



Introduction to Programming

Assignment 4

1. **Write a Python program that includes two functions: `square_properties` and `rectangle_properties`. (20 Marks)**

- **Function: `square_properties`**

- **Parameter:**

- One parameter: An integer or float represents the side length of a square.

- **The function should return:**

- The area of the square (calculated as the side length squared).
 - The perimeter of the square (calculated as 4 times the side length).

- **Function: `rectangle_properties`**

- **Input:**

- Two parameters: an integer or float representing the length and another representing the width of a rectangle.

- **The function should return:**

- The area of the rectangle (calculated as length multiplied by width).
 - The perimeter of the rectangle (calculated as 2 times the sum of the length and width).

- Demonstrates how to use both functions by calling them in your program

2. **Develop a Flowchart for the above program using the Microsoft Word application and submit a PDF file. (10 Marks)**

Do not forget to include comments that state the author, the date the program was created, and the purpose of the program. Additionally, add comments throughout describing the various steps. For this assignment, you can assume the user will enter proper input and will use the program correctly.

Example Output:

Square with side length 5:

Area: 25, Perimeter: 20

Rectangle with length 10 and width 4:

Area: 40, Perimeter: 28



Introduction to Programming

Submission:

- **You must submit a .py file for question 1 and .pdf file for question 2**
- **Do your own work!** A mark of 0 will be assigned to the entire assignment for work that is not your own and will be handled as per the **Code of Student Rights and Responsibilities**
- **All work must be run and validated to ensure that it is free of errors.** Any assignment that is submitted showing errors that prevent it from running will receive a mark of 0.
- **Only apply the knowledge that we have learned in class to this point.** Answers using any syntax or knowledge that we have not covered yet will receive a mark of 0 for that question.
- **Any assignment submitted past the posted due date and time will receive a mark of 0.** Do not wait until the last minute to complete and submit your work.