# *OOJ LAB WEEK 6 PRACTICE PROGRAMS*

## *Program and Output*

*Mallika Prasad*

## *20.10.2020*

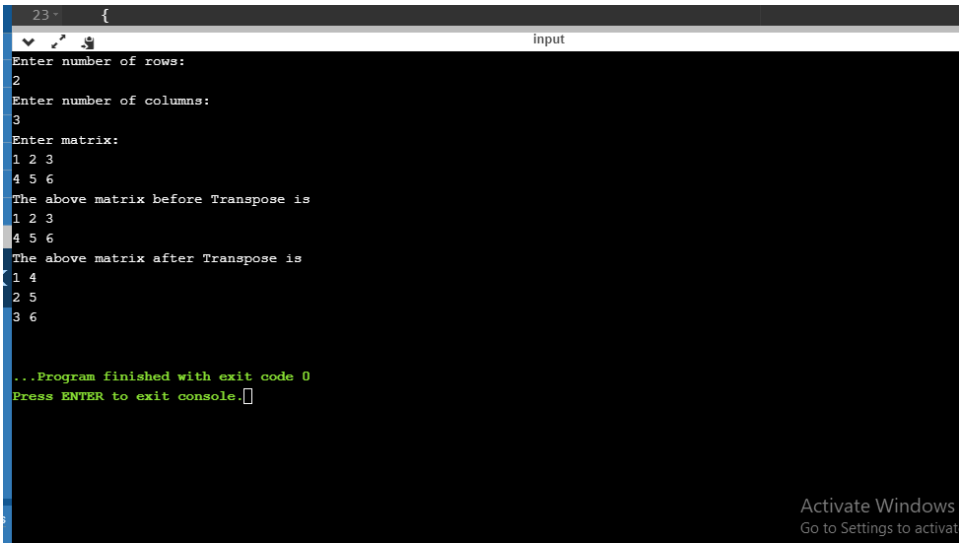
### *Program 1-*

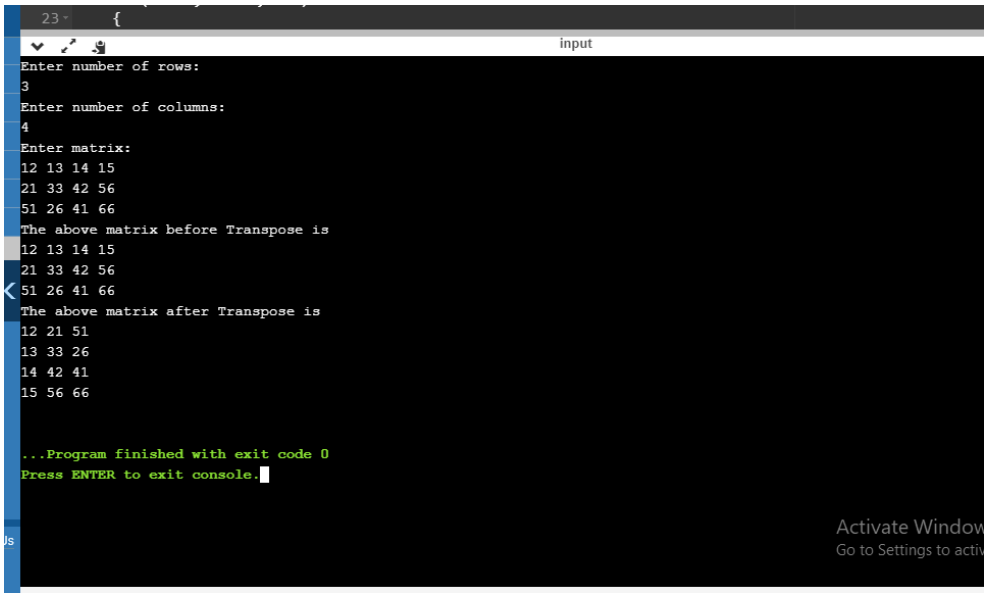
***Develop a Java program to find the transpose of a given matrix of order MXN.***

```
import java.util.Scanner;
public class Main
{
   public static void main(String args[])
   {
      Scanner s = new Scanner(System.in);
          int i, j;
          System.out.println("Enter number of rows: ");
          int m = s.nextInt();
          System.out.println("Enter number of columns: ");
          int n = s.nextInt();
          int array[][] = new int[m][n];
          System.out.println("Enter matrix:");
          for(i = 0; i < m; i++)
          {
             for(j = 0; j < n; j++)
             {
          array[i][j] = s.nextInt();
       }
          }
```

```
        System.out.println("The above matrix before Transpose is ");
        for(i = 0; i < m; i++)
        {
           for(j = 0; j < n; j++)
      {
        System.out.print(array[i][j]+" ");
      }
      System.out.println(" ");
    }
        System.out.println("The above matrix after Transpose is ");
        for(i = 0; i < n; i++)
        {
           for(j = 0; j < m; j++)
      {
         System.out.print(array[j][i]+" ");
      }
      System.out.println(" ");
    }
  }
}
```

***Output-***




## *Program 2-*

***Develop a Java program which has the (only) class CircleDemo that has members- radius, area and perimeter. Include methods to do the following.***

***a. accept the radius from the user***

***b. find the area of the circle***

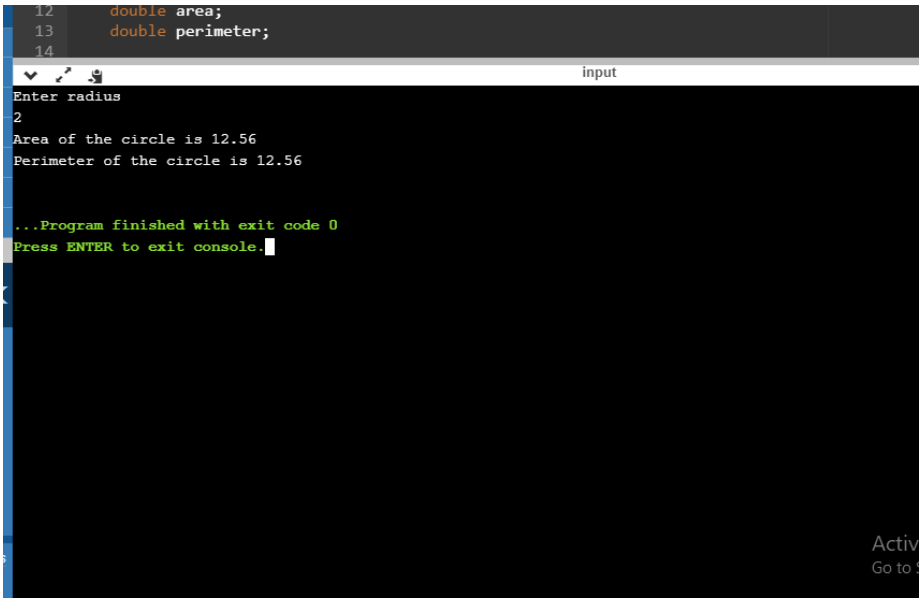
***c. find the perimeter of the circle***

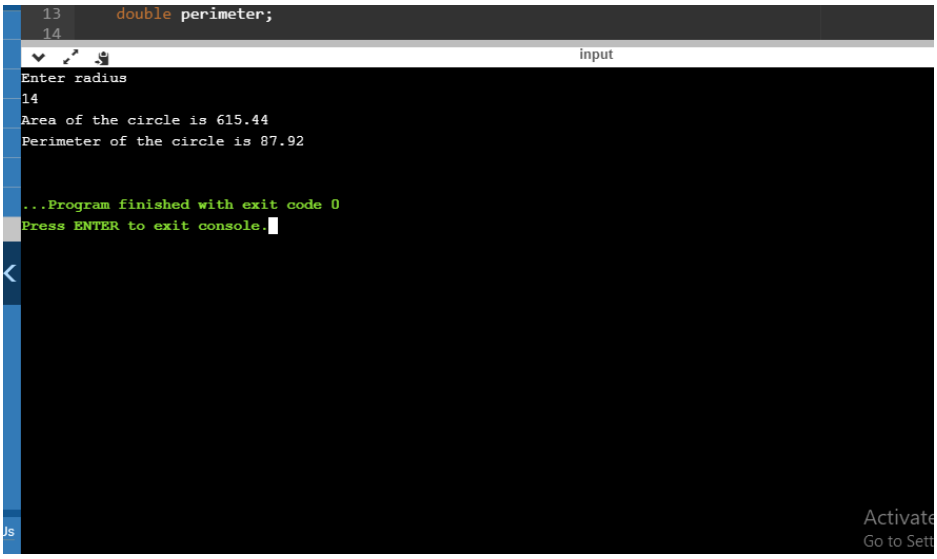
***d. Display all the details***

```
import java.util.Scanner;
class CircleDemo{
   double radius;
   double area;
   double perimeter;
    void accept()
   {
      Scanner xx=new Scanner (System.in);
      System.out.println("Enter radius");
      radius=xx.nextDouble();
   }
   double ar()
   {
      area=3.14*radius*radius;
      return area;
   }
   double pm()
   {
      perimeter=2*3.14*radius;
      return perimeter;
   }
   void display()
   {
      System.out.println("Area of the circle is "+area);
      System.out.println("Perimeter of the circle is "+perimeter);
   }
}
class Main{
```

```
    public static void main (String ss[]){
        CircleDemo c1=new CircleDemo();
        c1.accept();
        c1.ar();
        c1.pm();
        c1.display();
    }
}
```

***Output-***






## *Program 3-*

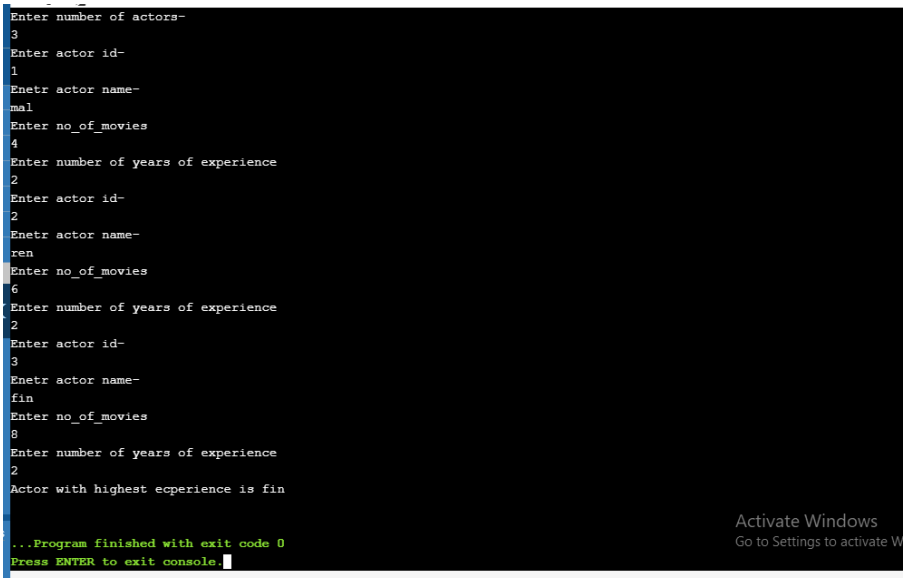
***Develop a Java program to create a class Actor with id, name, no_of_movies, no_of_years_exp. Calculate the average_performance for each of the actor and print the name of the actor with highest average.***

```
import java.util.Scanner;
class Actor{
   int id;
   String name;
   int no_of_movies;
   int no_of_years_exp;
   double avg_performance;
   static String highest_name;

   void accept()
   {
      Scanner xx=new Scanner(System.in);
      System.out.println("Enter actor id-");
```

```
        id=xx.nextInt();
        System.out.println("Enetr actor name-");
        name=xx.next();
        System.out.println("Enter no_of_movies");
        no_of_movies=xx.nextInt();
        System.out.println("Enter number of years of experience");
        no_of_years_exp=xx.nextInt();
    }
   double avg()
    {
      avg_performance=no_of_movies/no_of_years_exp;
      return avg_performance;
    }
     String actorname()
    {
        return name;
    }
}

class Main{
    public static void main(String args[]){
        Scanner xx=new Scanner(System.in);
        double highest=0;
        String actorname;
        System.out.println("Enter number of actors-");
        int n=xx.nextInt();
        Actor a[]=new Actor[n];
        for(int i=0;i<n;i++)
```

```
    {
       a[i]=new Actor();
       a[i].accept();
       a[i].avg();
        if(a[i].avg()>highest)
       {
          highest=a[i].avg();
          Actor.highest_name=a[i].name;
       }
        }
    System.out.println("Actor with highest ecperience is "+Actor.highest_name);
    }
 }
```

## *Output-*




## *Program 4-*

***Develop a Java program to accept the values of a double array through command line.***

***Display the sorted array.***

```
class Main{
   public static void main(String ss[]){
      double[] a = new double[ss.length];
      for(int i = 0;i<ss.length;i++){
          a[i] = Double.parseDouble(ss[i]);
      }
      System.out.println("Original array:");
      for( int i=0;i<a.length;i++)
      {
         System.out.println(a[i]+" ");
      }
      System.out.println();
      double temp=0.0;
      for(int i=0;i<a.length;i++){
         for(int j=0;j<a.length;j++){
            if(a[j]>a[j+1]){
               temp = a[j];
               a[j] = a[j+1];
               a[j+1] = temp;
            }
            }
      }
System.out.println("sorted array:");
      for(int i=0;i<a.length;i++){
        System.out.println(a[i] + " ");

      }
 }
```

}