2268. Minimum Number of Keypresses Premium

Medium | Topics | Companies | Hint

You have a keypad with `9` buttons, numbered from `1` to `9`, each mapped to lowercase English letters. You can choose which characters each button is matched to as long as:

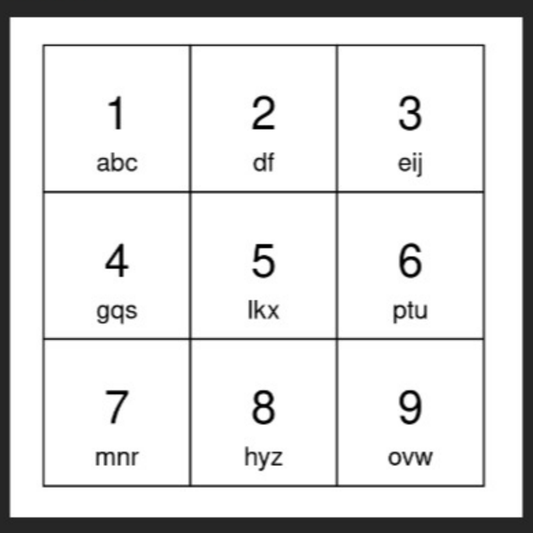
- All 26 lowercase English letters are mapped to.
- Each character is mapped to by **exactly** `1` button.
- Each button maps to **at most** `3` characters.

To type the first character matched to a button, you press the button once. To type the second character, you press the button twice, and so on.

Given a string `s`, return *the **minimum** number of keypresses needed to type* `s` *using your keypad.*

Note that the characters mapped to by each button, and the order they are mapped in cannot be changed.

Example 1:




```
Input: s = "apple"
Output: 5
Explanation: One optimal way to setup your keypad is shown above.
Type 'a' by pressing button 1 once.
Type 'p' by pressing button 6 once.
Type 'p' by pressing button 6 once.
Type 'l' by pressing button 5 once.
Type 'e' by pressing button 3 once.
A total of 5 button presses are needed, so return 5.
```

Example 2:


```
Input: s = "abcdefghijkl"
Output: 15
Explanation: One optimal way to setup your keypad is shown above.
The letters 'a' to 'i' can each be typed by pressing a button once.
Type 'j' by pressing button 1 twice.
Type 'k' by pressing button 2 twice.
Type 'l' by pressing button 3 twice.
A total of 15 button presses are needed, so return 15.
```

Constraints:

- `1 <= s.length <= 10^5`
- `s` consists of lowercase English letters.

Seen this question in a real interview before? 1/5

Yes No

Accepted 31.7K | Submissions 44.5K | Acceptance Rate 71.1%

Topics

Hash Table String Greedy Sorting Counting

Companies

0 - 6 months

Amazon 2

6 months ago

Snap 3

Hint 1

Map the most frequent letters so that you can type them with only 1 keypress.

Hint 2

Use an array to keep track of the frequency of every character, then sort it in non-increasing order.

Discussion (11)