

Shifting Letters

Medium

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`