CPSC 320: Intermediate Algorithm Design & Analysis

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High-Level Course Learning Goal

Learn about a command and important set of problem types, algorithmic solution approaches, and analysis techniques.

Gain the tools and experience necessary to judge how a new problem might fit one of these categories, how to approach solving the problem, and how to analyze and adjust your solution.

2

Representative Problem: Residency Insanity

3

Accomplishments in Resident Matching

- Clearly defined meaningful terms and symbols (e.g., preference, matching, stable matching)
- Stated and related versions of the problem with differing complexity and abstractions (e.g., 1-to-1 vs. many-to-1 matching)
- Formally established whether the problem is solvable in general
- Formally established properties of our algorithmic approach, including performance

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What's Next?

- Read course policies on the website: http://www.ugrad.cs.ubc.ca/~cs320/
  - You are expected to become familiar in the next week with the complete website, including e.g. grading policies
- Join our Piazza site (linked above)
  - Access Code
- Review CPSC 221/EECE 320 (especially asymptotic analysis)
- Read and prepare for Wed! (Readings on the website.)

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