Cosc 2P03 Fall 2014
Assignment#2

(Due date for assignment is Friday Oct. 3rd 4:00 p.m., Late date Monday Oct.6th, 4:00 p.m.)

Data Input Below.

Objective

Build and traverse a Binary Search tree using several traversal methods.

The Assignment

Implement a BST which has a String element and thus represents the Key as well; add an integer variable C which will represent the number of occurrences (count) of the element. Load the BST with the provided data. When a duplicate (element already in the BST) is encountered, increment the counter. Once done, run the following traversals in the following order. Verify that each traversal is correct by comparing it to previous output.

a). Recursive, Pre-Order, In-Order and Post-Order traversal
b). Implement the iterative In-Order Traversal, using Stacks.
c). Run the recursive In-Order again to verify the tree is still intact.

Output should consist of the word followed by the number of occurrences.

Data Input Above.

Build the BST once again using the supplied input. This time thread the tree as you build it. Output the following.

d). An In-Order output using the threaded traversal.
e). A Recursive In-Order Traversal.

The data for this assignment is the text between but not including the headings Data Input Below and Data Input Above. You are to treat each word as case sensitive. You may ignore punctuation, brackets, white space and hyphens. A word can be a number. All words are to be trimmed.

Submission Requirements:

- **Cover Sheet** completely filled out, available from: "http://www.cosc.brocku.ca/coverpage" Note: your assignment will not be marked unless one is submitted with the assignment on the assignment due date.
- **Commented and properly documented** source code listing, use Java Doc style.
- Listing of any input you used to test your program.
- Listing of your output which reflects the input.

- Source code is to be Java.
- Electronic submission, run the script "submit2p03" from sandcastle.
- Statement on coversheet with following information.
    - Platform, e.g. Mac, PC, Commodor 64, my Java enabled wrist watch.
    - Compiler Version, e.g. Java 1.6, Java 1.7 e.g.

Good Luck