

### **43. Multiply Strings**

Given two non-negative integers num1 and num2 represented as strings, return the product of num1 and num2, also represented as a string.

**Note:** You must not use any built-in BigInteger library or convert the inputs to integer directly.

#### **Example 1:**

**Input:** num1 = "2", num2 = "3"

**Output:** "6"

#### **Example 2:**

**Input:** num1 = "123", num2 = "456"

**Output:** "56088"

#### **Constraints:**

$1 \leq \text{num1.length}, \text{num2.length} \leq 200$

num1 and num2 consist of digits only.

Both num1 and num2 do not contain any leading zero, except the number 0 itself.