EverMart Analysis Using SQL – Mayank Shukla

Question 1. Use SELECT, WHERE, ORDER BY, GROUP BY.
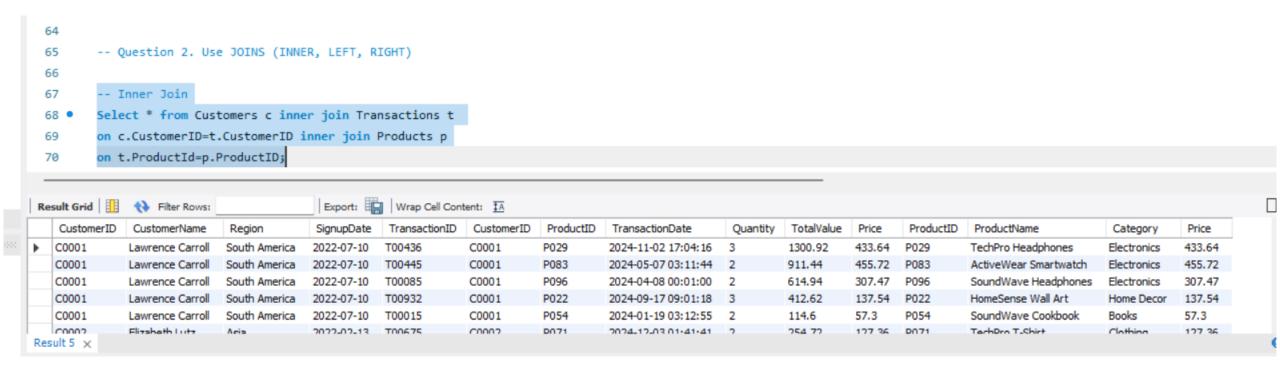
```
46
47    -- Question 1.  Use SELECT, WHERE, ORDER BY, GROUP BY
48
49    -- Select
50 ●  Select * from Customers;
```

	CustomerID	CustomerName	Region	SignupDate
▶	C0001	Lawrence Carroll	South America	2022-07-10
	C0002	Elizabeth Lutz	Asia	2022-02-13
	C0003	Michael Rivera	South America	2024-03-07
	C0004	Kathleen Rodriguez	South America	2022-10-09
	C0005	Laura Weber	Asia	2022-08-15
	C0006	Brittany Palmer	South America	2024-01-07

Customers 1 ✕

```
51
52    -- Where
53 ●  Select * from Customers
54    where CustomerID = 'C0011';
55
```

	CustomerID	CustomerName	Region	SignupDate
▶	C0011	Bryan Mathews	South America	2022-12-12

```
55
56     -- Order By
57  •  Select * from Customers
58     order by SignupDate Desc;
59
60  •  Select Region, count(*) As Customer_Count  from Customers
61     Group By Region;
```

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

CustomerID	CustomerName	Region	SignupDate
C0182	Joshua Preston	Europe	2024-12-28
C0117	Jeffrey Mcmahon	North America	2024-11-22
C0151	Amber Gonzalez	South America	2024-11-22
C0114	Benjamin Anderson	Europe	2024-11-18
C0066	Catherine White	Europe	2024-11-15
C0078	Julia Palmer	Asia	2024-11-13

Customers 3 ×

```
59
60     -- Group By
61  •  Select Region, count(*) As Customer_Count  from Customers
62     Group By Region;
63
64
```

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

Region	Customer_Count
South America	59
Asia	45
North America	46
Europe	50

Question 2. Use Joins (INNER, LEFT, RIGHT)

```sql
64
65      -- Question 2. Use JOINS (INNER, LEFT, RIGHT)
66
67      -- Inner Join
68  •   Select * from Customers c inner join Transactions t
69      on c.CustomerID=t.CustomerID inner join Products p
70      on t.ProductId=p.ProductID;
```

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

CustomerID	CustomerName	Region	SignupDate	TransactionID	CustomerID	ProductID	TransactionDate	Quantity	TotalValue	Price	ProductID	ProductName	Category	Price
C0001	Lawrence Carroll	South America	2022-07-10	T00436	C0001	P029	2024-11-02 17:04:16	3	1300.92	433.64	P029	TechPro Headphones	Electronics	433.64
C0001	Lawrence Carroll	South America	2022-07-10	T00445	C0001	P083	2024-05-07 03:11:44	2	911.44	455.72	P083	ActiveWear Smartwatch	Electronics	455.72
C0001	Lawrence Carroll	South America	2022-07-10	T00085	C0001	P096	2024-04-08 00:01:00	2	614.94	307.47	P096	SoundWave Headphones	Electronics	307.47
C0001	Lawrence Carroll	South America	2022-07-10	T00932	C0001	P022	2024-09-17 09:01:18	3	412.62	137.54	P022	HomeSense Wall Art	Home Decor	137.54
C0001	Lawrence Carroll	South America	2022-07-10	T00015	C0001	P054	2024-01-19 03:12:55	2	114.6	57.3	P054	SoundWave Cookbook	Books	57.3
C0002	Elizabeth Lutz	Asia	2022-02-13	T00675	C0002	P071	2024-12-03 01:41:41	2	254.72	127.36	P071	TechPro T-Shirt	Clothing	127.36

Result 5 ✕

```sql
72    -- Left Join
73 ●  Select * from Customers c Left join Transactions t
74    on c.CustomerID=t.CustomerID Left join Products p
75    on t.ProductId=p.ProductID;
76
```

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

CustomerID	CustomerName	Region	SignupDate	TransactionID	CustomerID	ProductID	TransactionDate	Quantity	TotalValue	Price	ProductID	ProductName	Category	Price
C0001	Lawrence Carroll	South America	2022-07-10	T00436	C0001	P029	2024-11-02 17:04:16	3	1300.92	433.64	P029	TechPro Headphones	Electronics	433.64
C0001	Lawrence Carroll	South America	2022-07-10	T00445	C0001	P083	2024-05-07 03:11:44	2	911.44	455.72	P083	ActiveWear Smartwatch	Electronics	455.72
C0001	Lawrence Carroll	South America	2022-07-10	T00085	C0001	P096	2024-04-08 00:01:00	2	614.94	307.47	P096	SoundWave Headphones	Electronics	307.47
C0001	Lawrence Carroll	South America	2022-07-10	T00932	C0001	P022	2024-09-17 09:01:18	3	412.62	137.54	P022	HomeSense Wall Art	Home Decor	137.54
C0001	Lawrence Carroll	South America	2022-07-10	T00015	C0001	P054	2024-01-19 03:12:55	2	114.6	57.3	P054	SoundWave Cookbook	Books	57.3
C0002	Elizabeth Lutz	Asia	2022-02-13	T00675	C0002	P071	2024-12-03 01:41:41	2	254.72	127.36	P071	TechPro T-Shirt	Clothing	127.36

Result 6 ✕

```sql
77    -- Right Join
78 ●  Select * from Customers c Right join Transactions t
79    on c.CustomerID=t.CustomerID Right join Products p
80    on t.ProductId=p.ProductID;
```

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

CustomerID	CustomerName	Region	SignupDate	TransactionID	CustomerID	ProductID	TransactionDate	Quantity	TotalValue	Price	ProductID	ProductName	Category	Price
C0017	Jennifer King	Europe	2023-12-05	T00758	C0017	P001	2024-05-28 14:47:15	3	507.9	169.3	P001	ActiveWear Biography	Books	169.3
C0045	Michael Williams	Asia	2022-02-25	T00732	C0045	P001	2024-08-13 10:42:48	2	338.6	169.3	P001	ActiveWear Biography	Books	169.3
C0105	Ryan Hampton	Europe	2024-11-11	T00545	C0105	P001	2024-06-24 10:10:17	2	338.6	169.3	P001	ActiveWear Biography	Books	169.3
C0191	Samantha Gibson DVM	South America	2024-04-07	T00449	C0191	P001	2024-12-12 12:17:38	1	169.3	169.3	P001	ActiveWear Biography	Books	169.3
C0036	Brian Aguilar DDS	North America	2024-07-06	T00433	C0036	P001	2024-05-05 05:01:18	2	338.6	169.3	P001	ActiveWear Biography	Books	169.3
C0071	Taylor Murphy	South America	2022-07-01	T00428	C0071	P001	2024-08-02 08:13:23	2	338.6	169.3	P001	ActiveWear Biography	Books	169.3

Result 7 ✕

Question 3. Use Aggregate Functions (SUM, AVG).

```
82
83      -- Question 3. Use aggregate functions (SUM, AVG).
84      -- Sum
85  •   Select Category, Sum(Price) As Sum_Price from Products
86      group by Category;
```

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

Category	Sum_Price
▶ Books	7597.520000000002
Electronics	7159.190000000001
Home Decor	5405.459999999999
Clothing	6592.999999999998

```
87      |
88      -- Average
89  •   Select Category, Round(Avg(Price), 2) As Avg_Price from Products
90      group by Category
91      order by Avg_Price Desc;
92
```

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

Category	Avg_Price
▶ Books	292.21
Electronics	275.35
Clothing	263.72
Home Decor	235.02

Question 4. Write Subqueries.

```
94
95      -- Question 4. Write subqueries.
96
97      -- Question. Find The CustomerID, CustomerName, Toatal_Spend for 2nd Highest Total_Spend ?
98 •    Select c.CustomerID, c.CustomerName, subquery.Total_Spend from Customers c
99   ⊖ Inner Join (
100     Select CustomerID, Sum(TotalValue) as Total_Spend from Transactions
101     group by CustomerId
102     Order By Total_Spend Desc
103     Limit 1 offset 1
104   ) as subquery
105     on c.CustomerId=subquery.customerid ;
```

Result Grid	Filter Rows:	Export:	Wrap Cell Content:

CustomerID	CustomerName	Total_Spend
C0054	Bruce Rhodes	8040.390000000001

Question 5. Create Views for analysis.

```
108
109        -- Question 5. Create views for analysis
110
111        -- Question Highest Spending Customer ?
112 ●   Create View  HighestSpendingCustomer As
113        Select c.CustomerId, c.CustomerName, Subquery.Total_Spend from Customers c
114    ⊖ Inner Join (
115        Select CustomerID, Sum(TotalValue) as Total_Spend
116        from transactions
117        group by CustomerId
118        order by Total_Spend Desc
119        Limit 1) As Subquery
120        on c.CustomerId=Subquery.CustomerID;
121
122        |
123        -- To Check Or See The View.
124 ●   Select * from HighestSpendingCustomer;
```

Result Grid		Filter Rows:		Export:	Wrap Cell Content:

	CustomerId	CustomerName	Total_Spend
▶	C0141	Paul Parsons	10673.87

HighestSpendingCustomer 11 ✕

Question 6. Optimize queries with indexes.

```
125
126        -- Question 6. Optimize queries with indexes.
127        -- To Make The Index.
128 ●      Create Index idx_customer_id on Transactions(CustomerID(255));
129
130        -- To Check The Index In Table.
131 ●      Show Index From transactions;
132
133        -- To Drop The Index.
134 ●      Drop Index idx_customer_id on Transactions;
135
136
```

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

Table	Non_unique	Key_name	Seq_in_index	Column_name	Collation	Cardinality	Sub_part	Packed	Null	Index_type	Comment	Index_comment	Visible	Expression
transactions	1	idx_customer_id	1	CustomerID	A	199	255	NULL	YES	BTREE			YES	NULL