Question - 1

SCORE: **75 points**

Prime String

Medium | Dynamic Programming | Algorithms | Problem Solving

Given a string of length *n* consisting of digits [0-9], count the number of ways the given string can be split into prime numbers, each of which is in the range *2 to* 10^6 inclusive. Since the answer can be large, return the answer modulo $10^9 + 7$.

Note: A partition that contains numbers with leading zeroes will be invalid and the initial string does not contain leading zeroes.

Take for example the input string to be *s = "11373"*, then this string can be split into *6* different ways as *[11, 37, 3], [113, 7, 3], [11, 3, 73], [11, 37, 3], [113, 73]* and *[11, 373]* where each one of them contains only prime numbers.

Function Description

Complete the function *countPrimeStrings* in the editor below. The function must return the number of ways the string can be split, modulo *1000000007*, 10^9+7.

countPrimeStrings has the following parameter(s):

s: a string

Constraints

- $1 \le$ length of s $\le 10^5$

▼ Input Format For Custom Testing

The first and only line contains the string, *s*.

▼ Sample Case 0

Sample Input For Custom Testing

```
3175
```

Sample Output

```
3
```

Explanation

The *3* ways to split this string into prime numbers are *[31, 7, 5], [3, 17, 5], [317, 5]*

▼ Sample Case 1

Sample Input For Custom Testing

```
24
```

Sample Output

```
0
```

Explanation

This string cannot be split into primes.