

GetAhead - Interview Practice 5

Word Hunting

Given a 4X4 grid of letters and a dictionary, find the longest word from the dictionary that can be formed in the grid.

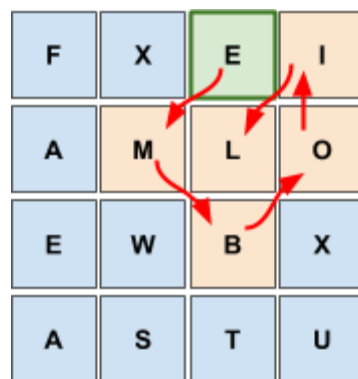
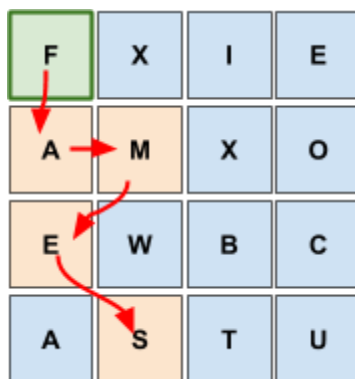
The rules for forming a word are:

- Start at any position on the board
- Move in any of the up to 8 directions to choose another letter
- Repeat
- Words must be at least 3 characters long
- You cannot reuse a letter in a given position in the same word.

You are given a dictionary, with two helper functions: `isWord()` to check if a word is valid and `isPrefix()` to check if a string is a prefix of some valid word.

Examples:

For the grid on the left, the longest word is **FAMES**, for the one on the right, it is **EMBOIL** (note that there might be more than one solution, for example on the left **EMBOLI** is also valid, and same length):



Testing

An important part of solving any technical problem is testing it. Remember to test not only the most generic cases, like the one presented in the example, but also various corner cases. Test

your code thoroughly before calling it complete. During an interview, it is often a good idea to define the test cases before even starting the implementation. This not only shows a solid problem-solving approach, but might even help you find ideas for an optimal solution.

Submission Instructions

The due date for this question is: Friday, February 7

When you are confident about your solution, please follow these two steps to submit your solution:

1 - **Create a new document in Google Drive**, copy and paste your code in it. If you found something particularly challenging, or if you have any questions, feel free to add those to the document as comments.

2 - When done, [submit here](#)