Text File Scanner Application Software Design Document

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1. Overview

This software application provides a text file scanner that counts the total number of words, the total number of different words (ignoring case) and the count for each different word in a graphical user interface.

2. Design

The text file scanner is built from two modules: a graphical user interface module and a text file scanner module.

The graphical user interface module presents a window for the user containing an area where the user is either able to enter the file path of the text file they want or they can click the browse button presented next to the text area, which will launch a file browser where they will be able to select the desired text file. If the user selects a file via the browse button then that file path will be displayed in the text area. Below these there will be a button that is labelled "Scan!", this will be what launches the file scanner on the desired text file selected from before. After the scan has been completed a results window will appear displaying the total number of words, total number of different words, and each word with the number of times appear. A visual example of what this will look like can be found in Figure 1.

The text file scanner module is a class that contains a function that will take in the file path of the text file the user has selected. This function will take that text file and have it be read by a scanner and have each individual word will be placed into a Hash map. After all of the words have been placed, this function will then loop through the Hash map and output the total number of words, the total number of different words and the count for each different word. These outputs will be saved with setter functions which then can be accessed by getter functions. This will allow for an easy way to pass the results from the file scanner to the graphical user interface.

When the user either types in the file path or selects it via the browse button and the hits the "Scan" button the file path of the text file will be passed to the file scanner, where the file will be scanned and the total number of words, the total number of different words and the count for each different word. These results will then be stored with setter functions. The graphical user interface will then be able to obtain the results via getter functions which will then have that information displayed in an additional text field labeled "Scanner Results".
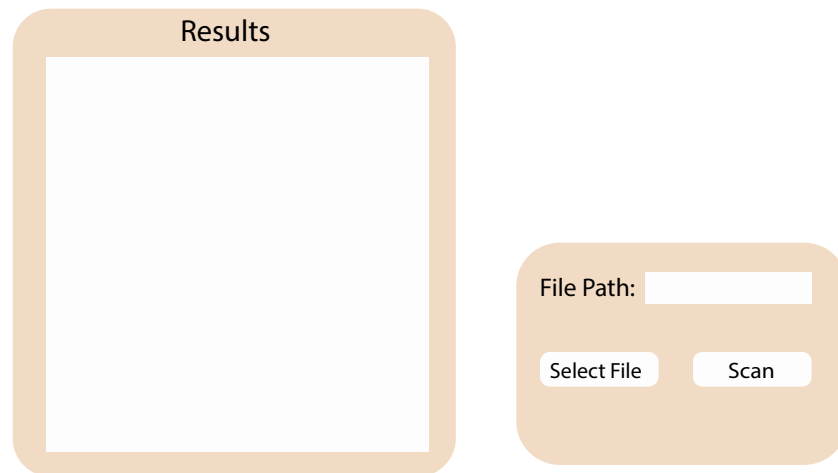
Figure 1: Example User Interface Layout

3. Change Log

24 September 2017 - Bergstrom - Created
26 September 2017 - Bergstrom – Added GUI figure
26 September 2017 - Bergstrom – Changes to design of the file scanner module
27 September 2017 – Bergstrom – Changed design of the file scanner module by adding getter and setter functions as part of the work flow.
08 October 2017 – Bergstrom – Changed the design of the GUI and the workflow for the results.