49. Group Anagrams

Created	@July 20, 2020 3:14 AM
Difficulty	Medium
LC Url	https://leetcode.com/problems/group-anagrams/
Importance	
Tag	Array&Sorting Hashmap NEET
Video	字母异位词分组 - 字母异位词分组 - 力扣（LeetCode） (leetcode-cn.com), https://maxming0.github.io/2020/04/26/Group-Anagrams/

Given an array of strings `strs`, group **the anagrams** together. You can return the answer in **any order**.

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.

Example 1:

```
Input: strs = ["eat","tea","tan","ate","nat","bat"]
Output: [["bat"],["nat","tan"],["ate","eat","tea"]]
```

Example 2:

```
Input: strs = [""]
Output: [[""]]
```

Example 3:

```
Input: strs = ["a"]
Output: [["a"]]
```

Constraints:

- `1 <= strs.length <= 10 4`
- `0 <= strs[i].length <= 100`
- `strs[i]` consists of lowercase English letters.

Solution

```
class Solution:
    def groupAnagrams(self, strs: List[str]) -> List[List[str]]:
        # d = defaultdict(list)
        # for s in strs:
        #     d[''.join(sorted(s))].append(s)
        # return d.values()

        # https://leetcode-cn.com/problems/group-anagrams/solution/zi-mu-yi-wei-ci-fen-zu-by-leetcode-solut-gyoc/
        d = defaultdict(list)
        for s in strs:
            counts = [0] * 26
            for ch in s:
                counts[ord(ch) - ord('a')] += 1
            # 需要将 list 转换成 tuple 才能进行哈希
            d[tuple(counts)].append(s)
        return list(d.values())
```