

# 3167. Better Compression of String Premium

Medium Topics Companies Hint

You are given a string `compressed` representing a compressed version of a string. The format is a character followed by its frequency. For example, `"a3b1a1c2"` is a compressed version of the string `"aaabacc"`.

We seek a **better compression** with the following conditions:

- 1. Each character should appear **only once** in the compressed version.
- 2. The characters should be in **alphabetical order**.

Return the *better compression* of `compressed`.

**Note:** In the better version of compression, the order of letters may change, which is acceptable.

### Example 1:

**Input:** `compressed = "a3c9b2c1"`

**Output:** `"a3b2c10"`

**Explanation:**  
  
Characters "a" and "b" appear only once in the input, but "c" appears twice, once with a size of 9 and once with a size of 1.  
  
Hence, in the resulting string, it should have a size of 10.

### Example 2:

**Input:** `compressed = "c2b3a1"`

**Output:** `"a1b3c2"`

### Example 3:

**Input:** `compressed = "a2b4c1"`

**Output:** `"a2b4c1"`

### Constraints:

- `1 <= compressed.length <= 6 * 104`
- `compressed` consists only of lowercase English letters and digits.
- `compressed` is a valid compression, i.e., each character is followed by its frequency.
- Frequencies are in the range `[1, 104]` and have no leading zeroes.

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Hint 1

This is an implementation problem.

Hint 2

Try to extract each character with its corresponding frequency.

Hint 3

Sum the frequencies for a single character.

Hint 4

Sort characters and append them to a string in alphabetical order.

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