



**CTU** training solutions

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## Instructions

**Module Name: Basic Programming – BP411**

**Assessment Type: Group Activity 2**

**Total Mark Allocation: 20 Marks**

**Total Hours: 2 Hours**

1. No material may be copied from original sources, even if referenced correctly, unless it is a direct quote indicated with quotation marks.
2. No more than 10% of the assessment may consist of direct quotes.
3. No assessment with a similarity index of more than 25%, even if the sources are referenced correctly, will be accepted.
4. Make a copy of your assessment before handing it in.
5. All assessment must be typed unless otherwise specified.
6. All work must be adequately and correctly referenced.
7. All questions should be answered using Python.

### Answer the following Question.

Create an algorithm using Python that calculate the sum and average of first **n** natural numbers. The algorithm will work as follows,

- Allows a user to enter the number (n) he wishes to calculate the sum and average.
- The program accepts user input using the input function.
- Next, run loop till the entered number using the **for loop** and **range ()** function.
- Next, calculate the sum using a **sum = sum + current number** formula.
- At last, after the loop ends, calculate the average using **average = sum / n**.
- **n** is a number entered by the user.

### Expected Output:

```
Enter a number to calculate sum 10
Sum of the first 10 natural numbers using formula is: 55.0
Average of the first 10 natural numbers using formula is: 5.5
```

### Completed Declaration of Authenticity

I \_\_\_\_\_ hereby  
(FULL NAME)

declare that the contents of this assignment \_\_\_\_\_ is entirely my own work except for the following documents: (List the documents and page numbers of work in this portfolio that were generated in a group)

Activity	Date

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

