

Question: 1

```
total = 0
i = int(input("Enter any integer"))
while i > 0:
    total = total + i
    i = int(input("Enter next integer"))
print("\n The sum of all numbers entered is", total)
```

Question: 2

While True:

```
m = int(input("Enter any value for m = "))
n = int(input("Enter any value for n = "))
while m > n:
    print("value of m should be less than n")
    n = int(input("Please re-enter a value for n = "))
```

sum = 0

```
for i in range(m, n+1):
```

```
    if i % 2 == 0:
```

```
        sum = sum + i
```

```
print(sum)
```

```
reply = str(input("\n Do you want to quit?
```

```
if reply == 'q': (type 'q'): ))
```

```
break;
```

Problem Solving Using Python and R Lab

Lab2. Python Loops

Question1. Write a program that accepts numbers continuously as long as the number is positive and prints the sum of the numbers read (Use while loop). A sample user interaction will be:

```
Enter a number: 2
Enter a number: 1
Enter a number: 4
Enter a number: 6
Enter a number: -10
Sum = 13
```

Question 2. Write a program to take the values of two integers **m** and **n** from the user. Calculate the sum of even number between **m** and **n** (including both m and n).

Please note that value of **m** must be less than value of **n**. If **m > n**, then you must print a message "Value of m should be less than n" and ask for next input values.

Print the values of **m**, **n** and **sum**. (Use while loop).

The program should continue until user types 'q' to quit the program.

Sample user interaction:

```
Enter m: 1
Enter n: 10
Sum of even numbers: 20
Do you want to quit (Type q)? :
```

```
Enter m: 2
Enter n: 10
Sum of even numbers: 20
Do you want to quit (Type q)? :
```

```
Enter m: 20
Enter n: 10
Value of m should be less than n
Do you want to quit (Type q)? : q
```

Question: 3

```
num = int(input("Enter the number: "))  
Print("Multiplication Table of ", num)  
for i in range(1, 11):  
    Print(num, "x", i, "=", num * i)
```

Question: 4

```
num = int(input("Enter a integer: "))  
total = 0  
while num > 0:  
    digit = num % 10  
    total = total + digit  
    num = num // 10  
Print("Sum of the integer is:", total)
```

Question3. Write a program to accept n and display its multiplication table. Value of n must be provided by the user. (Example: $n * 1, n * 2, \dots, n * 10$) (Use for loop)

Question4. Write a program that receives an integer and prints the sum of its digits. For example, an input 125 will print output $1+2+5=8$.

- Try out with the following test cases
- 125
- 12
- 2
- -15

Question 5. Develop an application in Python that repeatedly reads numbers until the user enters done. Once done is entered, print out the total, count, and average of the numbers. If the user enters anything other than a number, detect their mistake using try and except and print an error message and skip to the next number.

Question: 5

```
num = 0
```

```
tot = 0
```

```
while True:
```

```
    number = input("Enter a number:")
```

```
    if number == 'done':
```

```
        break
```

```
    try:
```

```
        num = int(number)
```

```
    except:
```

```
        print('Invalid Input')
```

```
        continue
```

```
    num = num + 1
```

```
    tot = tot + num
```

```
    avg = tot / num
```

```
print('\n done')
```

```
print('Total:', tot)
```

```
print('Num:', num)
```

```
print('Average:', avg)
```