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The goal with our test cases was to take care of the obvious test cases (no word ladder exists, one-word ladder). In addition, we wanted to test words that return ladders over 10 rungs. In addition, we tested a few random words expecting a ladder of 3-8 rungs. Since we are following an algorithm, we should not have logic errors for unique test cases. If the algorithm proves sufficient for end cases as well as a condition in the middle, the program should suffice for all searches.

1.

a) One\_Away\_BFS

b) This test covers when two words are one away from each other

c) money->honey

d) “Money”

“Honey”

e) If test runs and prints above output

f) Test should run quickly since only one away (under 1 second)

2.

a) Two\_Away\_3\_Letter\_BFS

b) This test covers when two words are two letters away.

This test covers when words are not five letters.

c) hit->dot

d) 2 rung ladder between “hit” and “dot”

e) Expected output

f) Under 1 second

3.

a) No\_Match\_Long\_BFS

b) This test covers two words that do not have a word ladder

c)

d) No ladder exists message

e) No ladder exists message formatted correctly

f) Run time will be significantly longer (around a couple minutes)

4.

a) Long\_Match\_BFS

b) This test covers two words that will produce a long ladder

c) stone -> money

d) Properly outputted, 10-rung ladder

e) Runs properly and finds best path

f) Run time will intermediate to long (about a minute)

5.

a) No\_Match\_Short\_BFS

b) This covers two words that do not have a ladder

c) angst->alula

d) no word ladder

e) runs properly and output formatted well

f) Run time will be short, angst does not have a lot of connections (under 10 seconds)

6.

a) Medium\_Match\_BFS

b) This covers two words that have a medium-length ladder

c) books->lulls

d) 6 rung latter from books to lulls

e) Run properly and format well

f) Run time will be intermediate (about 30 seconds)

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1. Long\_Match\_BFS\_2
2. This covers a long word ladder
3. Middy->breed
4. 11 rung ladder from middy to breed
5. Run properly and format well
6. Run time be intermediate to long(1 minute)