CS1760 ADV OBJECT ORIENTED PROGRAMMING

Assignment 3

# Task

To use JavaFX's event-handling capabilities to draw, delete and move multiple polygons.

**Method**

Create a Java application with 3 **Buttons** and a container for the drawing.

The 3 **Buttons** are:

*Draw Polygon*: When clicked, the program goes into Draw mode. The user clicks to add a point and double-clicks to add a point and complete the polygon. **As points are added the whole of the polygon should be displayed.**

*Delete Polygon*: The user first selects a polygon from the drawing pane and then when this button is clicked the polygon is removed.

*Clear Polygons*: When this button is clicked, all polygons are deleted.

To move a polygon the user clicks inside a polygon and drags it.

When a polygon is selected, drawn or moved it should be displayed red, otherwise a polygon should be black. Since polygons may intersect, make sure that the selection process allows every polygon to be selected even if one is completely inside another.

It is very useful to use the **setDisabled** method for **Buttons** to control when the user can do certain things. For example, if no polygon is selected, the Delete button should not be enabled.

# Turning in the Assignment

Create files **Assign3.fxml, Assign3.java, Assign3Controller.java**. Upload a zip file containing all your project files. Also turn in a folder containing printouts of all source code and a completed Assignment Information Sheet. This assignment is due on Monday 17 February (bonus) or Wednesday 19 February. No late assignments accepted.

# Other Points

1. Use **MouseDraw** example to help with the structure of the assignment.

2. You may need to code events for pressing, clicking, dragging, releasing the mouse.

3. Look at the **Polygon** class in JavaFX for useful methods.

3. Use method **getClickCount**() in class **MouseEvent** to distinguish between one and two clicks.