

Problem 249: Group Shifted Strings

Problem Information

Difficulty: Medium

Acceptance Rate: 67.61%

Paid Only: Yes

Tags: Array, Hash Table, String

Problem Description

Perform the following shift operations on a string:

* **Right shift** : Replace every letter with the **successive** letter of the English alphabet, where 'z' is replaced by 'a'. For example, ``abc`` can be right-shifted to ``bcd`` or ``xyz`` can be right-shifted to ``yza``. * **Left shift** : Replace every letter with the **preceding** letter of the English alphabet, where 'a' is replaced by 'z'. For example, ``bcd`` can be left-shifted to ``abc`` or ``yza`` can be left-shifted to ``xyz``.

We can keep shifting the string in both directions to form an **endless** **shifting sequence**.

* For example, shift ``abc`` to form the sequence: ``... <-> abc <-> bcd <-> ... <-> xyz <-> yza <-> ...` ` <-> zab <-> abc <-> ...`

You are given an array of strings `strings`, group together all `strings[i]` that belong to the same shifting sequence. You may return the answer in **any order**.

Example 1:

Input: strings = ["abc", "bcd", "acef", "xyz", "az", "ba", "a", "z"]

Output: [[“acef”],[“a”,“z”],[“abc”,“bcd”,“xyz”],[“az”,“ba”]]

Example 2:

Input: strings = [“a”]

****Output:**** `["a"]`

****Constraints:****

`* `1 <= strings.length <= 200` * `1 <= strings[i].length <= 50` * `strings[i]` consists of lowercase English letters.`

Code Snippets

C++:

```
class Solution {
public:
vector<vector<string>> groupStrings(vector<string>& strings) {
    }
};
```

Java:

```
class Solution {
public List<List<String>> groupStrings(String[] strings) {
    }
}
```

Python3:

```
class Solution:
def groupStrings(self, strings: List[str]) -> List[List[str]]:
```