EE422C Project 3 (Word Ladder) Test Plan

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We tested our program using JUNIT. We modularized our testing to test each case individually to easily isolate problems. We tested to see if the word ladder worked correctly with normal input, if there is no word ladder, if the same word was used for the start and finish, if an input with abnormal capitalization was ignored, if the start or end words were not in the dictionary, and if the word ladder worked correctly for another pair of words. We did not the test if the command /quit worked using JUNIT as we could not get the Scanner to work while the test was running. To get around this, we tested it in the main method with our own user input.

1.
   a) *TestSameWordDFS*
   b) If DFS will return a word ladder of the repeated word twice only.
   c) None
   d) There is no word ladder between X and Y.
      [X Y]
   e) If the returned word ladder is the same word repeated with a size of 2.
   f) Should be very fast as it will not go through the dictionary.

2.
   a) *TestSameWordBFS*
   b) If BFS will return a word ladder of the repeated word twice only.
   c) None
   d) There is no word ladder between X and Y.
      [X Y]
   e) If the returned word ladder is the same word repeated with a size of 2.
   f) Should be very fast as it will not go through the dictionary.

3.
   a) *CaseDFS*
   b) If DFS will return a valid word ladder, ignoring input capitalization.
   c) None
   d) A ZZZ -rung word ladder exists between X and Y.
      [X …Y]
   e) There are no duplicates in the word ladder, and if it is a valid word ladder
   f) The word ladder for money and stone using DFS is very long.

4.
   a) *CaseBFS*
   b) If BFS will return a valid word ladder, ignoring input capitalization.
   c) None

d) A ZZZ -rung word ladder exists between X and Y.
[X …Y]
e) There are no duplicates in the word ladder, and if it is a valid word ladder
f) The runtime to find the word ladder between stone and money is quite long for BFS.

5.

a) StartNotInDicBFS
b) If the start word is not in the dictionary, it will not do a search.
c) None
d) There is no word ladder between X and Y.
[X Y]
e) If the "word ladder" returned only contains X and Y
f) None

6.

a) StartNotInDicDFS
b) If the start word is not in the dictionary, it will not do a search.
c) None
d) There is no word ladder between X and Y.
[X Y]
e) If the "word ladder" returned only contains X and Y
f) None

7.

a) EndNotInDicBFS
b) If the end word is not in the dictionary, it will not do a search.
c) None
d) There is no word ladder between X and Y.
[X Y]
e) If the "word ladder" returned only contains X and Y
f) None

8.

a) EndNotInDicDFS
b) If the end word is not in the dictionary, it will not do a search.
c) None
d) There is no word ladder between X and Y.
[X Y]
e) If the "word ladder" returned only contains X and Y
f) None

9.

a) worksDFS
b) Finds the word ladder between X and Y.
c) None

d) A ZZZ -rung word ladder exists between X and Y.
   [X …. Y]
e) The word ladder is valid and there are not duplicates.
f) None

10.

a) worksBFS
b) Finds the word ladder between X and Y.
c) None
d) A ZZZ -rung word ladder exists between X and Y.
   [X …. Y]
e) The word ladder is valid and there are not duplicates.
f) None