

# 828. Count Unique Characters of All Substrings of a Given String

## Description

Let's define a function `countUniqueChars(s)` that returns the number of unique characters in `s`.

- For example, calling `countUniqueChars(s)` if `s = "LEETCODE"` then `"L"`, `"T"`, `"C"`, `"O"`, `"D"` are the unique characters since they appear only once in `s`, therefore `countUniqueChars(s) = 5`.

Given a string `s`, return the sum of `countUniqueChars(t)` where `t` is a substring of `s`. The test cases are generated such that the answer fits in a 32-bit integer.

Notice that some substrings can be repeated so in this case you have to count the repeated ones too.

### Example 1:

**Input:** `s = "ABC"`  
**Output:** 10  
**Explanation:** All possible substrings are: `"A"`, `"B"`, `"C"`, `"AB"`, `"BC"` and `"ABC"`.  
Every substring is composed with only unique letters.  
Sum of lengths of all substring is  $1 + 1 + 1 + 2 + 2 + 3 = 10$

### Example 2:

**Input:** `s = "ABA"`  
**Output:** 8  
**Explanation:** The same as example 1, except `countUniqueChars("ABA") = 1`.

### Example 3:

**Input:** `s = "LEETCODE"`  
**Output:** 92

### Constraints:

- $1 \leq s.length \leq 10^5$
- `s` consists of uppercase English letters only.

