**127. Word Ladder**

Hard

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A **transformation sequence** from word beginWord to word endWord using a dictionary wordList is a sequence of words such that:

* The first word in the sequence is beginWord.
* The last word in the sequence is endWord.
* Only one letter is different between each adjacent pair of words in the sequence.
* Every word in the sequence is in wordList.

Given two words, beginWord and endWord, and a dictionary wordList, return *the****number of words****in the****shortest transformation sequence****from* beginWord *to* endWord*, or*0*if no such sequence exists.*

**Example 1:**

**Input:** beginWord = "hit", endWord = "cog", wordList = ["hot","dot","dog","lot","log","cog"]

**Output:** 5

**Explanation:** One shortest transformation is "hit" -> "hot" -> "dot" -> "dog" -> "cog" with 5 words.

**Example 2:**

**Input:** beginWord = "hit", endWord = "cog", wordList = ["hot","dot","dog","lot","log"]

**Output:** 0

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

**Constraints:**

* 1 <= beginWord.length <= 10
* endWord.length == beginWord.length
* 1 <= wordList.length <= 5000
* wordList[i].length == beginWord.length
* beginWord, endWord, and wordList[i] consist of lowercase English letters.
* beginWord != endWord
* All the strings in wordList are **unique**.