

Given two words (*beginWord* and *endWord*), and a dictionary's word list, find the length of shortest transformation sequence from *beginWord* to *endWord*, such that:

1. Only one letter can be changed at a time.
2. Each transformed word must exist in the word list.

Note:

- Return 0 if there is no such transformation sequence.
- All words have the same length.
- All words contain only lowercase alphabetic characters.
- You may assume no duplicates in the word list.
- You may assume *beginWord* and *endWord* are non-empty and are not the same.

Example 1:

Input:

beginWord = «hit»,
endWord = «cog»,
wordList = [«hot», «dot», «dog», «lot», «log», «cog»]

Output: 5

Explanation: As one shortest transformation is «hit» → «hot» → «dot» → «dog» → «cog» return its length 5.

Example 2:

Input:

beginWord = «hit»
endWord = «cog»
wordList = [«hot», «dot», «dog», «lot», «log»]

Output: 0

Explanation: The *endWord* «cog» is not in *wordList*, therefore no possible transformation.