PRACTICAL – 13

PROGRAM -1

AIM- Aim for point class program  
Write a program to explain the concept of class and object using point class.

CODE-

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| // Define the Point class  class Point {  // Attributes (data members)  private int x; // x-coordinate  private int y; // y-coordinate  // Constructor to initialize the point  public Point(int x, int y) {  this.x = x;  this.y = y;  }  // Method to set the x-coordinate  public void setX(int x) {  this.x = x;  }  // Method to get the x-coordinate  public int getX() {  return x;  }  // Method to set the y-coordinate  public void setY(int y) {  this.y = y;  }  // Method to get the y-coordinate  public int getY() {  return y;  }  // Method to display the coordinates of the point  public void display() {  System.out.println("Point coordinates: (" + x + ", " + y + ")");  }  // Method to add two points and return a new Point object  public Point add(Point other) {  int newX = this.x + other.x;  int newY = this.y + other.y;  return new Point(newX, newY);  }  }  // Main class to demonstrate the Point class  public class Main {  public static void main(String[] args) {  // Create two objects of the Point class  Point point1 = new Point(3, 4); // Initialized at (3, 4)  Point point2 = new Point(5, 6); // Initialized at (5, 6)  // Display the initial coordinates of both points  System.out.println("Initial Coordinates:");  point1.display();  point2.display();  // Add the two points  Point pointSum = point1.add(point2);  // Display the sum of the coordinates  System.out.println("Sum of points:");  pointSum.display();  // Modify the coordinates of point1  point1.setX(10);  point1.setY(15);  // Display the modified coordinates of point1  System.out.println("After modification P1:");  point1.display();  // Again add the modified point1 with point2  pointSum = point1.add(point2);  // Display the new sum after modification  System.out.println("New sum after modifying point1:");  pointSum.display();  }  } |

OUTPUT-

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