

CS 212 – Fall 2022 – Project 2

Assigned: 12 October 2022
Due: 25 October 2022
Cutoff: 28 October 2022

Use linked lists to store and sort words

Create a class called *WordList* based on the linked list with head node as shown in lecture. The data in the nodes should be a *String*.

Create a class called *UnsortedWordList* that extends *WordList*. It should have an *append* method.

Create a class called *SortedWordList* that extends *WordList*. It should have a method called *add* which takes a *String* as a parameter and inserts that word into the list in a position so that the list remains sorted.

Read from the file and add to the sorted list

For each line in the input file (same file as in project 1), break the line into individual words (Strings) and insert each word into the unsorted list (using *append*), and into the sorted list (using *add*).

Display the results in a GUI with a *GridLayout* of one row and three columns. The first column, as in project 1, should contain the original text, the second column the unsorted words, and the third column the sorted words.

To break down the line of text into individual words, you can consider (1) using a *StringTokenizer*, (2) scanning the line with the *charAt* method and using the *String substring* method (3) using the *split* method.

Submitting the Project.

You should now have the following files to submit for this project:

```
Project2.java
WordGUI.java
WordList.java
UnsortedWordList.java
SortedWordList.java
```

(You do not have to submit *TextFileInput.java* or the input file.)

Submit a jar file.

Create a jar file called **Project2.jar** making sure that it contains source code (.java files) and submit that.

Upload your project to Blackboard by the due date for full credit. Do not send projects by email.