**RIFT VALLEY UNIVERSITY**

**DEGREE OF INFORMATION TECHNOLOGY**

**Advanced Database (SQL Server)**

**Assignment**

**Title: Database Design**

**Objective:**

Design a database schema for an online e-commerce platform that sells various products. The database should be able to store information about:

- Products (name, description, category, price, stock quantity)

- Customers (name, email, address, order history)

- Orders (order ID, customer ID, product ID, quantity, order date, total amount)

- Payments (payment ID, order ID, payment method, payment amount, payment date)

**Requirements:**

1. Identify the entities and their attributes.

2. Determine the relationships between the entities.

3. Create the database schema with appropriate data types and constraints.

4. Provide sample data for at least 10 products, 5 customers, and 10 orders.

5. Write SQL queries to:

- Add a new product to the database.

- Update the stock quantity of a product.

- Retrieve all orders placed by a specific customer.

- Calculate the total revenue generated from all orders.