Office Hours

Mondays: 9 - 10am

Finals Week:

For help, please call:

- Cell
- Direct
- Code

- Happy Table
- True (C-2-3, 2-3, AVL, Black, AVL, B-00)
- BST

*Final Exam Required*
Name: _____________________________________________
Date: __________________________
Email Address: __________________________

Please limit "short answer" questions to 1-2 sentences.

1. Short Answer (25 points) -- Limit your answers to 2-3 sentences --
   a) Explain the difference between the insert algorithm for a 2-3 tree vs. a 2-3-4 tree.

   b) Explain the benefits of hash tables.

   c) Compare and contrast the efficiency of two sorting algorithms (of your choice) -- include execution speed as well as memory concerns in your answer.

   d) Explain the benefits and drawbacks of the AVL tree.

   e) Explain how much memory is required to manage a 2-3-4 tree.

   f) Explain how much memory is required to manage an AVL tree.
2. (25 points) Given the following data, draw the following trees:

a) AVL tree

b) Delete _______ from the tree and draw the resulting AVL tree:

c) 2-3 tree

d) Delete _______ from the tree and draw the resulting 2-3 tree:

e) 2-3-4 tree

f) Now, add 90 to the 2-3-4 tree—what would the resulting tree be?