Rajalakshmi Engineering College

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NeoColab_REC_CS23221_Python Programming

REC_Python_Week 3_CY

Attempt : 1
Total Mark : 30
Marks Obtained : 25

Section 1 : Coding

1.   Problem Statement

Write a program to check if a given string is perfect.

A perfect string must satisfy the following conditions:

The string starts with a consonant.The string alternates between consonants and vowels.Each consonant appears exactly once.Vowels can occur consecutively multiple times but should not be followed immediately by a consonant.

If the string satisfies all these conditions, print "True"; otherwise, print "False".

Input Format

The input consists of a string.

Output Format

The output prints "True" if the string is perfect. Otherwise, print "False".

Refer to the sample output for formatting specifications.

Sample Test Case

Input: capacitor
Output: True

Answer

```
vowels = ['a','e','i','o','u','A','E','I','O','U']
str1 = input()
i = 0
j = 1
def check_str(vowels, str1):
    if(str1[0] not in vowels):
        while (j<len(str1)-1 and i<j):
            if(str1[i] in vowels or str1[j] not in vowels):
                return False
        return True
    else:
        return False
if check_str(vowels, str1):
    print("True")
else:
    print("False")
```

Status : Partially correct   *Marks : 5/10*

2. 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

```python
ini_input = input().split()
shop_list = [int(item) for item in ini_input]
print(f"List1 : {shop_list}")
remove_input = input()
try:
    item_to_rem = int(remove_input)
except ValueError:
    item_to_rem = remove_input
if item_to_rem in shop_list:
    shop_list.remove(item_to_rem)
    print(f"List after removal: {shop_list}")
else:
    print("Element not found in the list")

new_input = input().split()
new_items = [int(item) for item in new_input]
shop_list.extend(new_items)
print(f"Final list: {shop_list}")
```

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

```python
# You are using Python
def find_long_word(words_string):
    words = words_string.split()
    longest_word = " "
    for word in words:
        if(len(word) > len(longest_word)):
            longest_word = word

    return longest_word
if __name__ == "__main__":
    input_line = input()
    longest = find_long_word(input_line)
    print(longest)
```

Status : Correct   *Marks : 10/10*