

# 115. Distinct Subsequences

## Difficulty : Hard

<https://leetcode.com/problems/distinct-subsequences>

Given two strings  $s$  and  $t$ , return *the number of distinct **subsequences** of  $s$  which equals  $t$ .*

The test cases are generated so that the answer fits on a 32-bit signed integer.

### Example 1:

**Input:**  $s = \text{"rabbbit"}, t = \text{"rabbit"}$

**Output:** 3

**Explanation:**

As shown below, there are 3 ways you can generate "rabbit" from  $s$ .

rabbbit

rabbbit

rabbbit

### Example 2:

**Input:**  $s = \text{"babgbag"}, t = \text{"bag"}$

**Output:** 5

**Explanation:**

As shown below, there are 5 ways you can generate "bag" from  $s$ .

babgbag

babgbag

babgbag

babgbag

babgbagg

### Constraints:

- $1 \leq s.length, t.length \leq 1000$
- $s$  and  $t$  consist of English letters.