Homework 06 - some bst

Prof Bill - Feb 2020

Due: **Mon Feb 17, 2020** (bring to class)

Reading:

- ❏ Read: Sedgewick Algorithms 3.2 BST, algs4.cs.princeton.edu/32bst
- ❏ Read: Sedgewick Java 4.4 Symbol Tables (just the BST part), introcs.cs.princeton.edu/java/44st
- ❏ Play: Run some (very helpful!) BST animations , www.cs.usfca.edu/~galles/visualization/Algorithms.html

thanks...yow, bill

All numbers courtesy the fine people at www.random.org.

1. Draw a BST **inserting** these numbers (in this order).

Here are your random numbers:

37	33	10	48	88	99	57	5	86	66

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2. Now, **remove** these numbers: 5, 57, 37

3. What **properties** does each BST node have?

4. What is the average and worst-case **Big-O** performance for BST search and insert?

5. What problems may occur if your BST becomes **unbalanced**?