



**Amirkabir University of Technology
(Tehran Polytechnic)**

Report

trapezoidalization and triangularization

Professor:

Dr. Mohades (mohades@aut.ac.ir)

Student:

Mohammadreza Ardestani ([9513004](#))

Mohammad Lashkari (9513435)

30, Nov, 2020

This project contains three phase:

1. Finding trapezoids
2. Dividing the polygon into monotonic polygons
3. Triangulating all monotonic polygons

(Part 1,2 are implemented by Mr. Lashkari and the last part by Mr. Ardestani)

Following explanation will adumbrate input and output format:

- Input format:

No more than 2 points should lie one the same line (General position assumption)

Example: if you want a polygon with these points (4,4.5), (4,2), (3,1), (1.5,1.5), (1,4), (3,3) as Vertices

Enter points in this format:

4 4.5

4 2

3 1

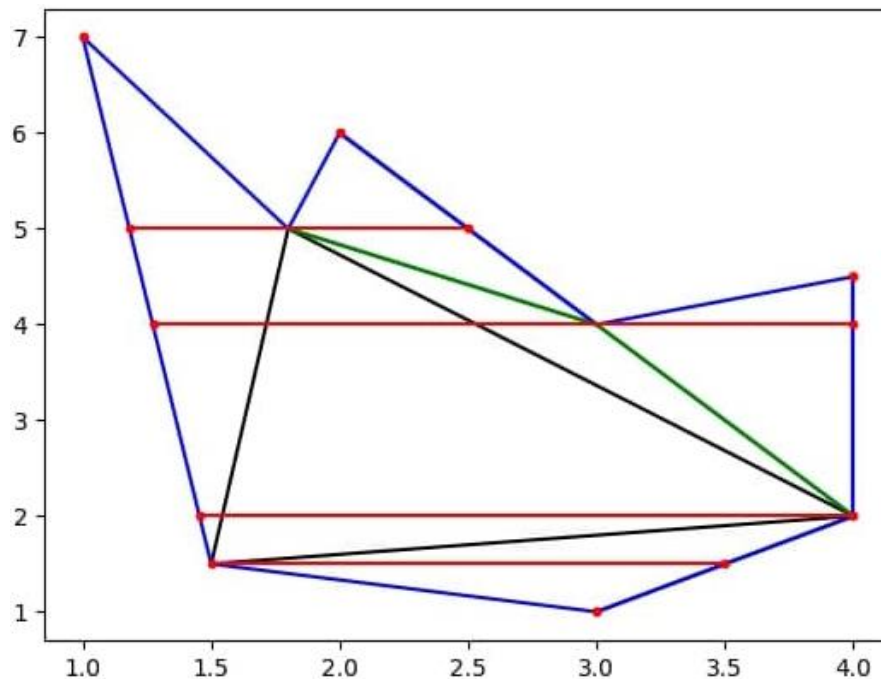
1.5 1.5

1 4

3 3

(Press inter at the end)

- Output format



Red lines are for Part1, green lines for Part2 and black line for Part3.
(Thanks for your attention)