3163. String Compression III

Solved ●

Medium Topics Companies Hint

Given a string `word`, compress it using the following algorithm:

- Begin with an empty string `comp`. While `word` is **not** empty, use the following operation:
  - Remove a maximum length prefix of `word` made of a *single character* `c` repeating **at most** 9 times.
  - Append the length of the prefix followed by `c` to `comp`.

Return the string `comp`.

Example 1:

> **Input:** word = "abcde"
>
> **Output:** "1a1b1c1d1e"
>
> **Explanation:**
>
> Initially, `comp = ""`. Apply the operation 5 times, choosing `"a"`, `"b"`, `"c"`, `"d"`, and `"e"` as the prefix in each operation.
>
> For each prefix, append `"1"` followed by the character to `comp`.

Example 2:

> **Input:** word = "aaaaaaaaaaaaaabb"
>
> **Output:** "9a5a2b"
>
> **Explanation:**
>
> Initially, `comp = ""`. Apply the operation 3 times, choosing `"aaaaaaaaa"`, `"aaaaa"`, and `"bb"` as the prefix in each operation.
>
> - For prefix `"aaaaaaaaa"`, append `"9"` followed by `"a"` to `comp`.
> - For prefix `"aaaaa"`, append `"5"` followed by `"a"` to `comp`.
> - For prefix `"bb"`, append `"2"` followed by `"b"` to `comp`.

Constraints:

- `1 <= word.length <= 2 * 10^5`
- `word` consists only of lowercase English letters.

Seen this question in a real interview before? 1/5

Yes No

Accepted 38.5K Submissions 69K Acceptance Rate 55.8%

Topics

Companies

Hint 1

Similar Questions

Discussion (21)