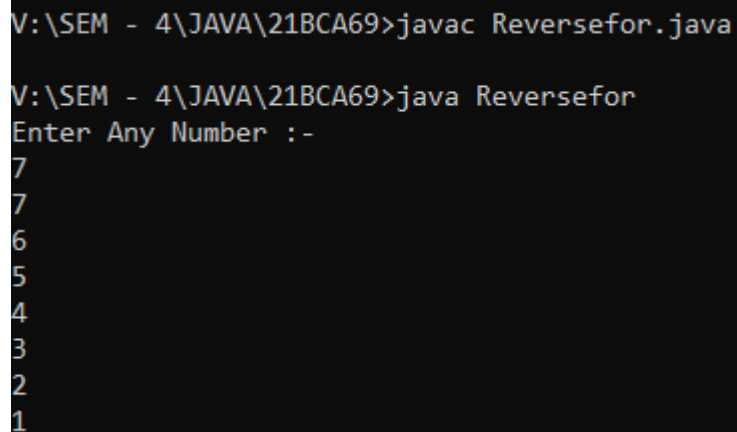
OUTPUT :-

```
V:\SEM - 4\JAVA\21BCA69>javac Reversewhile.java

V:\SEM - 4\JAVA\21BCA69>java Reversewhile
Enter a Number :-
7
7
6
5
4
3
2
1
```

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

CODE :-
```
import java.util.*;
class Reversefor
{
        public static void main(String args[])
        {
                int a;
                Scanner n=new Scanner(System.in);
                System.out.println("Enter Any Number :-");
                a=n.nextInt();
                for(int i=a;i !=0;i--)
                {
                        System.out.println(i);
                }
        }
}
```
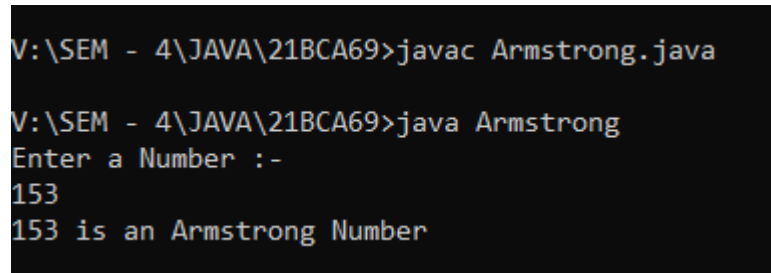
OUTPUT :-

```
V:\SEM - 4\JAVA\21BCA69>javac Reversefor.java

V:\SEM - 4\JAVA\21BCA69>java Reversefor
Enter Any Number :-
7
7
6
5
4
3
2
1
```

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

CODE :-

```java
import java.util.*;
class Armstrong
{
        public static void main(String[] args)
        {
                int n1, no, a, total = 0;
                Scanner n=new Scanner(System.in);
                System.out.println("Enter a Number :-");
                n1=n.nextInt();
                no = n1;
                while (no != 0)
                 {
                                a = no % 10;
                                total = total + a*a*a;
                                no /= 10;
                }
                if(total == n1)
                                System.out.println(n1 + " is an Armstrong Number");
                 else
                        System.out.println(n1 + " is Not an Armstrong Number");
        }
}
```
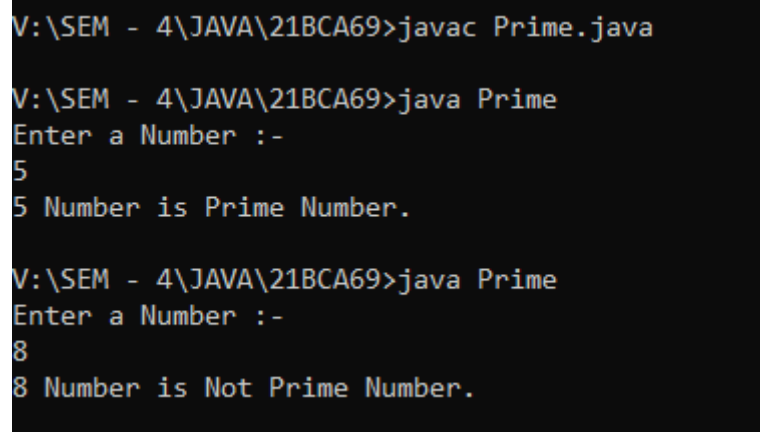
OUTPUT :-

```
V:\SEM - 4\JAVA\21BCA69>javac Armstrong.java

V:\SEM - 4\JAVA\21BCA69>java Armstrong
Enter a Number :-
153
153 is an Armstrong Number
```

10. Write a to Check Number is Prime Number or not.

CODE :-

```java
import java.util.*;
class Prime
{
        public static void main(String args[])
        {
                int a,i,c=0;
                Scanner n=new Scanner(System.in);
                System.out.println("Enter a Number :-");
                a=n.nextInt();
                for(i=2;i<=a/2;i++)
                {
                        if(a%i==0)
                        {
                                c=1;
                                break;
                        }
                }
                if(c==0)
                System.out.println(a+ " Number is Prime Number.");
                else
                System.out.println(a + " Number is Not Prime Number.");
        }
}
```

OUTPUT :-

```
V:\SEM - 4\JAVA\21BCA69>javac Prime.java

V:\SEM - 4\JAVA\21BCA69>java Prime
Enter a Number :-
5
5 Number is Prime Number.

V:\SEM - 4\JAVA\21BCA69>java Prime
Enter a Number :-
8
8 Number is Not Prime Number.
```
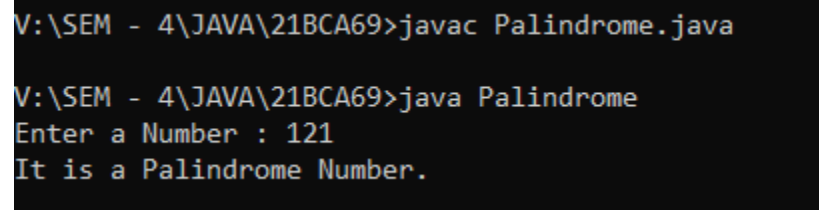
11. Write a program to Check given string is Palindrome or not.

CODE :-

```
import java.util.*;
class Palindrome
{
        public static void main(String[] args)
        {
        int num, rev=0, rem, temp;
        Scanner scan = new Scanner(System.in);

        System.out.print("Enter a Number : ");
        num = scan.nextInt();

        temp = num;
        while(temp!=0)
        {
                rem = temp%10;
                rev = (rev*10) + rem;
                temp = temp/10;
        }

        if(num==rev)
                System.out.println("It is a Palindrome Number.");
        else
                System.out.println("It is not a Palindrome Number.");
        }
}
```

OUTPUT :-

```
V:\SEM - 4\JAVA\21BCA69>javac Palindrome.java

V:\SEM - 4\JAVA\21BCA69>java Palindrome
Enter a Number : 121
It is a Palindrome Number.
```

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

/*Star Pattern 1

*

* *

* * *

* * * *

* * * * * */

CODE :-

```
public class Star
{
      public static void main(String[] args)
      {
      int rows = 5;
            for (int i = 1; i <= rows; ++i)
                  {
                  for (int j = 1; j <= i; ++j)
                        {
                                System.out.print("* ");
                        }
                  System.out.println();
                  }
      }
}
```
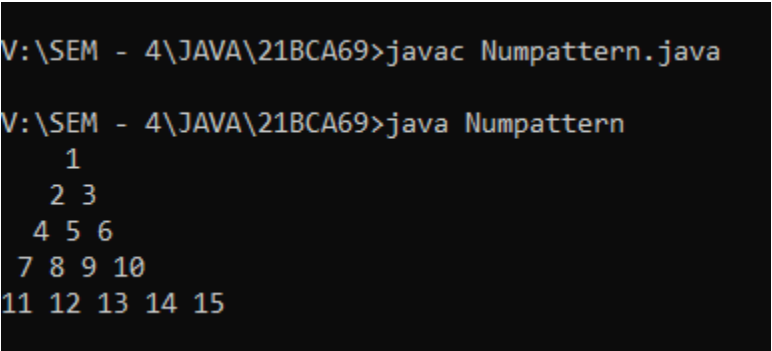
OUTPUT :-

```
V:\SEM - 4\JAVA\21BCA69>javac Star.java

V:\SEM - 4\JAVA\21BCA69>java Star
*
* *
* * *
* * * *
* * * * *
```

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

CODE :-

```
class Numpattern
{
    public static void main(String[] args)
    {
        int rows=5;
        int count = 1;
        for (int i = 1; i <= rows; i++)
        {
            for (int j = rows; j > i; j--)
            {
                System.out.print(" ");
            }
            for (int k = 1; k <= i; k++)
            {
                System.out.print(count + " ");
                count++;
            }
            System.out.println();
        }
    }
}
```
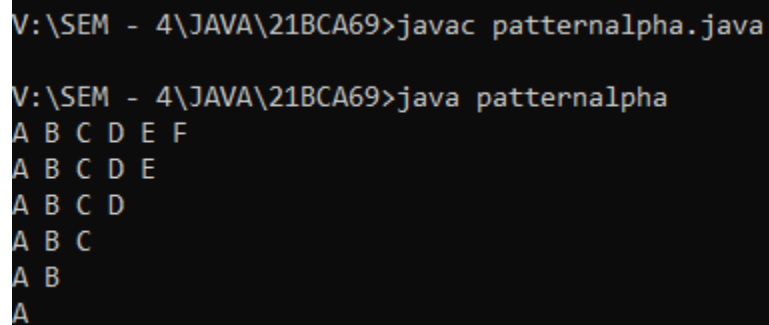
OUTPUT :-

```
V:\SEM - 4\JAVA\21BCA69>javac Numpattern.java

V:\SEM - 4\JAVA\21BCA69>java Numpattern
    1
   2 3
  4 5 6
 7 8 9 10
11 12 13 14 15
```

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

CODE :-

```
class patternalpha
{
      public static void main(String[] args)
      {
            int alphabet = 65;
            for (int i = 5; i >= 0; i--)
            {
                        for (int j = 0; j <= i; j++)
                        {
                        System.out.print((char) (alphabet + j) + " ");
                        }
                  System.out.println();
            }
      }
}
```
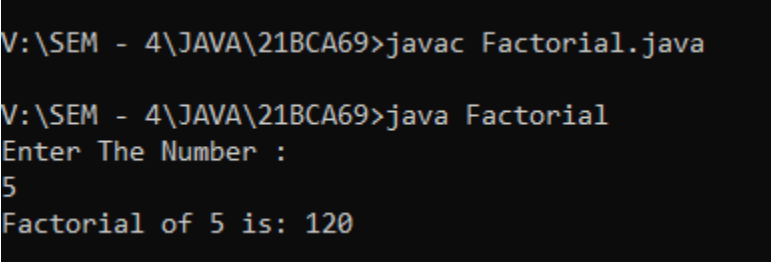
OUTPUT :-

```
V:\SEM - 4\JAVA\21BCA69>javac patternalpha.java

V:\SEM - 4\JAVA\21BCA69>java patternalpha
A B C D E F
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.

CODE :-
```
import java.util.*;
class Factorial
{
      public static void main(String args[])
      {
      int i,fact=1,no;
      Scanner n=new Scanner(System.in);
      System.out.println("Enter The Number :");
      no=n.nextInt();
      for(i=1;i<=no;i++)
      {
            fact=fact*i;
      }
      System.out.println("Factorial of "+no+" is: "+fact);
      }
}
```
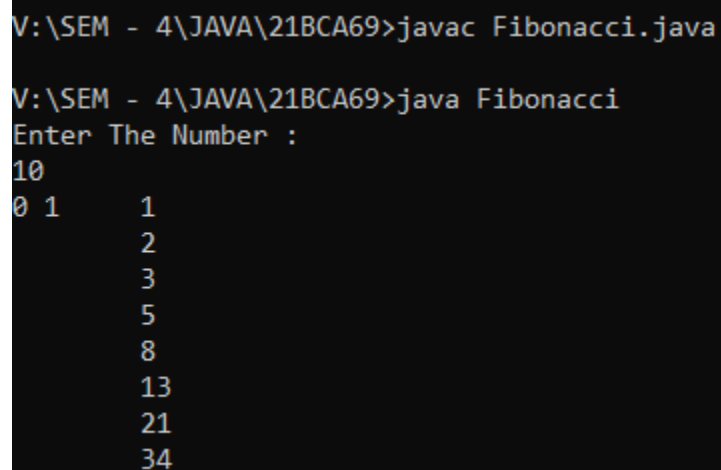
OUTPUT :-

```
V:\SEM - 4\JAVA\21BCA69>javac Factorial.java

V:\SEM - 4\JAVA\21BCA69>java Factorial
Enter The Number :
5
Factorial of 5 is: 120
```

16 . Write a program to display Fibonacci series.

CODE :-

```
import java.util.*;
class Fibonacci
{
public static void main(String args[])
{
        int a=0,b=1,c,i=3,no;
        Scanner s=new Scanner(System.in);
        System.out.println("Enter The Number :");
        no=s.nextInt();
        System.out.print(a+" "+b);
        while(i<=no)
        {
                c=a+b;
                System.out.println(" "+c);
                a=b;
                b=c;
                i++;
        }
}
}
```

OUTPUT :-

```
V:\SEM - 4\JAVA\21BCA69>javac Fibonacci.java

V:\SEM - 4\JAVA\21BCA69>java Fibonacci
Enter The Number :
10
0 1     1
        2
        3
        5
        8
        13
        21
        34
```