17. String Subsequences

Given two strings, determine the number of times the first one appears as a subsequence in the second one. A subsequence is created by eliminating any number of characters from a string (possibly 0) without changing the order of the characters retained.

For example, let's say *s1 = "ABC"* and *s2 = "ABCBABC"*. The first string appears 5 times as a subsequence in the second string at 1-indexed positions of (1, 2, 3), (1, 2, 7), (1, 4, 7), (1, 6, 7), and (5, 6, 7). Therefore, the answer is 5.

Function Description
Complete the function *getSubsequenceCount* in the editor below.

getSubsequenceCount has the following parameters:
string *s1*: the first string, which always has a length of 3
string *s2*: the second string
Returns:
int: the number of times *s1* appears as a subsequence in *s2*

Constraints

- length of *s1* = 3
- 1 ≤ length of *s2* ≤ $5*10^5$
- *s1* and *s2* consist of uppercase English letters, *ascii[A-Z]*

▼ Input Format For Custom Testing

The first line of input contains a string, *s1*.
The second line of input contains a string, *s2*.

▼ Sample Case 0

Sample Input For Custom Testing

```
STDIN       Function
-----       --------
HRW     →   s1 = "HRW"
HERHRWS →   s2 = "HERHRWS"
```

Sample Output

```
3
```

Explanation
"HRW" appears as a subsequence in "HERHRWS" 3 times at positions (1, 3, 6), (1, 5, 6), and (4, 5, 6). Therefore, the answer is 3.

▼ Sample Case 1

Sample Input For Custom Testing

```
STDIN           Function
-----           --------
ELO         →   s1 = "ELO"
HELLOWORLD  →   s2 = "HELLOWORLD"
```

Sample Output

```
4
```

Explanation
"ELO" appears as a subsequence in "HELLOWORLD" 4 times at positions (2, 3, 5), (2, 3, 7), (2, 4, 5), and (2, 4, 7). Therefore, the answer is 4.

C++ | Autocomplete Loading...

```
#include <bits/stdc++.h>

/*
 * Complete the 'getSubsequenceCount' function below.
 *
 * The function is expected to return a LONG_INTEGER.
 * The function accepts following parameters:
 *  1. STRING s1
 *  2. STRING s2
 */

long getSubsequenceCount(string s1, string s2) {

}

int main()
```

Line: 6 Col: 1

Test Results | Custom Input | Run | Submit Code