A string S of lowercase letters is given. We want to partition this string into as many parts as possible so that each letter appears in at most one part, and return a list of integers representing the size of these parts.

**Example 1:**

**Input:** S = "ababcbacadefegdehijhklij"

**Output:** [9,7,8]

**Explanation:**

The partition is "ababcbaca", "defegde", "hijhklij".

This is a partition so that each letter appears in at most one part.

A partition like "ababcbacadefegde", "hijhklij" is incorrect, because it splits S into less parts.

**Note:**

1. S will have length in range [1, 500].
2. S will consist of lowercase letters ('a' to 'z') only.