CS141: Intermediate Data Structures and Algorithms

Ahmed Eldawy
Welcome back to UCR!
Class information

- Classes: Monday, Wednesday, and Friday 11:00 – 11:50 AM
- Instructor: Ahmed Eldawy
- Office hours: Monday and Wednesday 10:00 – 10:50 AM @Bourns A-143. Conflicts?
- Email: eldawy@ucr.edu
- [Very Important] Subject line: “[CS141] …”
- Website http://www.cs.ucr.edu/~eldawy/20WCS141
Textbook

- Introduction to Algorithms. Third Edition
- Cormen, Leiserson, Rivest, and Stein
Course goals

- What are your goals?
- Analysis of algorithms
- Design of algorithms
- How to compare and choose different algorithms and data structures
- How to improve existing algorithms
Covered topics

- Analysis of algorithms
- Big-O notation
- Divide and conquer algorithms
- Greedy algorithms
- Dynamic programming
- Graph algorithms
- Computational geometry
Course work

› Class participation (5%)
› Five assignments (20%)
   › Prepared on Latex or any other word processor
   › Late policy: 20% per calendar day (up to four days)
› Two mid-terms (15% + 20% = 35%)
› Final exam (40%)

Wednesday, March 18, 2020
8:00 a.m. - 11:00 a.m.
Background

- Basic data structures (Lists, stacks, and queues)
- Sorting algorithms
- Binary search tree
- Heap data structure (Priority queue)
- Hashtables
- Graphs

Test your background