

1684. Count the Number of Consistent Strings

You are given a string `allowed` consisting of **distinct** characters and an array of strings `words`. A string is **consistent** if all characters in the string appear in the string `allowed`.

Return *the number of **consistent** strings in the array `words`*.

Example 1:

Input: `allowed = "ab", words = ["ad","bd","aaab","baa","badab"]`

Output: 2

Explanation: Strings "aaab" and "baa" are consistent since they only contain characters 'a' and 'b'.

Example 2:

Input: `allowed = "abc", words = ["a","b","c","ab","ac","bc","abc"]`

Output: 7

Explanation: All strings are consistent.

Example 3:

Input: `allowed = "cad", words = ["cc","acd","b","ba","bac","bad","ac","d"]`

Output: 4

Explanation: Strings "cc", "acd", "ac", and "d" are consistent.

Constraints:

- $1 \leq \text{words.length} \leq 10^4$
- $1 \leq \text{allowed.length} \leq 26$
- $1 \leq \text{words}[i].\text{length} \leq 10$
- The characters in `allowed` are **distinct**.
- `words[i]` and `allowed` contain only lowercase English letters.

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```
/*  
    Time complexity:  $O(n+mk)$   
    Space complexity:  $O(26)=O(1)$   
*/  
class Solution {  
public:  
    int countConsistentStrings(std::string allowed, std::vector<std::string>& words) {  
        bool exist[26]={false};  
        for(auto& letter: allowed) exist[letter-'a']=true;  
  
        int ans=0;  
        for(auto& word: words){  
            int i=0,k=word.size();  
            while(i<k&&exist[word[i]-'a']) i++;  
            ans+=(i==k);  
        }  
  
        return ans;  
    }  
};
```