CMSC451: Algorithms

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These are my notes for UMD's CMSC451: Algorithms. These notes are taken live in class ("live-TEX"-ed). This course is taught by Professor Clyde Kruskal.

Contents

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Stable Marriage Problem

Definition 0.1 (Stable Marriage Problem)**.** The Stable Marriage Problem states that given N men and N women, where each person has ranked all members of the opposite sex in order of preference, marry the men and women together such that there are no two people of opposite sex who would both rather have each other than their current partners. If there are no such people, all the marriages are "stable."

§1 Graph Algorithms

Note 1.1. The size of an adjacency list is $\Theta(m+n)$ whereas for adjacency matrix, the size is $\Theta(n^2)$.

Definition 1.2 (Depth-First Search)**.**