Homework 4 – ITEC 3150, Fall, 2018

Due Date: Friday, November 2, 2018 by 11:59 PM - NO LATE HOMEWORK ACCEPTED

Create a program to read in the words from the attached text file (a text version of a children’s book). Using a binary search tree, keep a count of the number of times each word is used in the text file. After reading in and counting the words, print the words and their counts in reverse alphabetical order in a user-friendly, easy to read manner.

Example output:

Word Count

the 300

a 750

Hint: Instead of creating a BST of String, create a new class that contains a String attribute and a count attribute. Store this in the BST instead of just the String. When adding, if the word is already in the BST, increase the count, if not, add it appropriately Make sure you implement the Comparable interface for this class to determine alphabetical order.

Hint 2: Look at SpellCheck.java also attached.

You may use the BST.java example file in D2L, but will need to modify the add method it to update the count on existing words and add method(s) to print in reverse alphabetical order.

Grading Criteria

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| --- | --- |
| ~~Reads words from given text file~~ | 10 |
| ~~Correctly creates a class to hold words and count~~ | ~~20~~ |
| Correctly modifies BST add class to update count | 20 |
| Correctly adds new class to a BST | 15 |
| Correctly prints words and counts in reverse alphabetical order | 20 |
| Meets coding standards | 15 |