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

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 = ""
max_length = 0
for word in words:
    if len(word)>max_length:
        longest_word = word
        max_length = len(word)
print(longest_word)
```

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

2. 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

```
def is_perfect_string(s):
    vowels={'a','e','i','o','u'}
    consonants_seen=set()
    if s[0] in vowels:
        return "False"
    i=0
    while i<len(s):
        if s[i] not in vowels:
            if s[i] in consonants_seen:
                return "False"
            consonants_seen.add(s[i])
            i+=1
            if i<len(s) and s[i] not in vowels:
                return "False"
        else:
            while i<len(s) and s[i] in vowels:
                i+=1
            if i<len(s) and s[i] in vowels:
                return "False"
    return "True"
s=input().strip()
print(is_perfect_string(s))
```

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

3. 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

```
s=input()
digit_sum = sum(int(char) for char in s if char.isdigit())
print(digit_sum,end=' ')
if digit_sum>9:
    if str(digit_sum) == str(digit_sum)[::-1]:
        print("Palindrome")
    else:
```

```
print("Not palindrome")
```

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