



PYTHON ASSIGNMENT

Programming Task

Task 1: Calculate Area with Conditions

Write a Python function `calculate_area` that takes two parameters: length and width. It should calculate and return the area of a rectangle. However, add a condition: if the length is equal to the width, return "This is a square!" instead of the area. Then, write a program to input values for length and width from the user and call the `calculate_area` function to display either the area or the message.

Task 3: MySQL Database Operations with Python (Compulsory)

Problem Statement:

Your task is to write a Python program that accomplishes the following:

First create a database , table and add these column 'student_id', 'first_name', 'last_name', 'age', 'grade'.

Connects to your MySQL database with python.

Inserts a new student record into the "students" table with the following details:

First Name: "Alice"

Last Name: "Smith"

Age: 18

Grade: 95.5

Updates the grade of the student with the first name "Alice" to 97.0.

Deletes the student with the last name "Smith."

Fetches and displays all student records from the "students" table.

Task 2: Generate Fibonacci Series

Problem Statement:

Write a Python program that generates the Fibonacci sequence up to a specified number of terms, n. The Fibonacci sequence starts with 0 and 1, and each subsequent number in the sequence is the sum of the two preceding numbers (e.g., 0, 1, 1, 2, 3, 5, 8, ...). Prompt the user to enter the number of terms (n) they want in the sequence and then display the Fibonacci sequence up to that number of terms.