

# 1. SQL - Module End Assignment

**Task:** Database for an Online Store

**Description:** Create and manipulate tables for an e-commerce store with products, customers, and orders.

**Task 1:** Write SQL queries to:

- Create three tables: Products, Customers, and Orders.
- Insert sample data for at least 10 products, 5 customers, and 10 orders.

**Task 2:** Use ALTER to add new columns like discount in the Products table, and then UPDATE to modify some data.

**Task 3:** Write a query that selects all orders with a total value above \$100 and sorts them by the order date in descending order.

**Task 4:** Use GROUP BY to group orders by customer and calculate the total amount spent by each customer.

**Task 5:** Add a HAVING clause to filter out customers who spent less than \$500.

**Task 6:** Write queries that calculate the average price of products, the maximum order value, and the total number of products in the store using AVG(), MAX(), SUM(), and COUNT().

**Task 7:** Use comparison and logical operators (e.g., BETWEEN, LIKE, AND, OR) to find all products with prices between \$20 and \$50 or those that contain the keyword "Laptop" in their names.

**Task 8:** Write an INNER JOIN query to retrieve a list of all customer names along with their order details.

**Task 9:** Use LEFT JOIN to retrieve all products and their corresponding orders, ensuring that products with no orders are still shown.

**Task 10:** Use RIGHT JOIN to get all customers and their orders, including customers who haven't placed any orders.