

Hash Table

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244. Shortest Word Distance II Premium

Solved

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Design a data structure that will be initialized with a string array, and then it should answer queries of the shortest distance between two different strings from the array.

Implement the WordDistance class:

WordDistance(String[] wordsDict) initializes the object with the strings array wordsDict.

int shortest(String word1, String word2) returns the shortest distance between word1 and word2 in the array wordsDict.

Example 1:

Input

["WordDistance", "shortest", "shortest"]
[[["practice", "makes", "perfect", "coding", "makes"], ["coding", "practice"], ["makes", "coding"]]

Output

[null, 3, 1]

Explanation

WordDistance wordDistance = new WordDistance(["practice", "makes", "perfect", "coding", "makes"]);
wordDistance.shortest("coding", "practice"); // return 3
wordDistance.shortest("makes", "coding"); // return 1

Constraints:

1 <= wordsDict.length <= 3 * 10⁴

1 <= wordsDict[i].length <= 10

wordsDict[i] consists of lowercase English letters.

word1 and word2 are in wordsDict.

word1 != word2

At most 5000 calls will be made to shortest.

Seen this question in a real interview before? 1/5

Yes

No

Accepted 153.2K | Submissions 250.2K | Acceptance Rate 61.2%

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1K 7

</> Code

Python3

Auto

```
1 class WordDistance:
2
3     def __init__(self, wordsDict: List[str]):
4         self.dictx = {}
5
6         for i in range(0, len(wordsDict)):
7             if wordsDict[i] not in self.dictx:
8                 self.dictx[wordsDict[i]] = [i]
9             else:
10                self.dictx[wordsDict[i]].append(i)
11
12
13     def shortest(self, word1: str, word2: str) -> int:
14
15         min_distnce = math.inf
16
17         for i in self.dictx[word1]:
18             for j in self.dictx[word2]:
19                 val = abs(i-j)
20                 if val < min_distnce:
21                     min_distnce = val
22
23         return min_distnce
24
25
26
27 # Your WordDistance object will be instantiated and called as such:
28 # obj = WordDistance(wordsDict)
29
```

Saved

Ln 9, Col 18

Testcase Test Result

Accepted Runtime: 39 ms

Case 1

Input

["WordDistance", "shortest", "shortest"]

[[["practice", "makes", "perfect", "coding", "makes"], ["coding", "practice"], ["makes", "coding"]]]