Homework assignment #3

November 21, 2019

You don't have to implement Graph or DFS classes yourself – if you prefer, you may use off the shelf classes (Dmitry can email to you if you don't have them).

Problem 1:

- Implement Ford-Fulkerson algorithm using classes Graph and DFS.
- Imagine that a biological system has n elements of class A and n elements of class B. Some of the elements of class A interact with elements of class B. However, each element cannot interact with more than a single other element at the same time. We believe that biological system reaches equilibrium when maximum number of elements are involved in interaction simultaneously. Using Ford-Fulkerson algorithm find the list of interacting elements.

  On the first line of the input there is n followed bu the list of interacting pairs of elements. Each element of a class is assigned a number from 1 to n.

  Input:
  3
  1 1
  1 2
  3 2
  2 3

  Output:
  1 1
  3 2
  2 3