Planarity

Given two positive integers n and m, construct a random simple graph with n vertices and m edges and determine whether the graph is planar. If it is, draw it in such a way that there are no crossing edges. If it is not, determine the thickness of the graph.

Construct a random simple graph with n vertices and m edges and determine whether the graph is planar. If it is, draw a plane graph. If it is not, determine the thickness of the graph.

- simple graph
- planarity
- plane graph
- thickness

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- plane graph – the actual drawing
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- planarity – a graph that is planar can be drawn such that no edges cross each other
- plane graph – the actual drawing
- thickness – the smallest number of planar graphs into which the edges of G can be partitioned

Al Gore Rhythms

- Planarity check
- Thickness algorithm
- Drawing algorithm
-

Al Gore Rhythms

- Planarity check – we made a not-so-efficient algorithm
- Thickness algorithm
- Drawing algorithm
-

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- Planarity check – we made a not-so-efficient algorithm
- Thickness algorithm – works on some graphs
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- Planarity check – we made a not-so-efficient algorithm
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- Drawing algorithm – we didn't write a drawing algorithm
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Al Gore Rhythms

- Planarity check – we made a not-so-efficient algorithm
- Thickness algorithm – works on some graphs
- Drawing algorithm – we didn't write a drawing algorithm
- But we create did the script using libraries

Demo