**Faculty of Computer Science and Information Technology**

**CCS3100 Problem Solving and Programming Concept**

**First Semester 2024/2025**

**Lab 2 (Week 2)**

**Topic:**

Develop programs to solve problems using mathematical operations.

**Instruction:**

* Write a program based on your analyzation for **all questions**.
* Demo/present two answers to demonstrator during lab session **Week 2**.
* Combine all answers in one (1) file (Word or Pdf format). Arrange it accordingly to number of questions.Put cover page that complete with all details, such as course, lecturer’s name, your name, and matric number.
* Submit the assignment in Putrablast before the lab session end (before end of **Week 2**) and to demonstrator.
* Refer lab rubric for assessment.

\*\* Copy or other forms of cheating is forbidden. The standard penalty for the first offence is to award 0 to all parties concerned.

**Learning Outcome:**

At the end of this lab, student should be able to:

1. Analyse and solve programming problem using mathematical operations (P3)
2. Construct program using mathematical operations (P4)

**Questions**

1. Write a program to compute the result of the following mathematical formula.

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1. Write a program to compute the **perimeter** and **area** of a right triangle (See figure below) when given the length of the two sides (*a* and *b*).

c

a

b

Use the following formulas:

*c*2 = *a*2 + *b*2

area = 0.5 \* (*a* \* *b*)

1. (Area and perimeter of a rectangle) Write a program that displays the area and perimeter of a rectangle with the width of 5.5 and height of 7.6 using the following formula:
   1. **area** = width height
   2. **perimeter** = 2 (width + height)