Announcements

• Exam 2 back
• Read for next time Chap. 11.1-3 (just the part about selection sort, the first four pages)
• Reading Quiz on Blackboard
  – Due before class next time
• Assignment 7 out, due Tues, Dec 6
• One more APT assignment out
What is Computer Science?

• The Organization of Data, and Searching
Now let’s focus on searching

• Linear Search
  – linear_search1
  – linear_search2
  – linear_search3

• Compare and time three methods

• Binary search
  – algorithm
  – Tradeoff – data must be sorted to use
Binary Search

3 7 8 10 13 18 21 22 25 34 37 42 44 46 49
Binary Search

3 7 8 10 13 18 21 22 25 34 37 42 44 46 49
Thinking about Sorting
Jannie Tan

• Is sorting important?
• Is it a common problem?
• In what contexts do you encounter sorting?
Selection Sort

• Step 1: Find the minimum value
• Step 2: Swap it with the value in the first position
• Step 3: Keep going until the list is sorted
Selection Sort picks the Smallest!
SSS!
Correctness

• Why is algorithm correct?
Efficiency

• Is this algorithm efficient?
Code

• Let's code it!