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| **Experiment No.** | 1A |

| **AIM:** | To write a program to demonstrate classes and objects. |
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| **Program 1** | |
| **PROBLEM STATEMENT :** | Write a program which contains a class called Rectangle with data members length and breadth. Define methods perimeter and area. Create a Tester class which creates objects of Rectangle classs in the main() method and calls the methods of rectangle class. |
| **PROGRAM:** | import java.util.Scanner;  class Rectangle{  double area(double l, double b){  return l \* b;  }    double perimeter(double l, double b){  return 2\*(l + b);  }  }  class rectangle{  public static void main(String []arr){    Scanner sc = new Scanner(System.in);  System.out.print("Enter length : ");  double x= sc.nextDouble();  System.out.print("Enter breadth : ");  double y= sc.nextDouble();    Rectangle r = new Rectangle();  double a = r.area(x,y);  double p = r.perimeter(x,y);    System.out.println("Area of rectangle is : " + a);  System.out.println("Area of rectangle is : " + p);    }  } |
| **RESULT:** | |
| **Program 2** | |
| **PROBLEM STATEMENT :** | Write a Java program to Generate marksheet for a student  Data members: Name, Rollno, Subje1 marks, Subj2 Marks, Total, Grade  Assign grade:  Total: <40---F  40 To 60----B grade  61 To 75----A grade  75>---O grade  Display the marksheet of the student |
| **PROGRAM:** | import java.util.Scanner;  class Student{  String name(String n){  return n;  }    int rollno(int r){  return r;  }    int sub1(int s1){  return s1;  }    int sub2(int s2){  return s2;  }    int total(int s1, int s2){  return s1+s2;  }    void grade(int s1, int s2){  int n = (s1 + s2)/2;    if(n<40){  System.out.print("F grade");  }  else if(n>=40 && n<=60){  System.out.print("B grade");  }  else if(n>=61 && n<=75){  System.out.print("A grade");  }  else if(n>75){  System.out.print("O grade");  }  }  }  class marks{  public static void main(String []arr){    Scanner sc = new Scanner(System.in);    System.out.print("Enter your name : ");  String name1 = sc.nextLine();    System.out.print("Enter your Roll Number : ");  int roll = sc.nextInt();    System.out.println("Enter your marks : ");  System.out.print("Subject 1 - ");  int s1 = sc.nextInt();    System.out.print("Subject 2 - ");  int s2 = sc.nextInt();    Student a = new Student();    System.out.println("");  System.out.println("Marksheet");  System.out.println("Name : " + a.name(name1));  System.out.println("Roll Number : " + a.rollno(roll));  System.out.println("Marks - ");  System.out.println("Subject 1 : " + a.sub1(s1));  System.out.println("Subject 2 : " + a.sub2(s2));  System.out.println("Total : " + a.total(s1,s2));  System.out.println("Grade : " );  a.grade(s1,s2);  }  } |
| **RESULT:** | |
| **CONCLUSION:** | Studied the demonstration of classes and objects to solve given problems. |