Review for midterm

Lecture 13
CS 312

Project

• Don’t use C++ stream libraries unless you can get your real time under 1 minute.
• Instead, use C scan functions.
• Not pretty, but faster.

Today

• Review class objectives so far
• Review a typical Midterm 1
• Get your feedback on the sample midterm

Midterm

• In class
• Open book, you may write in your book
• Closed everything else
• Designed to take 30-40 minutes
• Will include point values.
• Measures attainment of the following objectives...

Assessing Objectives

Objectives

1. Know how common greedy algorithms work (Dijkstra and Knapsack)
2. Understand significance of picking a good selection function in a greedy algorithm
3. Know how common divide and conquer algorithms work (Mergesort, Quicksort, Strassen’s alg)
4. Understand why picking a good pivot element is important for Quicksort
5. Apply Equation 7.1 to analyze the execution time of divide and conquer algorithms
Objectives

6. Pick threshold values to terminate recursion in divide and conquer solutions.
7. Apply constructive induction to appropriate problems
8. Compare the asymptotic upper bound (big-O notation) of an algorithm with the performance of an implementation of the algorithm on an average data set.
9. Compare sorting and searching algorithms in terms of execution time.
10. Explain why the existence and non-existence of divide and conquer algorithms is important to RSA.