Kerry Ojakian's CSI 33 Class
Test 2 Review

1. See HW questions! And classwork questions!
2. Make a diagram of a Linked List with the elements 5, 4, 1 (consider differences beween Python and C++ implementations).
   (a) Make a diagram to show ALL the steps for inserting a 7 between the 4 and the 1.
   (b) Make a diagram to show ALL the steps for inserting a 9 at the end of the list.
   (c) Make a diagram to show ALL the steps for inserting a 2 at the beginning of the list.
   (d) You now have the list: 2, 5, 4, 1, 9. Show ALL the steps for deleting the third node (i.e. contains data 4)
   (e) You now have the list: 2, 5, 4, 1, 9. Show ALL the steps for deleting the last node.
   (f) You now have the list: 2, 5, 4, 1, 9. Show ALL the steps for deleting the first node.
3. Make a diagram of a Tailed Linked List with the elements 3, 4, 1. Do some operations on it.
4. Make a diagram of a Doubly Linked List with the elements 3, 4, 1. Do some operations on it.
5. Do some stack and queue operations. Like build a stack with all the even numbers less than n, smallest on top.
6. Do some postfix and prefix calculations.
7. Do some theta analysis of programs
   (a) Programs with loops.
   (b) Recursive factorial program
   (c) Check if a number is prime.
   (d) Checking if a number is even.
   (e) Go through a list checking if all are even.
   (f) Go through a list finding the sum of every 100th number
8. Do some Big O calculations.