4.1 Customer Insights:

1. Calculate the total amount spent by each customer and find the top 10 spenders.

```sql
CREATE DATABASE EcommerceDB;
USE EcommerceDB;
CREATE TABLE transactions (
    CustomerID INT,
    OrderID INT PRIMARY KEY,
    Product VARCHAR(255),
    Quantity INT,
    UnitPrice DECIMAL(10, 2),
    PurchaseDate DATETIME,
    Country VARCHAR(255),
    TotalSpend DECIMAL(10, 2)
);
# DATA Imported check
SELECT *
FROM transactions;
# 4. Aggregated Analysis: Extra grad
# 4.1 Customer Insights:
# 1. Calculate the total amount spent by each customer and find the top 10 spenders.
SELECT CustomerID,
    sum(TotalSpend) As TotalAmount
FROM transactions
GROUP BY CustomerID
ORDER BY TotalAmount DESC
limit 10;
# 2. Group data by Country and analyze the total revenue generated per country.
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows:

CustomerID	TotalAmount
1626	9916.61
1385	9699.73
1633	8940.54
1915	8934.78
1161	8658.97
1378	7857.90

Result 2

2. Group data by Country and analyze the total revenue generated per country.

```
25    # 2. Group data by Country and analyze the total revenue generated per country.
26    SELECT Country,
27        SUM(TotalSpend) AS TotalRevenue
28    FROM transactions
29    GROUP BY Country
30    ORDER BY TotalRevenue DESC;
31    # 3. Identify which country has the highest average transaction value.
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Country	TotalRevenue
Australia	235767.81
Japan	184114.15
USA	175409.70
UK	169943.33
France	164686.00
Canada	159869.54

3. Identify which country has the highest average transaction value.

```
31    # 3. Identify which country has the highest average transaction value.
32    SELECT Country,
33        AVG(TotalSpend) As AverageSpentBYCountry
34    FROM transactions
35    GROUP BY Country
36    ORDER BY AverageSpentByCountry DESC;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Country	AverageSpentBYCountry
Australia	1684.055786
USA	1486.522881
Canada	1414.774690
Japan	1353.780515
Germany	1324.247568
UK	1317.390155
France	1276.635659
India	1260.360081

4.2 Product Analysis:

1. Find the most purchased product and its total quantity sold.

```
38      # 1. Find the most purchased product and its total quantity sold.
39  •   SELECT Product,
40          SUM(Quantity) As TotalQuantitySold
41      From transactions
42      group by Product
43      order by TotalQuantitySold Desc;
```

esult Grid | Filter Rows: | Export: | Wrap Cell Content:

Product	TotalQuantitySold
Printer	699
Headphones	618
Smartwatch	604
Mouse	568
Gaming Console	551
Tablet	549
Monitor	542
Keyboard	538
Laptop	465
Smartphone	439

2. Identify the product that generated the highest revenue.

```
44      # 2. Identify the product that generated the highest revenue
45  •   select Product,
46          Sum(TotalSpend) As HighestRevenueProduct
47      From transactions
48      group by Product
49      order by HighestRevenueProduct desc;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Product	HighestRevenueProduct
Printer	178841.60
Headphones	172493.15
Smartwatch	154633.92
Mouse	146366.75
Tablet	132302.73
Monitor	128298.82
Keyboard	125075.18
Gaming Console	123659.54
Laptop	117309.47
Smartphone	114085.50

3. Determine the top 3 least popular products based on sales quantity.

```
50    # 3. Determine the top 3 least popular products based on sales quantity
51    select Product,
52        Sum(TotalSpend) As LowstSalesQuntity
53    From transactions
54    group by Product
55    order by LowstSalesQuntity asc;
56    # 4.3 Time-Based Insights:
57    # 1. Analyze the total revenue generated per day in July 2022.
58    Select Date(PurchaseDate) As PurchaseDay,
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Product	LowstSalesQuntity
Smartphone	114085.50
Laptop	117309.47
Gaming Console	123659.54
Keyboard	125075.18
Monitor	128298.82
Tablet	132302.73
Mouse	146366.75
Smartwatch	154633.92
Headphones	172493.15
Printer	178841.60

4.3 Time-Based Insights:

1. Analyze the total revenue generated per day in July 2022.

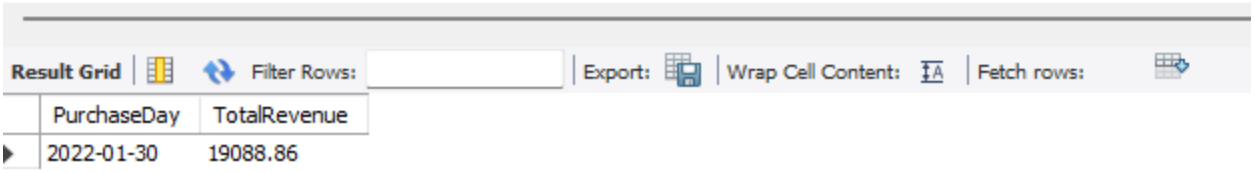
```
57    # 1. Analyze the total revenue generated per day in July 2022.
58    Select Date(PurchaseDate) As PurchaseDay,
59        Sum(TotalSpend) As TotalRevenue
60    From transactions
61    Where month(PurchaseDate) = 7
62        AND Year(PurchaseDate) = 2022
63    group by PurchaseDay
64    order by PurchaseDay asc;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

PurchaseDay	TotalRevenue
2022-07-01	7934.78
2022-07-02	5135.95
2022-07-03	2160.90
2022-07-06	712.92
2022-07-07	3641.89
2022-07-08	2350.70
2022-07-10	1763.54
2022-07-11	427.65
2022-07-12	3179.79

2. Identify peak shopping hours based on the number of transactions.

```
65    # 2. Identify peak shopping hours based on the number of transactions.
66    # NO Hour Data Provided in the dataset
67    # 3. Find the day with the highest total revenue.
68    Select Date(PurchaseDate) As PurchaseDay,
69        Sum(TotalSpend) As TotalRevenue
70    From transactions
71    group by PurchaseDay
72    order by TotalRevenue desc
73    limit 1;
74    # 5. Advanced Insights:  Extra grad
75    # 1. Create a column for total spend per transaction (Quantity * UnitPrice).
76    # Done in Python
77    # 2. Use quantites to identify the top 10% of transactions based on total spend.
78    # Analyze purchasing trends by country:
79    # (1) Identify the most popular product in each country.
80    # (2) Determine the average order value per country.
```



PurchaseDay	TotalRevenue
2022-01-30	19088.86