NatWest Code Test

We appreciate you taking the time to complete this test, hopefully you'll find it interesting too. You can choose the coding language of your choice to provide the solution between JavaScript, Python and Java.

Problem Statement

You are given a string s of lowercase English letters and a 2D integer array shifts where $shifts[i] = [start_i, end_i, direction_i]$. For every i, **shift** the characters in s from the index $start_i$ to the index end_i (**inclusive**) forward if $direction_i = 1$, or shift the characters backward if $direction_i = 0$.

Shifting a character **forward** means replacing it with the **next** letter in the alphabet (wrapping around so that 'z' becomes 'a'). Similarly, shifting a character **backward** means replacing it with the **previous** letter in the alphabet (wrapping around so that 'a' becomes 'z').

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

Example 1:

Input: s = "abc", shifts = [[0,1,0],[1,2,1],[0,2,1]]

Output: "ace"

Explanation: Firstly, shift the characters from index 0 to index 1 backward. Now s = "zac".

Secondly, shift the characters from index 1 to index 2 forward. Now s = "zbd".

Finally, shift the characters from index 0 to index 2 forward. Now s = "ace".

Example 2:

Input: s = "dztz", shifts = [[0,0,0],[1,1,1]]

Output: "catz"

Explanation: Firstly, shift the characters from index 0 to index 0 backward. Now s = "cztz".

Finally, shift the characters from index 1 to index 1 forward. Now s = "catz".

Deliverables

• Project containing source code for your solution.
• Any instructions to run the solution.
• A short description of what you have implemented.

Please check-in your code to a GitHub repository, add a detailed readme file and provide details and access.