Writing Assignment # 2

Trees

Due February 8, 2010

1. Sequential search in a symbol table with N items requires how many comparisons for a search hit on average?

2. In the worst case, a search in a Binary Search tree with N keys can require how many comparisons?

3. Draw the BST that results when you insert items with keys B I N A R Y T R E E, in that order, into an initially empty tree.

4. From the above generated tree, remove the Y and draw the resulting tree.

5. Can you guarantee that you can guess the right number between 1 and 1,000,000 (inclusive) within 20 questions? If so, prove it. An example set of questions will do.