CS3560 Homework 2

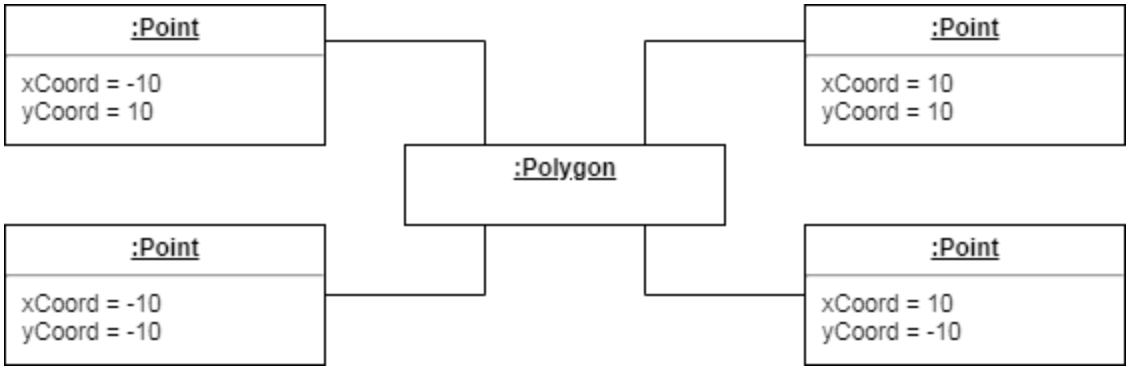
Be sure to read this document carefully. You are responsible to read and understand all of these instructions. If you have questions, be sure to ask, either in class, by email, or at office hours.

Description

For this homework, you will prepare some UML diagrams using Drawio. Save the actual Drawio files on your computer (in case you need to edit or resubmit the diagrams). However, do *not* submit these files. Instead, export your diagrams as .PNG files, then submit the .PNG files to Blackboard.

Make your diagrams neat. I know this is very subjective, but sloppy diagrams are hard to understand.

Diagram 1:
Prepare a class diagram for the object diagram shown here. Explain your multiplicity decisions. Does it make a difference whether or not a point could be shared between two polygons?



Diagrams 2 and 3:
Using your class diagram from above, prepare object diagrams for two triangles with a common side. Note that two triangles have a common side if two of the three points in one triangle have the same X and Y coordinates as two of the points in the other triangle.

In diagram 2, use the constraint that a point object can only belong to a single polygon. In diagram 3, a point could belong to more than one polygon.

Diagram 4. Prepare an activity diagram for computing a restaurant bill. There should be a charge for each item delivered. The total should be subject to tax. A service charge of 18% is applied for groups of six or more, but for smaller groups there should be a blank entry for a gratuity. Any coupons or gift certificates should be subtracted.

Collaboration vs Cheating

Recall that Cal Poly's Academic Integrity policy states that all homework should be your own work. You should not turn in someone else's work with your name on it. Since this is ***not*** a group project, you ***cannot*** work on the assignment together, turning in joint work.

Grading

This homework is worth 5 points (5% of your grade for the course). Your score will be computed as follows:

- **4 points:** Each of the diagrams is worth one point. If a diagram is missing something specified in the instructions, there will be a deduction.
- **1 point:** If your diagrams are neat, you earn this point. If the diagrams are sloppy, you lose this point!

Turning In Homework

You will submit your homework to Blackboard.

Due Date

The homework is due on **Apr 6**, by the end of the day.