

# CS133 Lab 7– Line Simplification

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## Objective

- Simplify a polyline using Douglas-Peucker algorithm

## Detailed Requirements

Define a data type Polyline as a list of Points. You are required to implement the Douglas-Peucker line simplification algorithm that, given a polyline and a threshold  $\epsilon$ , it returns a simplified version of the polyline where the points in the simplified line are displaced at most a distance of  $\epsilon$ .

## Functions

- Polyline Simplify(Polyline P, double epsilon)  
Simplify the input polyline  $P$  according to the given threshold and returns a new polyline.

Feel free to add any supporting functions as you see appropriate.