Problem 1268: Search Suggestions System

Problem Information

Difficulty: Medium
Acceptance Rate: 65.13%
Paid Only: No
Tags: Array, String, Binary Search, Trie, Sorting, Heap (Priority Queue)

Problem Description

You are given an array of strings `products` and a string `searchWord`.

Design a system that suggests at most three product names from `products` after each character of `searchWord` is typed. Suggested products should have common prefix with `searchWord`. If there are more than three products with a common prefix return the three lexicographically minimums products.

Return _a list of lists of the suggested products after each character of_`searchWord` _is typed_.

Example 1:

Input: products = ["mobile","mouse","moneypot","monitor","mousepad"], searchWord = "mouse" **Output:** [["mobile","moneypot","monitor"],["mobile","moneypot","monitor"],["mouse","mousepad"],["mouse","mousepad"],["mouse","mousepad"]] **Explanation:** products sorted lexicographically = ["mobile","moneypot","monitor","mouse","mousepad"]. After typing m and mo all products match and we show user ["mobile","moneypot","monitor"]. After typing mou, mous and mouse the system suggests ["mouse","mousepad"].

Example 2:

Input: products = ["havana"], searchWord = "havana" **Output:** [["havana"],["havana"],["havana"],["havana"],["havana"],["havana"]] **Explanation:** The only word "havana" will be always suggested while typing the search word.

Constraints:

* `1 <= products.length <= 1000` * `1 <= products[i].length <= 3000` * `1 <= sum(products[i].length) <= 2 * 104` * All the strings of `products` are **unique**. * `products[i]` consists of lowercase English letters. * `1 <= searchWord.length <= 1000` * `searchWord` consists of lowercase English letters.

Code Snippets

C++:

```
class Solution {
public:
vector<vector<string>> suggestedProducts(vector<string>& products, string
searchWord) {

}
};
```

Java:

```
class Solution {
public List<List<String>> suggestedProducts(String[] products, String
searchWord) {

}
}
```

Python3:

```
class Solution:
def suggestedProducts(self, products: List[str], searchWord: str) ->
List[List[str]]:
```