

Praktikum Diskrete Optimierung

Due Date: Monday, 11th June 2012, 12:00

Aufgabe 1 (Planar graph coloring coloring)

Consider a strongly connected graph $G = (V, E)$. Implement and animate the third greedy algorithm from the tutorial, in a way that a “good” coloring is achieved in time $O(|V| \log |V| + |E|)$. The nodes should be displayed in their respective color and should be labelled with their respective position in the ordering σ . After termination of the algorithm, the number of colors used is displayed.

Hints

As input for your algorithm, use the undirected graphs `color1.gw` to `color6.gw`. Graphs `color1.gw` to `color4.gw` are planar, the other two are general graphs.