Sample interview questions

Pre-break lecture
Fund2
Searching through an array

• Given a sorted array of integers, how can you find the location of a particular integer x?
Favorite C++ questions (review)

• What is polymorphism?

• What is a virtual function/method (in C++)
Interesting problems

• Write code or pseudocode to convert a string to an integer, known as atoi()

• How would you implement the random shuffle algorithm used for CardDeck?

• How would you compute $2^x$?
More challenging problems

• Algorithm: beating the stock market
  – Suppose you have an array where an element $A[i]$ is the price of a stock on day $i$. If you could buy and sell the stock just once, what is the best time to buy and sell?

• Design: how to use objects
  – What classes are needed for a poker game? OR
  – How would you use C++ to simulate traffic at a toll booth / intersection
Spoilers for after break

• You will be expected to know design patterns and explain them. Useful ones are:
  – Listener/observer
  – Singleton
  – Model/view controller