**Task 1**.

def calculate\_area(length, width):

if length == width:

return "This is a square!"

else:

return length \* width

def main():

length = float(input("Enter the length: "))

width = float(input("Enter the width: "))

result = calculate\_area(length, width)

if isinstance(result, str):

print(result)

else:

print("The area of the rectangle is:", result)

if \_\_name\_\_ == "\_\_main\_\_":

main()

**Task 3.**

import mysql.connector

# Connection to your MySQL database

conn = mysql.connector.connect(

host='your\_host',

user='your\_username',

password='your\_password',

database='your\_database'

)

cursor = conn.cursor()

cursor.execute("CREATE TABLE IF NOT EXISTS students (student\_id INT AUTO\_INCREMENT PRIMARY KEY, first\_name VARCHAR(255), last\_name VARCHAR(255), age INT, grade FLOAT)")

cursor.execute("INSERT INTO students (first\_name, last\_name, age, grade) VALUES ('Alice', 'Smith', 18, 95.5)")

cursor.execute("UPDATE students SET grade = 97.0 WHERE first\_name = 'Alice'")

cursor.execute("DELETE FROM students WHERE last\_name = 'Smith'")

cursor.execute("SELECT \* FROM students")

records = cursor.fetchall()

for record in records:

print(record)

conn.commit()

conn.close()

**Task 2.**

def generate\_fib(n):

fib\_sequence = [0, 1]

while len(fib\_sequence) < n:

next\_term = fib\_sequence[-1] + fib sequence[-2]

fib\_sequence.append(next\_term)

return fib\_sequence

def main():

try:

# Prompt the user to enter the number of terms

n = int(input("Enter the number Fib sequence: "))

if n <= 0:

print("Please enter a positive integer for the number of terms.")

else:

# Generate and display the Fibonacci sequence

fib\_sequence = generate\_fib(n)

print(f"Fib sequence up to {n} terms:")

print(fib\_sequence)

except ValueError:

print("Invalid input. Please enter a valid positive integer.")

if \_\_name\_\_ == "\_\_main\_\_":

main()