**Assignment Project: E-commerce Database**

**Objective:**

1. Explore the structure of the dataset by understanding the relationships between tables.
2. Formulate SQL queries to extract meaningful insights from the data.

**Tasks:**

**1. Data Exploration:**

* List all tables present in the dataset.
* Describe the structure of each table, including primary and foreign keys.
* Identify relationships between tables.

**2. Basic Queries:**

* Retrieve the first 10 rows of each table to get a glimpse of the data.
* Count the total number of rows in each table.

**3. Customer Analysis:**

* Find the total number of customers.
* Identify the top 5 states with the highest number of customers.
* Calculate the average order value for each customer.

**4. Product Analysis:**

* Determine the total number of unique products.
* Find the top 10 best-selling products.
* Calculate the average price of products.

**5. Order Analysis:**

* Find the total number of orders.
* Identify the month with the highest number of orders.

**Practice Questions: E-commerce Dataset**

1. Rank the products based on their total sales revenue. Include the product name, total sales revenue, and the rank.
2. Find the top 5 customers with the highest cumulative purchase amount. Show customer ID, name, and the cumulative purchase amount.
3. Calculate the running total of sales revenue for each product. Display the product name, date, and the running total of sales revenue.
4. Identify customers who have placed orders with a total value greater than the average order value. Show customer ID, name, and total order value.
5. Determine the difference in sales revenue from the previous day for each product. Show the product name, date, sales revenue, and the daily difference.
6. List the customers who have made at least two purchases in the same day. Show customer ID, name, and the number of purchases.
7. Calculate the total sales revenue for each month. Display the month name, year, and total sales revenue.
8. Find products that have sales revenue higher than the average sales revenue. Display the product name, sales revenue, and the average sales revenue.
9. Identify the average order value for each quarter. Display the quarter, year, and average order value.

**Submission:**

* Write SQL queries for each task.
* Include comments explaining the purpose of each query.
* Provide a brief summary of the insights obtained from each analysis.