```
56      #Q1. Find the high-income customers who made large purchases.
57  •   SELECT Customer_ID, Purchase_Category, Purchase_Amount, Time_of_Purchase
58      FROM Ecommerce
59      WHERE Income_Level = 'High'
60        AND Purchase_Amount > 400
61      ORDER BY Purchase_Amount DESC;
62
63
```

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

Customer_ID	Purchase_Category	Purchase_Amount	Time_of_Purchase
86-257-9581	Gardening & Outdoors	497.76	2024-08-03
72-830-1211	Jewelry & Accessories	496.11	2024-08-06
69-394-1424	Software & Apps	494.97	2024-08-16
59-261-4453	Furniture	494.81	2024-05-26
51-302-9537	Animal Feed	492.74	2024-02-29
87-056-8987	Groceries	491.92	2024-12-29
38-940-4942	Health Care	490.41	2024-12-15

Ecommerce 6 ✕

```sql
63      #Q2. Which purchase category generates the most revenue?
64  •   SELECT Purchase_Category,
65             COUNT(*) AS Total_Orders,
66             AVG(Purchase_Amount) AS Avg_Amount,
67             SUM(Purchase_Amount) AS Total_Revenue
68      FROM Ecommerce
69      GROUP BY Purchase_Category
70      ORDER BY Total_Revenue DESC;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: $\overline{\underline{\text{A}}}$

Purchase_Category	Total_Orders	Avg_Amount	Total_Revenue
Books	26	311.679231	8103.66
Health Supplements	28	285.931786	8006.09
Jewelry & Accessories	24	323.996250	7775.91
Software & Apps	23	333.922174	7680.21
Packages)	26	295.061154	7671.59
Furniture	30	254.272667	7628.18
Baby Products	28	271.312857	7596.76

Result 7 ✕

```
72      #Q3. Which customers spend above the average purchase amount?
73  •   SELECT Customer_ID, Purchase_Amount
74      FROM Ecommerce
75  ⊖   WHERE Purchase_Amount > (
76          SELECT AVG(Purchase_Amount)
77          FROM Ecommerce
78      );
79
80
```

Customer_ID	Purchase_Amount
84-649-5117	426.22
90-144-9193	486.40
44-674-4037	389.70
45-073-7243	356.45
95-478-2650	461.00
29-625-7057	489.05
25-839-8670	382.24

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

Ecommerce 8 ×

```sql
80      #Q4. Who are the frequent buyers and how much have they spent?
81 ●    CREATE VIEW frequent_buyers AS
82      SELECT Customer_ID,
83              COUNT(*) AS Purchase_Count,
84              SUM(Purchase_Amount) AS Total_Spent
85      FROM Ecommerce
86      GROUP BY Customer_ID;
87 ●    select * from frequent_buyers;
88
```

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

Customer_ID	Purchase_Count	Total_Spent
29-392-9296	1	222.22
84-649-5117	1	426.22
90-144-9193	1	486.40
37-065-3182	1	201.96
44-674-4037	1	389.70
78-116-8349	1	238.93
19-933-8095	1	61.22

frequent_buyers 11 ✕

```
89        #Q5. What is the monthly sales trend?
90  •     SELECT DATE_FORMAT(Time_of_Purchase, '%Y-%m') AS Month,
91               SUM(Purchase_Amount) AS Monthly_Sales
92        FROM Ecommerce
93        GROUP BY Month
94        ORDER BY Month;
```

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

Month	Monthly_Sales
NULL	0.00
2024-01	8867.44
2024-02	12873.86
2024-03	16055.80
2024-04	18550.29
2024-05	11753.35
2024-06	17069.54

Result 12 ×

```sql
96      #Q6. Which device type generates the highest sales?
97  •   SELECT Device_Used_for_Shopping,
98              SUM(Purchase_Amount) AS Total_Sales
99      FROM Ecommerce
100     GROUP BY Device_Used_for_Shopping
101     ORDER BY Total_Sales DESC;
```

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

Device_Used_for_Shopping	Total_Sales
Desktop	54046.97
Tablet	52358.80
Smartphone	50543.66
High	0.00

Result 13 ×

```
103        #Q7. Improve query performance for frequent analysis.
104  ●    CREATE INDEX idx_purchase_category ON Ecommerce(Purchase_Category);
105  ●    CREATE INDEX idx_time_of_purchase ON Ecommerce(Time_of_Purchase);
106
107        #Q8. Which payment method is most popular and generates the most revenue?
108  ●    SELECT Payment_Method,
109              COUNT(*) AS Total_Transactions,
110              SUM(Purchase_Amount) AS Total_Revenue
111        FROM Ecommerce
112        GROUP BY Payment_Method
113        ORDER BY Total_Revenue DESC;
```

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

Payment_Method	Total_Transactions	Total_Revenue
Credit Card	125	34970.88
Other	121	34317.04
PayPal	118	32842.60
Debit Card	103	29389.23
Cash	96	25429.68
Smartphone	1	0.00 25429.68

Result 14 ×

```sql
115      #Q9. Which purchase channel has the highest customer satisfaction?
116 •    SELECT Purchase_Channel,
117            AVG(Customer_Satisfaction) AS Avg_Satisfaction,
118            COUNT(*) AS Total_Customers
119      FROM Ecommerce
120      GROUP BY Purchase_Channel
121      ORDER BY Avg_Satisfaction DESC;
```

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

Purchase_Channel	Avg_Satisfaction	Total_Customers
Mixed	5.4513	195
Online	5.3351	185
In-Store	5.1202	183
7	0.0000	1

Result 15 ✕

```sql
123    #Q10. What is the return rate by product category?
124 •  SELECT Purchase_Category,
125         AVG(Return_Rate) AS Avg_Return_Rate
126    FROM Ecommerce
127    GROUP BY Purchase_Category
128    ORDER BY Avg_Return_Rate DESC;
```

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

Purchase_Category	Avg_Return_Rate
Travel & Leisure (Flights	1.2105
Baby Products	1.1071
Luxury Goods	1.0870
Books	1.0769
Office Supplies	1.0526
Gardening & Outdoors	1.0417
Hotels	1.0417

Result 16 ×