ASSIGNMENT-3:-

1:-WRITE A JAVA PROGRAM TO CALCULATE THE AVERAGE VALUE OF ARRAY ELEMENTS?

Program:-

```
class test1 {

public static void main(String[] args) {

int[] numbers = new int[]{20, 30, 25, 35, -16, 60, -100};

int sum = 0;

      for(int i=0; i < numbers.length ; i++)

       sum = sum + numbers[i];

       double average = sum / numbers.length;

       System.out.println("Average value of the array elements is : " + average);

  }

}
```

Output:-

```
Average value of the array elements is : 7.0
```

2:-WRITE A JAVA PROGRAM TO FIND THE MAX AND MIN VALUE OF ARRAY?

Program:-

```
import java.util.*;
class test1
{
  public static void main(String[] args)
  {

      Scanner sc=new Scanner(System.in);
      int arr[]=new int[10];
      System.out.println("Enter elements in array");
      int min=Integer.MAX_VALUE;
      int max=Integer.MIN_VALUE;
      for(int i=0;i<=9;i++)
      {
        arr[i]=sc.nextInt();
        if(arr[i]<min)
          {
          min=arr[i];
```

```
        }
       if(arr[i]>max)
       {
         max=arr[i];
       }
      }
      System.out.println("Maximum element is "+max);
      System.out.println("Minimum element is "+min);


  }
}
```

Output:-

```
Enter elements in array
67
89
90
56
34
23
```

21

908

65

678

Maximum element is 908

Minimum element is 1

3:-WRITE A JAVA PROGRAM TO FIND SECOND LARGEST ELEMENT IN AN ARRAY?

Program:-

```
import java.util.*;
class GFG{
static void print2largest(int arr[],
                          int arr_size)
{
  int i, first, second;
  if (arr_size < 2)
  {
    System.out.printf(" Invalid Input ");
    return;
  }
```

```
  Arrays.sort(arr);
  for (i = arr_size - 2; i >= 0; i--)
  {
    if (arr[i] != arr[arr_size - 1])
    {
      System.out.printf("The second largest " +
                        "element is %d\n", arr[i]);
      return;
    }
  }

  System.out.printf("There is no second " +
                    "largest element\n");
}
public static void main(String[] args)
{
  int arr[] = {12, 35, 1, 10, 34, 1};
  int n = arr.length;
  print2largest(arr, n);
}
```

```
}
```

Output:-

The second largest element is 34

4:-WRITE A JAVA PROGRAM TO ADD 2 MATRIX OF SAME SIZE?

Program:-

```
import java.util.Scanner;

class Example {

 public static void main(String args[])

  {

     int m, n, c, d;

     Scanner in = new Scanner(System.in);

     System.out.println("Input number of rows of matrix");

     m = in.nextInt();

     System.out.println("Input number of columns of matrix");

     n  = in.nextInt();

     int array1[][] = new int[m][n];

     int array2[][] = new int[m][n];

     int sum[][] = new int[m][n];
```

```
      System.out.println("Input elements of first matrix");
      for (  c = 0 ; c < m ; c++ )
        for ( d = 0 ; d < n ; d++ )
          array1[c][d] = in.nextInt();
          System.out.println("Input the elements of
second matrix");
          for ( c = 0 ; c < m ; c++ )
        for ( d = 0 ; d < n ; d++ )
          array2[c][d] = in.nextInt();
          for ( c = 0 ; c < m ; c++ )
        for ( d = 0 ; d < n ; d++ )
           sum[c][d] = array1[c][d] + array2[c][d];
           System.out.println("Sum of the matrices:-");
           for ( c = 0 ; c < m ; c++ )
      {
        for ( d = 0 ; d < n ; d++ )
          System.out.print(sum[c][d]+"\t");


        System.out.println();
      }
```

```
  }
}
```

Output:-

5:-WRITE A JAVA PROGRAM TO DISPLAY CUBE OF A GIVEN NUMBER UPTO AN INTEGER?

program:-

```
import java.util.Scanner;
class cube{
public static void main(String [ ] args)
{
int n=6;
System.out.println("enter the number:");
Scanner sc=new Scanner(System.in);
int num=sc.nextInt( );
System.out.println("cube of a num
is"+(num*num*num));
}
}
```

Output:-

enter the number:

6

cube of a num is216

6:-WRITE A JAVA PROGRAM THAT TAKES A YEAR FROM THE USER AND PRINT WHETHER IT IS A ;EAP YEAR OR NOT?

Program:-

```
class leapyear{
   public static void main(String[]args)
   {
      int year=2006;
      if(year%4==0)
      System.out.println(year+"year is an leap year");
      else
      System.out.println(year+"year is not an leap year");
   }
}
```

Output:-

2006year is not an leap year

7:-WRITE A JAVA PROGRAM TO DISPLAY N TIMES OF NATURAL NUMBERS AND THEIR SUM?

Program:-

```
import java.util.Scanner;
class test{
    public static void main(String[] args)
    {
   int i, n, sum=0;
   {
   Scanner in = new Scanner(System.in);
        System.out.print("Input number: ");
         n = in.nextInt();
}
  System.out.println("The first n natural numbers are : "+n);

 for(i=1;i<=n;i++)
   {
     System.out.println(i);
     sum+=i;
```

```
  }
System.out.println("The Sum of Natural Number upto "+n+ " terms : " +sum);


}
}
```

Output:-

```
Input number: 7
The first n natural numbers are : 7
1
2
3
4
5
6
7
The Sum of Natural Number upto 7 terms : 28
```

8:-WRITE A JAVA PROGRAM TO DISPLAY MULTIPLICATION TABLE OF GIVEN NUMBER?

Program:-

```
class multiplicationtable{
public static void main(String[]args){
int num=10;
for(int i=1;i<=10;++i)
{
System.out.println(num+"*"+i+"="+num*i);
}
}
}
```

Output:-

```
10*1=10
10*2=20
10*3=30
10*4=40
10*5=50
10*6=60
10*7=70
10*8=80
10*9=90
10*10=100
```