


2273. Find Resultant Array After Removing Anagrams

Solved 

Easy

 Topics

 Companies

 Hint

You are given a **0-indexed** string array `words`, where `words[i]` consists of lowercase English letters.

In one operation, select any index `i` such that $0 < i < \text{words.length}$ and `words[i - 1]` and `words[i]` are **anagrams**, and **delete** `words[i]` from `words`. Keep performing this operation as long as you can select an index that satisfies the conditions.

Return `words` *after performing all operations*. It can be shown that selecting the indices for each operation in **any** arbitrary order will lead to the same result.

An **Anagram** is a word or phrase formed by rearranging the letters of a different word or phrase using all the original letters exactly once. For example, `"dacb"` is an anagram of `"abdc"`.

Example 1:

Input: `words = ["abba", "baba", "bbaa", "cd", "cd"]`

Output: `["abba", "cd"]`

Explanation:

One of the ways we can obtain the resultant array is by using the following operations:

- Since `words[2] = "bbaa"` and `words[1] = "baba"` are anagrams, we choose index 2 and delete `words[2]`.

Now `words = ["abba", "baba", "cd", "cd"]`.

- Since `words[1] = "baba"` and `words[0] = "abba"` are anagrams, we choose index 1 and delete `words[1]`.

Now `words = ["abba", "cd", "cd"]`.

- Since `words[2] = "cd"` and `words[1] = "cd"` are anagrams, we choose index 2 and delete `words[2]`.

Now `words = ["abba", "cd"]`.

We can no longer perform any operations, so `["abba", "cd"]` is the final answer.

Example 2:

Input: words = ["a","b","c","d","e"]

Output: ["a","b","c","d","e"]

Explanation:

No two adjacent strings in words are anagrams of each other, so no operations are performed.

Constraints:

- `1 <= words.length <= 100`
- `1 <= words[i].length <= 10`
- `words[i]` consists of lowercase English letters.

Python:

```
from typing import List
```

```
class Solution:
```

```
    def removeAnagrams(self, words: List[str]) -> List[str]:
```

```
        result = []
```

```
        prev_sig = ""
```

```
        for w in words:
```

```
            sig = "".join(sorted(w))
```

```
            if sig != prev_sig:
```

```
                result.append(w)
```

```
                prev_sig = sig
```

```
        return result
```

JavaScript:

```
/**
```

```
 * @param {string[]} words
```

```
 * @return {string[]}
```

```
 */
```

```
var removeAnagrams = function(words) {
```

```
    const result = [];
```

```
    let prevSig = "";
```

```
    for (const w of words) {
```

```
        const sig = w.split("").sort().join("");
```

```
        if (sig !== prevSig) {
```

```

        result.push(w);
        prevSig = sig;
    }
}
return result;
};

```

Java:

```

import java.util.*;

class Solution {
    public List<String> removeAnagrams(String[] words) {
        List<String> result = new ArrayList<>();
        String prevSig = "";

        for (String w : words) {
            char[] arr = w.toCharArray();
            Arrays.sort(arr);
            String sig = new String(arr);
            if (!sig.equals(prevSig)) {
                result.add(w);
                prevSig = sig;
            }
        }
        return result;
    }
}

```