

# Rajalakshmi Engineering College

Name: Rayvan Sanjai  
Email: 240701425@rajalakshmi.edu.in  
Roll no: 2116240701425  
Phone: 9380572043  
Branch: REC  
Department: I CSE FD  
Batch: 2028  
Degree: B.E - CSE

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## NeoColab\_REC\_CS23221\_Python Programming

### REC\_Python\_Week 3\_CY

Attempt : 1  
Total Mark : 30  
Marks Obtained : 30

### Section 1 : Coding

#### 1. Problem Statement

Raja needs a program that helps him manage his shopping list efficiently. The program should allow him to perform the following operations:

**Add Items:** Raja should be able to add multiple items to his shopping list at once. He will input a space-separated list of items, each item being a string.

**Remove Item:** Raja should be able to remove a specific item from his shopping list. He will input the item he wants to remove, and if it exists in the list, it will be removed. If the item is not found, the program should notify him.

**Update List:** Raja might realize he forgot to add some items initially. After removing unnecessary items, he should be able to update his list by adding more items. Similar to the initial input, he will provide a space-separated

list of new items.

### ***Input Format***

The first line consists of the initial list of integers should be entered as space-separated values.

The second line consists of the element to be removed should be entered as a single integer value.

The third line consists of the new elements to be appended should be entered as space-separated values.

### ***Output Format***

The output displays the current state of Raja's shopping list after each operation. After adding items, removing items, and updating the list, the program prints the updated shopping list in the following format:

"List1: [element1, element2, ... ,element\_n]

List after removal: [element1, element2, ... ,element\_n]

Final list: [element1, element2, ... ,element\_n]".

If the item is not found in the removing item process, print the message "Element not found in the list".

Refer to the sample output for the formatting specifications.

### ***Sample Test Case***

Input: 1 2 3 4 5

3

6 7 8

Output: List1: [1, 2, 3, 4, 5]  
List after removal: [1, 2, 4, 5]  
Final list: [1, 2, 4, 5, 6, 7, 8]

**Answer**

```
initial_list = list(map(int, input().split()))  
item_to_remove = int(input())  
new_items = list(map(int, input().split()))
```

```
print("List1:", initial_list)
```

```
if item_to_remove in initial_list:  
    initial_list.remove(item_to_remove)  
    print("List after removal:", initial_list)  
else:  
    print("Element not found in the list")
```

```
initial_list += new_items
```

```
print("Final list:", initial_list)
```

**Status :** Correct

**Marks :** 10/10

## 2. Problem Statement

You have two strings str1 and str2, both of equal length.

Write a Python program to concatenate the two strings such that the first character of str1 is followed by the first character of str2, the second character of str1 is followed by the second character of str2, and so on.

For example, if str1 is "abc" and str2 is "def", the output should be "adbecf".

**Input Format**

The input consists of two strings in each line.

**Output Format**

The output displays the concatenated string in the mentioned format.

Refer to the sample output for formatting specifications.

**Sample Test Case**

Input: abc

def

Output: adbecf

**Answer**

```
str1 = input().strip()
str2 = input().strip()
result = []
for i in range(len(str1)):
    result.append(str1[i])
    result.append(str2[i])

print("".join(result))
```

**Status :** Correct

**Marks :** 10/10

### 3. Problem Statement

Raj wants to write a program that takes a list of strings as input and returns the longest word in the list. If there are multiple words with the same length, the program should return the first one encountered.

Help Raj in his task.

**Input Format**

The input consists of a single line of space-separated strings.

**Output Format**

The output prints a string representing the longest word in the given list.

Refer to the sample output for formatting specifications.

### Sample Test Case

Input: cat dog elephant lion tiger giraffe

Output: elephant

### Answer

```
words = input().split()
longest_word = ""
for word in words:
    if len(word) > len(longest_word):
        longest_word = word
print(longest_word)
```

**Status :** Correct

**Marks : 10/10**