

Homework 4 : Classes to represent Points and Lines

In this homework, you are to implement following classes of a drawing application. All the instance variables should be defined as private variables in your classes.

- Point class has the following methods
 - A constructor that sets the x and y coordinates of the point.
 - Accessor methods for the x and y coordinate
- Line class has the following methods
 - A constructor that sets the start and end point of the line.
 - Accessor methods for the start and end points.
 - A method that prints the coordinates of the point such as x= 3, y=5
- Polyline class has the following methods
 - A constructor that sets the point list
 - A method that prints the coordinates and index of the points in the polyline such as
 - ◆ Point 0: x= 3, y=5
 - ◆ Point 1: x= 6, y= 2
 - addPoint method that adds the given point to the end of the pointlist.
 - addPoint method that inserts the given point at the given index.
 - removePoint method that removes the point from the given index.
 - addLine method that adds the points of the given line to the end of the point list.
 - size method that returns the number of the points in the polyline.
- PolylineDemo class should have a main method (the only static method in your project) to test your classes. In the main method
 - Create an instance of Polyline which has three points.
 - Add a point to the polyline
 - Add a line to the polyline
 - Insert a point at the beginning of the polyline
 - Remove the last point of the polyline.
 - Print the coordinates of the points of the polyline

Point, Line and Polyline classes should be defined in the “shapes” package and PolylineDemo class should be defined in the “demo” package.

Due date: 29.02.2016 13:30

Submission:

- You will submit your homework to **onurkilincceker@gmail.com**
- Write CENG 1004 HW4 in the subject line of your email.
- To this email, you should attach your compressed deliverable file (zip file) which contains the source files of your application.
- The name of your zip file should be in the following format: StudentID_HW4.zip and you should replace StudentID with your own ID number. Assuming 1007090002 is your ID number, then the name of your zip file should be 1007090002_HW4.zip