Simple Example: Class Definition and Use

```java
import java.util.Scanner;

/**
 * Simple program showing creation and use of two objects
 * @author Nick Howe
 * @version September 2016
 */
public class MyPointDistance {
    /**
     * Takes in two points and displays the distance between them
     */
    public static void main(String[] args) {
        int x, y;
        MyPoint p1, p2;
        Scanner input = new Scanner(System.in);
        System.out.print("X coordinate of first point?  ");
        x = input.nextInt();
        System.out.print("Y coordinate of second point?  ");
        y = input.nextInt();
        p1 = new MyPoint(x, y);
        System.out.print("X coordinate of first point?  ");
        x = input.nextInt();
        System.out.print("Y coordinate of second point?  ");
        y = input.nextInt();
        p2 = new MyPoint(x, y);

        System.out.print("X coordinate of first point?  ");
        x = input.nextInt();
        System.out.print("Y coordinate of second point?  ");
        y = input.nextInt();
        p1 = new MyPoint(x, y);

        System.out.print("X coordinate of first point?  ");
        x = input.nextInt();
        System.out.print("Y coordinate of second point?  ");
        y = input.nextInt();
        p2 = new MyPoint(x, y);

        System.out.println("The distance is "+p1.distanceTo(p2)+". ");
    }
}
// end of class MyPointDistance
```

```java
/*
 * Simple class representing a point in two dimensions
 * (Example only; better to use existing Java class Point)
 * This class has public fields, which is not generally recommended.
 *
 * @author Nick Howe
 * @version January 2017
 */
public class MyPoint {
    /** The x coordinate */
    public int x;

    /** The y coordinate */
    public int y;

    /** Create a new point at the origin */
    public MyPoint() {
        x = 0;
        y = 0;
    }

    /** Create a new point at the specified location */
    public MyPoint(int x, int y) {
        this.x = x;
        this.y = y;
    }

    /** Compute distance to another point
     * @param p: The point to compare to
     * @return the distance */
    public double distanceTo(MyPoint p) {
        // use Euclidean distance
        int dx = p.x-this.x;
        int dy = p.y-this.y;
        return Math.sqrt(dx*dx+dy*dy);
    }
}
// end of class MyPoint
```