NAME :D.HARIHARASUDHAN

DEP.NO :205229112

SUBJECT :PYTHON

ASSINGMENT :LAB

Question4.

Source code:

```
def piglatin(word):
    s1=word[0]
    s2=word[1:]
    if(s1== 'a' or s1=='e' or s1== 'i' or s1=='o' or s1== 'u'):
       return(word+'-way')
    else:
        return(s2+'-'+s1+'ay')
    piglatin(input("Enter the word:"))
```

Output:

```
Enter the word:pig
'ig-pay'
```

Question4.(another one)

Source code:

```
word=str(input("Enter the word:"))
s1=word[0]
s2=word[1:]
if (s1== 'a' or s1=='e' or s1== 'i' or s1=='o' or s1== 'u'):
        print(word+'-way')
else:
    print(s2+'-'+s1+'ay')
```

Output:

```
Enter the word:orange
orange-way
```

LAB-5

LIST PROCESSING IN PYTHON:

Question1. write a function find_average(student) that takes student tuple as input and print student rollno,name,marks and average marks as output:

Source code:

```
def find_average(student):
    roll,name,marks=student
    total=0
    for mark in marks:
```

```
        total += mark
    avg = total/len(marks)
    print("Rollno:",roll,"Name:",name,"Marks:",marks,"Average:",avg)
```

Given result: `student=(2,"rex thomas",(80,78,96))`

Getting result: `find_average(student)`

Output:

```
Rollno: 2 Name: rex thomas Marks: (80, 78, 96) Average: 84.66666666666667
```

Another program:

Source code:

```
def stud_avg(students):
    for student in students:
        roll,name,marks=student
        total=0

        for mark in marks:
            total += mark
            avg=total/len(marks)
        print("Roll No:",roll,"Name:",name,"Average:","avg")

Student_list=[(1,'prasana',[90,95,92]),
```

(2,'manoj',[88,80,60]),

(3,'karan',[90,95,89])]

Output:

```
Roll No:1 Name:prasana Average:92.3
Roll No:2 Name:manoj Average:76.0
Roll No:3 Name:karan Average:91.3
```

Question2

Source code:

```
list=[]
for i in range(7):
    c=float(input("Enter your weight:"))
    list.append(c)
print("first day weight is:",list[0])
print("last day weight is:",list[-1])
print("highest weight is:",max(list))
print("lowest weight is:",min(list))
print("average of weight is:",round(sum(list)/len(list)))
firstday=list[0]
lastday=list[-1]
avg=(sum(list)/len(list))
low_weight=min(list)
if(avg<low_weight):
    print("your weight management is excellent")
```

else:

print("your weight management is not good,please take care of your diet")

Output:

```
Enter your weight:69
Enter your weight:76
Enter your weight:67
Enter your weight:70
Enter your weight:67
Enter your weight:65
Enter your weight:67
first day weight is: 69.0
last day weight is: 67.0
highest weight is: 76.0
lowest weight is: 65.0
average of weight is: 69
your weight management is not good,please take care of your diet
```

Source Code:

```
def piglatin(word):
    S1 = word[0]
    S2 = word[1:]
    if (S1=='a' or S1=='e' or S1=='i'
        or S1=='o' or S1=='u'):
        return(word+'-way')
    else:
        return(S2+'-'+S1+'ay')
Piglatin(input("Enter the word:"))
```

Hand calculation:

Enter the word: pig

'ig-pay'

Question4. Write a program that asks the user for a word. Translate their word into Pig Latin. Pig Latin game takes the first consonant (or set of first consonants) of an English word, moves it to the end of the word and suffixes an **ay**. If the first letter is a vowel, do not move that vowel, but instead add "**way**" at the end of the word.

Test Cases:

1. Enter a word: **pig**
   Output: **ig-pay**
2. Enter a word: **banana**
   Output: **anana-bay**
3. Enter a word: **trash**
   Output: **ash-tray**
4. Enter a word: **apple**
   Output: **apple-way**
5. Enter a word: **orange**
   Output: **orange-way**

Modify your program so that it becomes a function **piglatin(word)** and returns translated word as output. Call this function 3 times with the same inputs and validate the outputs.

```
Word = input("Enter a Word to translate to pig Latin:")
def Piglatin(word):
    ay = 'ay'
    way = 'way'
    Consonant = ('B','C','D','F','G','H','J','K','L','M','N','P','Q','R'
                 'S','T','U','V','W','X','Y','Z')
    Vowel = ('A','E','I','O','U')
    first_letter = word[0]
    first_letter = str(first_letter)
    first_letter = first_letter.upper())
    if first_letter in Consonant:
        Print(first_letter,'is a Consonant')
        length_of_word = len(word)
        remove_first_letter = word[1:length_of_word]
        Pig_latin = remove_first_letter + first_letter + ay
        Point("The word in pig Latin is:",pig_latin)
    elif first_letter in Vowel:
        Print(first_letter,'is a vaael')
        Pig_latin = word + way
    Point('The word in
    Pig Latin is:',pig_latin)
    else:
        Print('I don't
    know what', first_letter,
                'is')
```

List Processing in Python

List = Students_list = [(1, 'Prasanna', [90, 95, 92]),
(2, 'Manoj', [88, 80, 60]),
(3, 'kasan', [90, 95, 89])]

Source code:

```
def Stud_avg(Students):
    for Student in Students:
        roll, name, masks = Student
        total = 0

        for mask in masks:
            total += mask
        avg = total / len(masks)
        Print("Roll No:", roll, "Name:", 'name',
              "Average:", 'avg')
```

Getting Result -> Stud_avg(Students_list)

Hand Calculation:

- Roll No : 1 Name : Prasanna Average : 92.3
  Roll No : 2 Name : Manoj Average : 76.0
  Roll No : 3 Name : kasan Average : 91.3

Problem Solving Using Python and R Lab

Lab5. List Processing in Python

Question1. Write a function **find_average(student)** that takes student tuple as input and print student rollno, name, marks and average marks as output.

Test Cases:

1. stud1 = (1, "rex", 60, 85, 70)
   find_average(stud1)

Modify the above function **find_average(student)** so that it processes a tuple of tuples.

2. stud2 = (2, "rex", (80, 75, 90))
   find_average(stud2)

```
def find_average(student):
    roll, name, marks = student
    total = 0
    for mark in marks:
        total += mark
    avg = total / len(marks)
    Print("Roll no:", roll, "Name:", name, "Marks:", marks, "average", avg)
```

Question2. Write a weight management program that prompts the user to enter in 7 days of their body weight values as float numbers. Store them in list.
Then print first day weight, last day weight, 4th day weight, highest weight, lowest weight and average weight.
Finally, print if average weight < lowest weight, then print "Your weight management is excellent". Otherwise print "Your weight management is not good. Please take care of your diet".

```
list = []
for i in range(7):
    c = float(input("Enter your weight:"))
    list.append(c)
Print("First day weight is:", list[0])
Print("last day weight is:", list[-1])
Print("highest weight is:", max(list))
Print("lowest weight is:", min(list))
print("average weight is:", round
    (sum(list)/len(list)))
firstday = list[0]
last day = list[-1]
avg = (sum(list)/len(list))
low_weight = min(list)
if(avg < low_weight):
    Print("your weight
management is excellent")
else:
    Print("your weight man
agement is not good, please
take care of your diet")
```