Rajalakshmi Engineering College

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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

```
# You are using Python
initiallist=input().split()
removeitem=input().strip()
newitems=input().split()
print(f"List1: [{','.join(initiallist)}]")
if removeitem in initiallist:
    initiallist.remove(removeitem)
    print(f"List after removal:[{','.join(initiallist)}]")
else:
    print("Element not found in the list")
initiallist.extend(newitems)
print(f"Final list:[{','.join(initiallist)}]")
```

Status : Correct ***Marks : 10/10***

2. Problem Statement

Emily is a data analyst working for a company that collects feedback from customers in the form of text messages. As part of her data validation tasks, Emily needs to perform two operations on each message:

Calculate the sum of all the digits mentioned in the message.If the sum of the digits is greater than 9, check whether the sum forms a palindrome number.

Your task is to help Emily automate this process by writing a program that extracts all digits from a given message, calculates their sum, and checks if the sum is a palindrome if it is greater than 9.

Input Format

The input consists of a string s, representing the customer message, which may contain letters, digits, spaces, and other characters.

Output Format

The output prints an integer representing the sum of all digits in the string,

followed by a space.

If the sum is greater than 9, print "Palindrome" if the sum is a palindrome, otherwise print "Not palindrome".

If the sum is less than or equal to 9, no palindrome check is required.

Refer to the sample output for the formatting specifications.

Sample Test Case

Input: 12 books 4 pen

Output: 7

Answer

```
# You are using Python
s=input()
sumd=0
for char in s:
    if char.isdigit():
        sumd+=int(char)
print(sumd,end='')
if sumd>9:
    sumstr=str(sumd)
    if sumstr==sumstr[::-1]:
        print("Palindrome")
    else:
        print("Not palindrome")
```

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

```
# You are using Python
words=input().split()
longest=""
maxlen=0
for word in words:
    if len(word)>maxlen:
        longest=word
        maxlen=len(word)
print(longest)
```

Status : Correct ***Marks : 10/10***