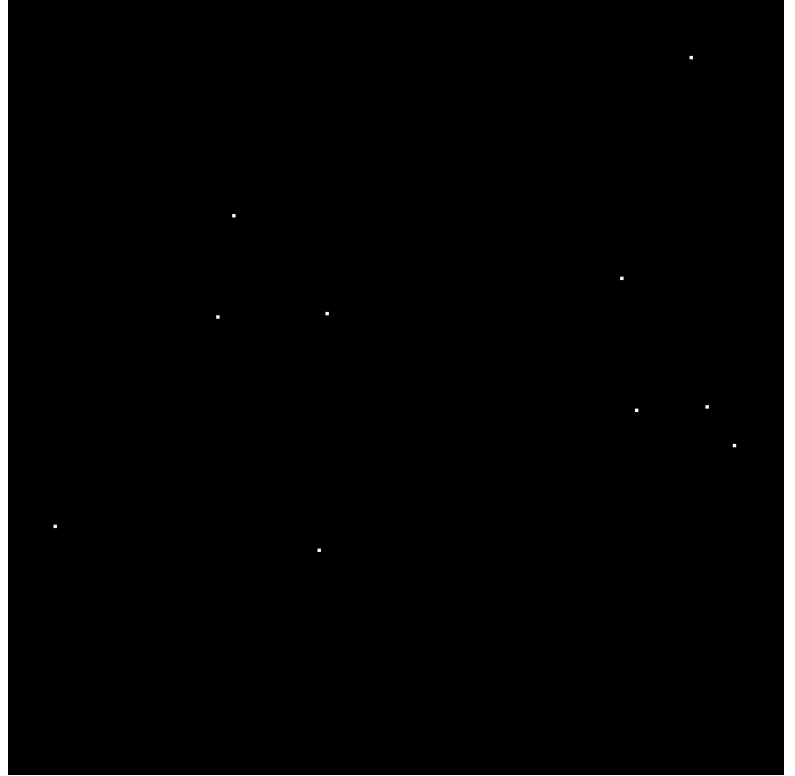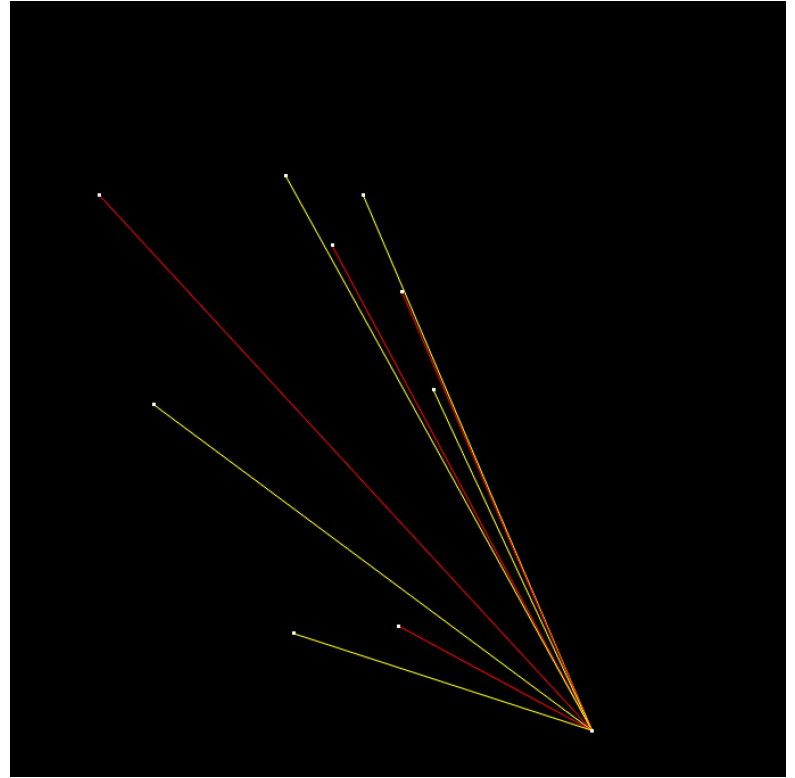# Largest Empty Circle

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Prateek Prakash

Random Set Generation
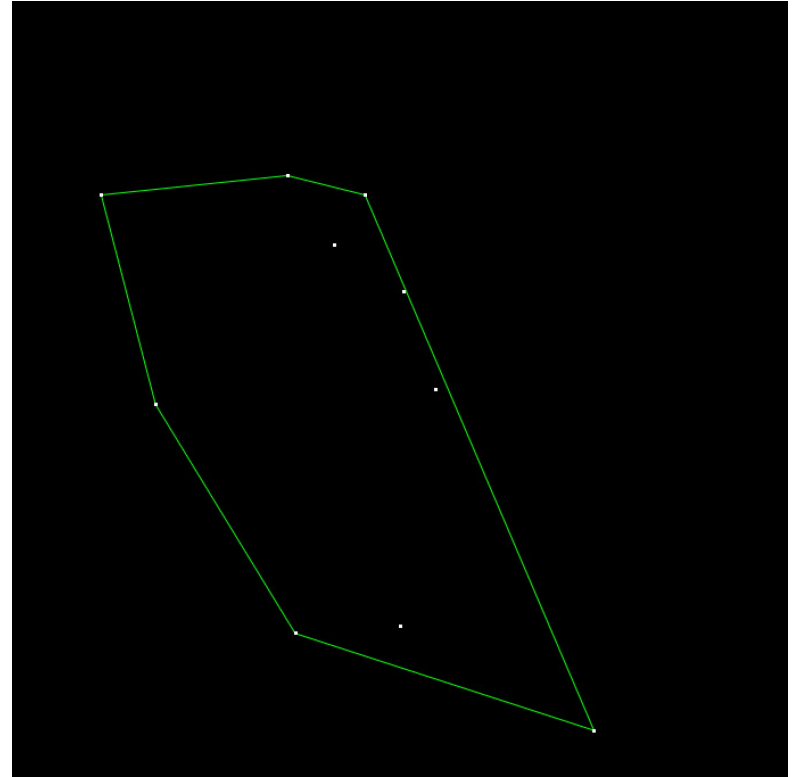
Algorithm: Brute-Force
Time Complexity: O(N)

Organize Set Counterclockwise
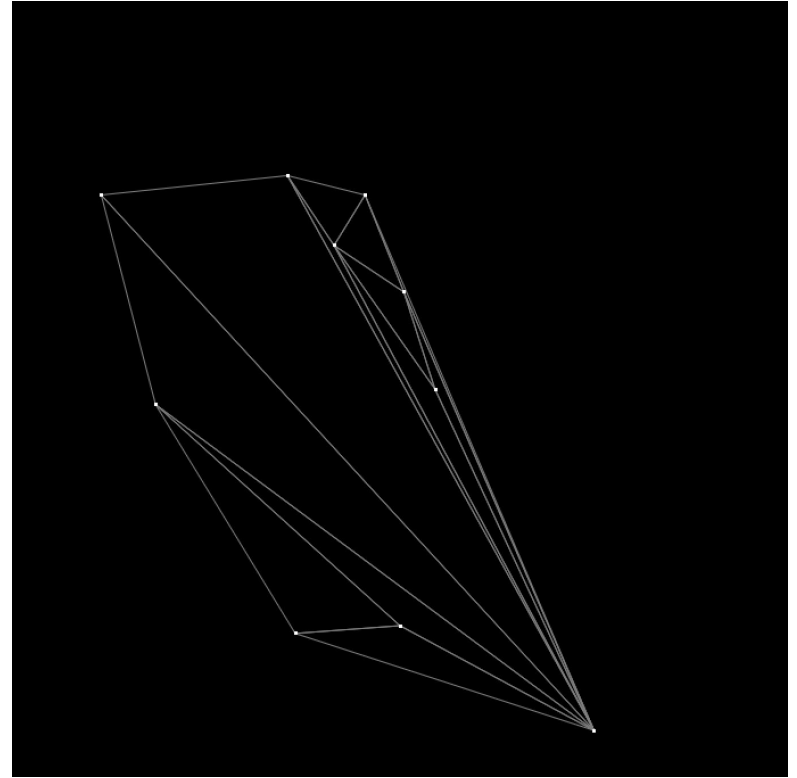
Algorithm: Brute-Force
Time Complexity: $O(N^2)$

Convex Hull Generation

Algorithm: Graham Scan
Time Complexity: O(N)
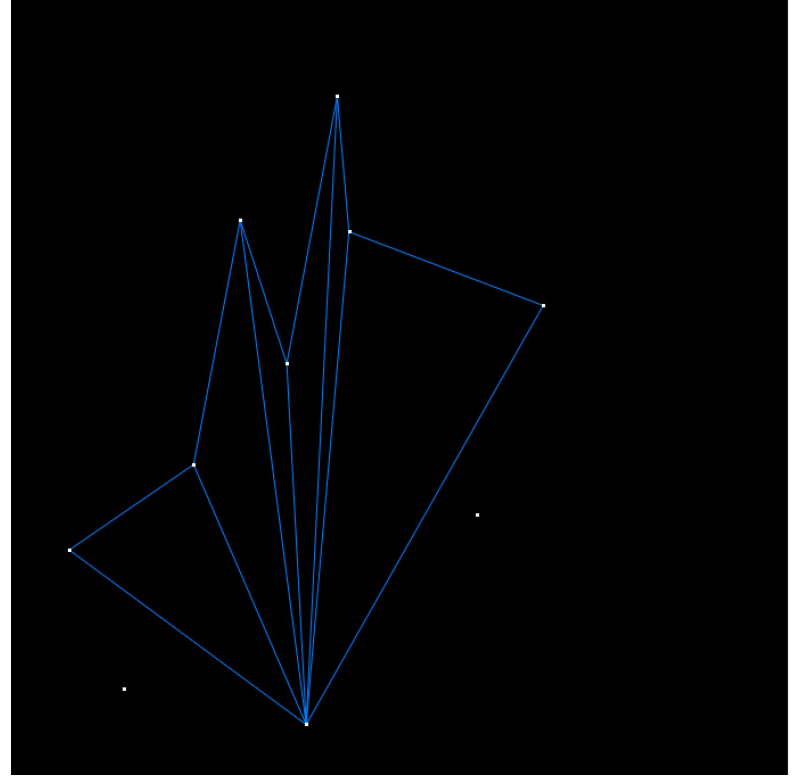
Triangulation Generation
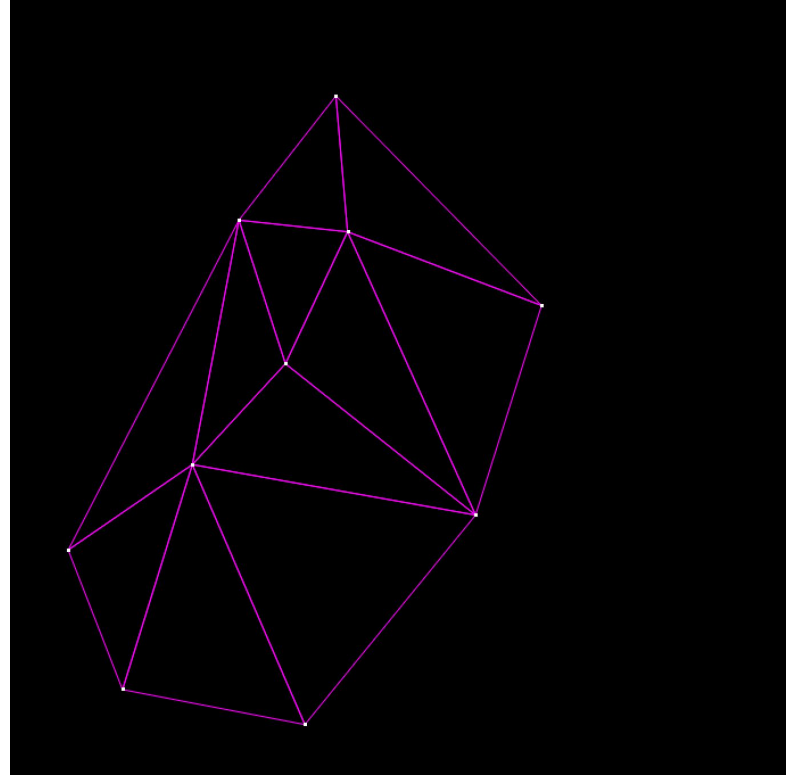
Algorithm: Convex Hull Method
Time Complexity: O(N • T)

Internal Edge Identification – P1
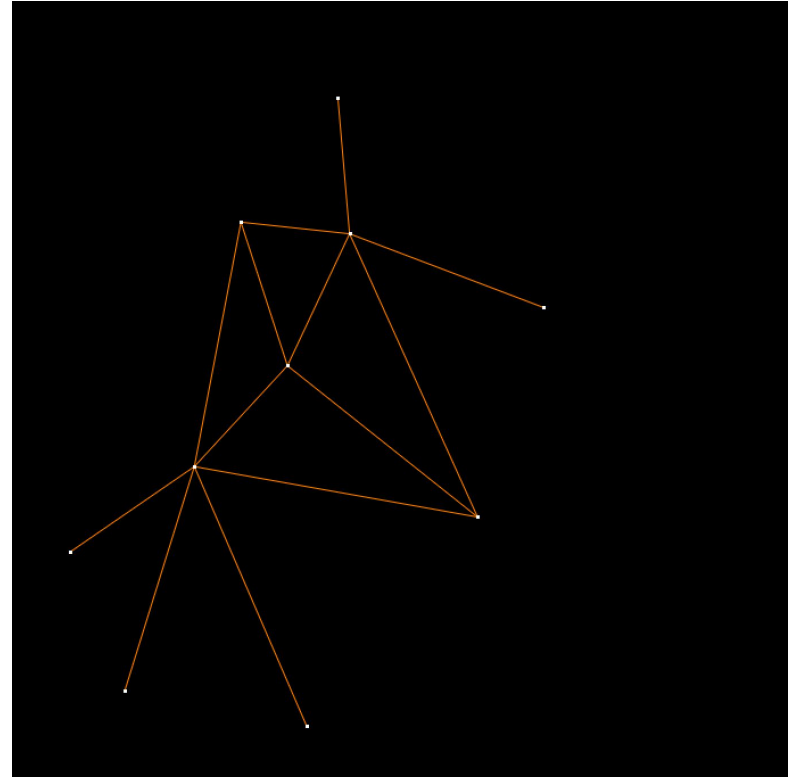
Algorithm: Brute-Force
Time Complexity: $O(T^2)$

Delaunay Generation

Algorithm: Edge Flipping – |A|
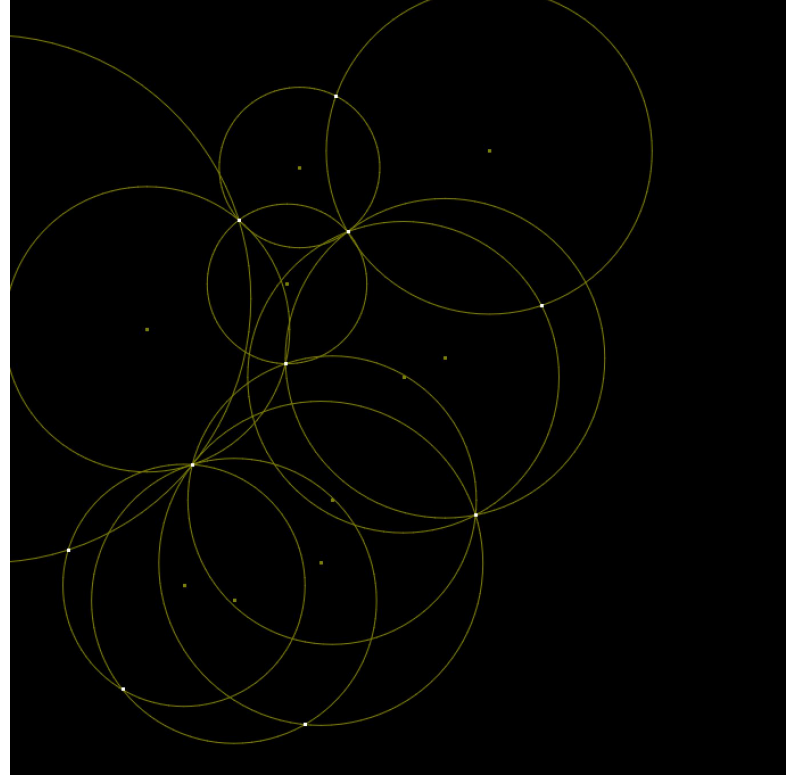Time Complexity: $\Omega(E^2)$

Internal Edge Identification – P2
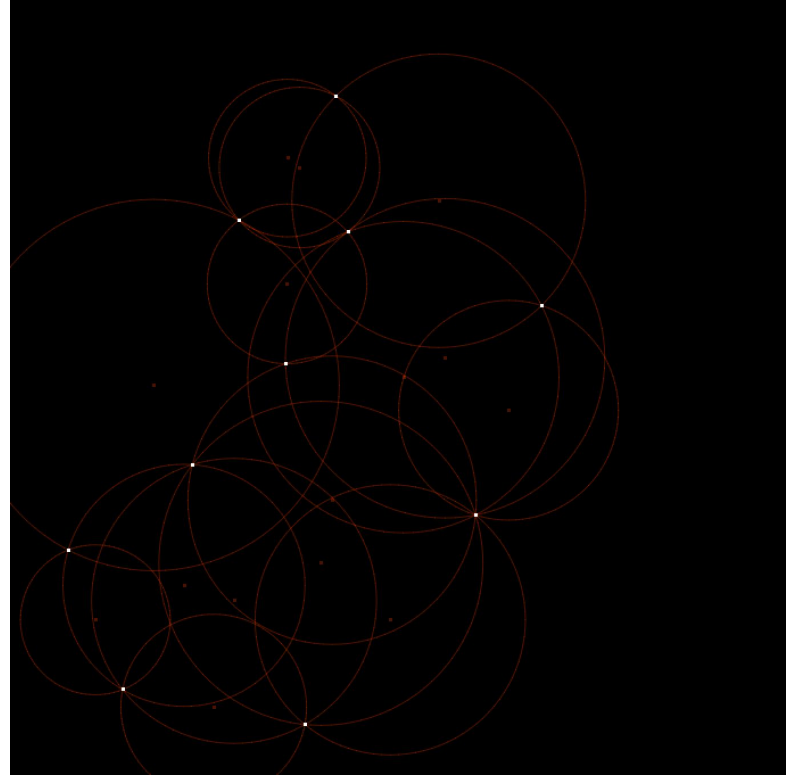
Algorithm: Brute-Force
Time Complexity: $O(T^2)$

Circumcircle Generation

Algorithm: Bisector Calculation
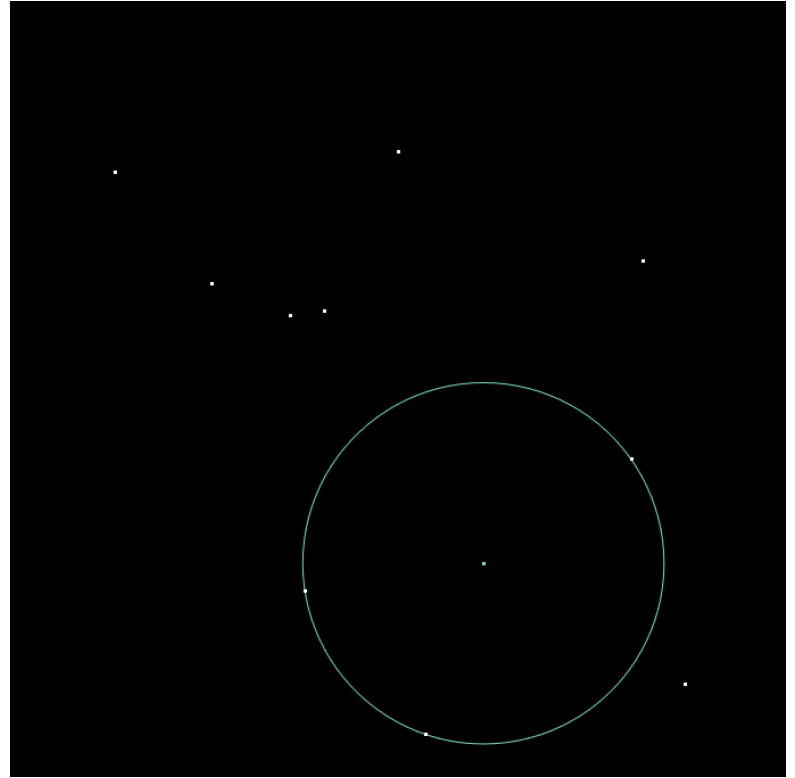Time Complexity: O(T)

Candidate Generation

Algorithm: Brute-Force
Time Complexity: $O(T^2)$

Largest Empty Circle Identification

Algorithm: Brute-Force
Time Complexity: O(C)

Demonstration

Questions & Answers