

# Rajalakshmi Engineering College

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## NeoColab\_REC\_CS23221\_Python Programming

### REC\_Python\_Week 1\_CY

Attempt : 1  
Total Mark : 40  
Marks Obtained : 40

### Section 1 : Coding

#### 1. Problem Statement

Emily is organizing a taco party and needs to determine the total number of tacos required and the total cost. Each attendee at the party will consume 2 tacos. To ensure there are enough tacos:

If there are 10 or more attendees, Emily will need to provide an additional 5 tacos. If there are fewer than 10 attendees, Emily must ensure a minimum of 20 tacos are provided.

The cost of each taco is \$25. Write a program that calculates both the total number of tacos required and the total cost based on the number of attendees.

#### **Input Format**

The input consists of an integer n, representing the number of attendees.

### **Output Format**

The first line prints "Number of tacos needed: " followed by an integer representing the number of tacos needed for n attendees.

The second line prints "Total cost: " followed by an integer representing the total cost.

Refer to the sample output for the formatting specifications.

### **Sample Test Case**

Input: 10

Output: Number of tacos needed: 25

Total cost: 625

### **Answer**

# You are using Python

```
n=int(input())
```

```
if(n>=10):
```

```
    tn=(n*2)+5
```

```
else:
```

```
    tn=max(20,n*2)
```

```
tcost=tn*25
```

```
print("Number of tacos needed:",tn,"\nTotal cost: ",tcost)
```

**Status : Correct**

**Marks : 10/10**

## **2. Problem Statement**

Mandy is working on a mathematical research project involving complex numbers. For her calculations, she often needs to swap the real and imaginary parts of two complex numbers.

Mandy needs a Python program that takes two complex numbers as input and swaps their real and imaginary values.

### **Input Format**

The first line of input consists of a complex number in the format  $a+bj$ , representing the first complex number.

The second line consists of a complex number in the format  $a+bj$ , representing the second complex number.

### **Output Format**

The first line of output displays "New first complex number: " followed by the swapped complex number.

The second line of output displays "New second complex number: " followed by the swapped complex number.

Refer to the sample output for the formatting specifications.

### **Sample Test Case**

Input:  $10+8j$   
 $7-9j$

Output: New first complex number:  $(8+10j)$   
New second complex number:  $(-9+7j)$

### **Answer**

```
# You are using Python
cn=complex(input())
cn1=complex(input())
print("New first complex number: ",complex(cn.imag,cn.real),"\nNew second
complex number: ",complex(cn1.imag,cn1.real))
```

**Status :** Correct

**Marks :** 10/10

## **3. Problem Statement**

John is developing a financial application to help users manage their investment portfolios. As part of the application, he needs to write a program that receives the portfolio's main value and the values of two specific investments as inputs. The program should then display these values in reverse order for clear visualization.

Help John achieve this functionality by writing the required program.

### ***Input Format***

The first line of input consists of a float, representing the first investment value.

The second line of input consists of a float, representing the second investment value.

The third line of input consists of an integer, representing the portfolio ID.

### ***Output Format***

The first line of output prints "The values in the reverse order:".

The second line prints the integer, representing the portfolio ID.

The third line prints the second float, representing the second investment value.

The fourth line prints the first float, representing the first investment value.

Refer to the sample output for the formatting specifications.

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

Input: 35.29

9374.11

48

Output: The values in the reverse order:

48

9374.11

35.29

### ***Answer***

```
# You are using Python
```

```
fi=float(input())
```

```
si=float(input())
```

```
pid=int(input())
```

```
print("The values in the reverse order:\n",pid,"\n",si,"\n",fi)
```

**Status :** Correct

**Marks :** 10/10

#### 4. Problem Statement

Olivia is creating a wellness dashboard for her new fitness app, FitTrack. She needs a program that can capture and display key details about a user's workout. The program should read the user's full name, the total steps they ran, the energy they expended in kilojoules, and the duration of their workout in hours. After collecting this information, the program will generate a detailed summary of the user's fitness activity.

Your task is to guide Olivia through the program.

##### **Input Format**

The first line of input consists of a string, representing the user's name.

The second line consists of an integer, representing the total steps taken.

The third line consists of a float value, representing the calories burned.

The fourth line consists of a float value, representing the workout duration in hours.

##### **Output Format**

The first line of output prints "User Name: " followed by the user's name.

The second line prints "Total Steps: " followed by the total steps.

The third line prints "Calories Burned: " followed by the calories burned, rounded off to one decimal place.

The fourth line prints "Workout Duration: X hours" where X is the workout duration, rounded off to one decimal place.

Refer to the sample output for formatting specifications.

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

Input: Alex  
10000  
350.5  
1.5

Output: User Name: Alex  
Total Steps: 10000  
Calories Burned: 350.5  
Workout Duration: 1.5 hours

**Answer**

# You are using Python

```
name=input()
```

```
steps=int(input())
```

```
cal=float(input())
```

```
dur=float(input())
```

```
print("User Name: ",name,"\nTotal Steps: ",steps,"\nCalories Burned: ",cal,"\nWorkout Duration: ",dur," hours")
```

**Status :** Correct

**Marks :** 10/10