2950. Number of Divisible Substrings Premium

Medium | Topics | Companies | Hint

Each character of the English alphabet has been mapped to a digit as shown below.

A string is **divisible** if the sum of the mapped values of its characters is divisible by its length.

Given a string `s`, return *the number of **divisible substrings** of* `s`.

A **substring** is a contiguous non-empty sequence of characters within a string.

Example 1:

Substring	Mapped	Sum	Length	Divisible?
a	1	1	1	Yes
s	7	7	1	Yes
d	2	2	1	Yes
f	3	3	1	Yes
as	1, 7	8	2	Yes
sd	7, 2	9	2	No
df	2, 3	5	2	No
asd	1, 7, 2	10	3	No
sdf	7, 2, 3	12	3	Yes
asdf	1, 7, 2, 3	13	4	No

```
Input: word = "asdf"
Output: 6
Explanation: The table above contains the details about every substring of word, and we can see that 6 of them are divisible.
```

Example 2:

```
Input: word = "bdh"
Output: 4
Explanation: The 4 divisible substrings are: "b", "d", "h", "bdh".
It can be shown that there are no other substrings of word that are divisible.
```

Example 3:

```
Input: word = "abcd"
Output: 6
Explanation: The 6 divisible substrings are: "a", "b", "c", "d", "ab", "cd".
It can be shown that there are no other substrings of word that are divisible.
```

Constraints:

- `1 <= word.length <= 2000`
- `word` consists only of lowercase English letters.

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

Yes No

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Topics

Hash Table String Counting Prefix Sum

Companies

0 - 3 months

IBM 5 Paytm 5 Wayfair 2

0 - 6 months

Amdocs 2

Hint 1

Iterate over all substrings in `O(n * n)`.

Hint 2

For each substring, try to calculate the sum of the mapped values in `O(1)`.

Hint 3

To do the above, use a partial sum array.

Discussion (1)