Problem 3556: Sum of Largest Prime Substrings

Problem Information

Difficulty: Medium
Acceptance Rate: 37.58%
Paid Only: No
Tags: Hash Table, Math, String, Sorting, Number Theory

Problem Description

Given a string `s`, find the sum of the **3 largest unique prime numbers** that can be formed using any of its** substrings**.

Return the **sum** of the three largest unique prime numbers that can be formed. If fewer than three exist, return the sum of **all** available primes. If no prime numbers can be formed, return 0.

Note: Each prime number should be counted only **once** , even if it appears in **multiple** substrings. Additionally, when converting a substring to an integer, any leading zeros are ignored.

Example 1:

Input: s = "12234"

Output: 1469

Explanation:

* The unique prime numbers formed from the substrings of `"12234"` are 2, 3, 23, 223, and 1223. * The 3 largest primes are 1223, 223, and 23. Their sum is 1469.

Example 2:

Input: s = "111"

Output: 11

Explanation:

* The unique prime number formed from the substrings of `"111"` is 11. * Since there is only one prime number, the sum is 11.

Constraints:

* `1 <= s.length <= 10` * `s` consists of only digits.

Code Snippets

C++:

```
class Solution {
public:
long long sumOfLargestPrimes(string s) {

}
};
```

Java:

```
class Solution {
public long sumOfLargestPrimes(String s) {

}
}
```

Python3:

```
class Solution:
def sumOfLargestPrimes(self, s: str) -> int:
```