We have a string S of lowercase letters, and an integer array shifts.

Call the *shift* of a letter, the next letter in the alphabet, (wrapping around so that 'z' becomes 'a').

For example, shift('a') = 'b', shift('t') = 'u', and shift('z') = 'a'.

Now for each shifts[i] = x, we want to shift the first i+1 letters of S, x times.

Return the final string after all such shifts to S are applied.

**Example 1:**

**Input:** S = "abc", shifts = [3,5,9]

**Output:** "rpl"

**Explanation:**

We start with "abc".

After shifting the first 1 letters of S by 3, we have "dbc".

After shifting the first 2 letters of S by 5, we have "igc".

After shifting the first 3 letters of S by 9, we have "rpl", the answer.

**Note:**

1. 1 <= S.length = shifts.length <= 20000
2. 0 <= shifts[i] <= 10 ^ 9