



## DAILY PROGRAMMING CHALLENGE



### Group Anagrams

You are given an array of strings `strs[]`. Your task is to group all the strings that are anagrams of each other. An anagram is a word or phrase formed by rearranging the letters of a different word or phrase, typically using all the original letters exactly once. The goal is to return the grouped anagrams as a list of lists, where each sublist contains words that are anagrams of each other.

#### Input:

An array of strings `strs[]` consisting of lowercase English letters.

#### Output:

- A list of lists, where each sublist contains strings that are anagrams of each other. The order of the output groups does not matter.

#### Examples:

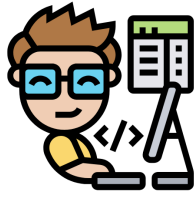
- Example 1  
Input: `strs[] = ["eat", "tea", "tan", "ate", "nat", "bat"]`  
Output: `[["eat", "tea", "ate"], ["tan", "nat"], ["bat"]]`  
Explanation:  
i. "eat", "tea", and "ate" are anagrams of each other.  
ii. "tan" and "nat" are anagrams of each other.  
iii. "bat" has no anagram in the array, so it forms its own group.

#### Constraints:

- $1 \leq \text{strs.length} \leq 10^4$  (The array can contain up to 10,000 strings)
- $0 \leq \text{strs}[i].\text{length} \leq 100$  (Each string can have up to 100 characters)
- All strings consist of lowercase English letters.

#### Test Cases:

1. Input: `strs[] = ["eat", "tea", "tan", "ate", "nat", "bat"]`  
Output: `[["eat", "tea", "ate"], ["tan", "nat"], ["bat"]]`
2. Input: `strs[] = [""]`  
Output: `[[""]]`
3. Input: `strs[] = ["a"]`



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Output: `[["a"]]`

4. Input: `strs[] = ["abc", "bca", "cab", "xyz", "zyx", "yxz"]`

Output: `[["abc", "bca", "cab"], ["xyz", "zyx", "yxz"]]`

5. Input: `strs[] = ["abc", "def", "ghi"]`

Output: `[["abc"], ["def"], ["ghi"]]`

### Edge Cases:

1. Single string: If the array contains only one string, the output should be a list containing that string.
2. Empty strings: If the array contains empty strings, they should be grouped together.
3. All anagrams: If all strings in the array are anagrams of each other, they should form a single group.