

<b>CS 212 – Spring 2017 – Project 3</b>
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Assigned: 29 March 2017

Due: 19 April 2017

Cutoff: 24 April 2017

1. Create a class hierarchy which has an abstract class called *WordList* (the same class as in project 2 but it is abstract). This class should have two subclasses: *UnsortedWordList* and *SortedWordList*, each having a method called *add*. In the *UnsortedWordList* the method *add* will add to the end of the list (append), and in the *SortedWordList* it will do an insert. So now, rather than in project 2 where you used two of the same kind of list (*WordList*) you will use one unsorted list and one sorted list.
2. Create a new exception called *IllegalWordException* by extending *IllegalArgumentException*.
3. When you create a new *Word* from a String read from the input file, catch any exceptions thrown by the constructor and print the offending string to the console along with the message from the Exception. The constructor should check that the word is 3 characters, and all the characters are letters.
4. Add a File menu to your GUI which has menu items for Open and Quit. You should now be able to select an input file using the GUI.

The format of the input file will be the same as Project 1.

### Submitting the Project.

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

```
Project3.java
Word.java
WordGUI.java
WordNode.java
WordList.java
UnsortedWordList.java
SortedWordList.java
FileMenuHandler.java
IllegalWordException.java
```

### Submit a jar file.

Create a jar file called **Project3.jar** and submit and upload it to Blackboard by the due date for full credit.