COT 4521-001: Introduction to Computational Geometry (Fall 2018)

Project 2: Polygon Diagonals

1 Objectives

In this assignment you will implement some of the basic polygon functionality.

2 Ground Rules

This assignment is intended to be done alone. You may ask others for help with figuring out strategies. However, the code must be yours.

3 Assignment Instructions

- Download the provided skeleton code and complete the unfinished functions in `Polygon.pde`.

  - `boolean isSimple( )` — This function checks to see that the boundary of the polygon is simple.
  - `boolean pointInPolygon( Point p )` — Returns true if the point p is inside of the polygon.
  - `ArrayList<Edge> getDiagonals( )` — Returns all of the valid diagonals for the polygon.
  - `boolean ccw( )` — Returns true if the polygon is oriented counterclockwise.
  - `boolean cw( )` — Returns true if the polygon is oriented clockwise.

- To test your code the Processing skeleton provided gives visual feedback for creating polygons and testing your capabilities.

4 Submission

Compress your sketch into a single zip file and upload to canvas.