

# Word Game Application

Players must enter **exactly three words**, and the system should generate a “mystery code” using the following rules:

1. If the player enters anything other than **three alphabetic words**, the system must display **"Invalid input"**.
2. If **all three words have the same length**, the system should combine them by taking characters alternately from each word (e.g.,  $w1[0]$ ,  $w2[0]$ ,  $w3[0]$ ,  $w1[1]$ ,  $w2[1]$ ,  $w3[1]$ , ...).
3. If the words have **different lengths**, the system must:
  - Identify the **shortest word**.
  - For each index  $i$  in the shortest word, append the character from the shortest word first, followed by characters from the other two words at index  $i$ .
4. Once the combined string is formed:
  - If its length is **even**, reverse the string and append its length at the end.
  - If its length is **odd**, move the first **two characters to the end** and prefix the length.
5. The final output must always be displayed in **lowercase**.

## Input

Enter three words

abc def ghi

## Output

9gbehcfiad

## Input

Enter three words

hi code play

## Output

loipch6

**Input**

Enter three words

flower sun plant

**Output**

unstlfwopa3

**Input**

Enter three words

cat ball pen

**Output**

pbecalatn3