EE422C Project 3 (Word Ladder)

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Our goal for our testing was to confirm that our program worked through rigorous testing and careful selection of test cases. We decided to use JUNIT testing to narrow the scope of our tests and increase the durability of our program. We split our tests into modules to individually test initialization, Breadth First Search, and Depth First Search. Our tests covered long word ladders, short word ladders, zero-length word ladders, and ladders of a length that were not predetermined. We did not cover the parsing function in our JUNIT test cases, but rather tested this outside of JUNIT. All tests require initialize to be run before the test.

1.
    a. Test name
    b. What feature does the test cover
    c. Set up for the test – initialization
    d. Expected output for a good module.
    e. The pass/fail criterion for the test
    f. Any comments, if any
2.
    a. BFS Test1
    b. This feature tests the example provided in the project description
    c. Requires "money" and "stone" as inputs
    d. We expect a 8 rung ladder as the result
    e. Specifically 8 rungs on the ladder
3.
    a. BFS Test2
    b. Tests some random words to ensure the algorithm works under normal situations
    c. "brank" and "brays" as inputs
    d. Expect a short ladder <15 words as the result
    e. No errors or exceptions thrown and printed outputs
4.
    a. BFS Test3
    b. Tests the 0 rung ladder
    c. "peach" and "TEACH" as inputs
    d. Expect a 0 rung ladder
    e. Two words should be printed as well as 0 in place of N
5.
    a. BFS Test4
    b. Test to confirm that DFS gives a suboptimal result compared with BFS
    c. "wrote" and "amigo" as inputs
    d. Expect a ladder shorter than the DFS version
    e. No errors or exceptions thrown and printed outputs
6.
    a. DFS Test1
    b. Test some common words for large rung ladder
    c. "fleer" and "teeth" as inputs

  d. Expect a long ladder since common words
  e. No overflow exceptions

7.
  a. DFS Test2
  b. Test similar to piazza post for consistency and comparing with classmates
  c. "money" and "acidy" as inputs
  d. Expect a ladder of undetermined length (nonzero)
  e. Printed output with no errors

8.
  a. DFS Test3
  b. Confirmation that DFS gives suboptimal result
  c. "wrote" and "amigo" as inputs
  d. Expect ladder longer than BFS version
  e. Printed output with no errors

9.
  a. DFS Test4
  b. Test to determine that DFS cannot find this word ladder
  c. "whump" and "xylan" as inputs
  d. Expect no ladder
  e. No errors or overflow exceptions

10.
  a. DFS Test5
  b. 0 rung ladder test
  c. "bread" and "tread" as inputs
  d. Expect a 0 length ladder
  e. Printed output, no errors