

COT 4521-001: Introduction to Computational Geometry (Fall 2019)

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 (MOSS will be used).

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.