

# 1170. Compare Strings by Frequency of the Smallest Character

Let the function  $f(s)$  be the **frequency of the lexicographically smallest character** in a non-empty string  $s$ . For example, if  $s = "dcce"$  then  $f(s) = 2$  because the lexicographically smallest character is  $'c'$ , which has a frequency of 2.

You are given an array of strings `words` and another array of query strings `queries`. For each query `queries[i]`, count the **number of words** in `words` such that  $f(queries[i]) < f(w)$  for each  $w$  in `words`.

Return an integer array `answer`, where each `answer[i]` is the answer to the `i`th query.

## Example 1:

**Input:** `queries = ["cbd"], words = ["zaaaz"]`

**Output:** `[1]`

**Explanation:** On the first query we have  $f("cbd") = 1$ ,  $f("zaaaz") = 3$  so  $f("cbd") < f("zaaaz")$ .

## Example 2:

**Input:** `queries = ["bbb","cc"], words = ["a","aa","aaa","aaaa"]`

**Output:** `[1,2]`

**Explanation:** On the first query only  $f("bbb") < f("aaaa")$ .

On the second query both  $f("aaa")$  and  $f("aaaa")$  are both  $> f("cc")$ .

```
def numSmallerByFrequency(self, queries: List[str], words: List[str]) -> List[int]:
    for i in range(len(queries)):
        queries[i] = queries[i].count(min(queries[i]))
    for i in range(len(words)):
        words[i] = words[i].count(min(words[i]))
    words.sort()
    res = []
    N = len(words)
    for ele in queries:
        idx= self.binarySearch(words,ele)
        res.append(N-idx)
    return res
```

```
def binarySearch(self, arr, target):  
    lo = 0  
    hi = len(arr)-1  
  
    while lo<=hi:  
        mid = (lo+hi)//2  
        if arr[mid]==target:  
            lo = mid+1  
        elif arr[mid]<target:  
            lo = mid+1  
        else:  
            hi = mid-1  
    return lo
```