# **Principal Global Test Questions**

## **Question 1: String Transformation with Vowel Mapping**

#### **Problem Statement**

You are given a string **s** consisting of lowercase English alphabets. You need to transform the string by identify the pattern:

Return the final transformed string.

## Example 1

Input:

s = "apple"

Output:

1ppl5

#### Example 2

Input:

s = "Umbrella"

Output:

21mbr5ll1

## Question 2: Reverse Array in Groups of K

#### **Problem Statement**

You are given an array of integers arr[] and an integer k. You need to reverse the array in groups of k elements.

- For every group of k elements, reverse them.
- If the last group contains fewer than k elements, reverse all of them as well.

Return the final modified array.

## Example 1

Input:

$$arr = [1, 2, 3, 4, 5, 6, 7, 8], k = 3$$

#### Process:

Group 1:  $[1, 2, 3] \rightarrow [3, 2, 1]$ 

Group 2:  $[4, 5, 6] \rightarrow [6, 5, 4]$ 

Group 3:  $[7, 8] \rightarrow [8, 7]$  (less than k, still reversed)

#### Output:

[3, 2, 1, 6, 5, 4, 8, 7]

# Example 2

Input:

$$arr = [10, 20, 30, 40, 50, 60], k = 2$$

#### Process:

Group 1:  $[10, 20] \rightarrow [20, 10]$ 

Group 2:  $[30, 40] \rightarrow [40, 30]$ 

Group 3:  $[50, 60] \rightarrow [60, 50]$ 

Output: [20, 10, 40, 30, 60, 50]