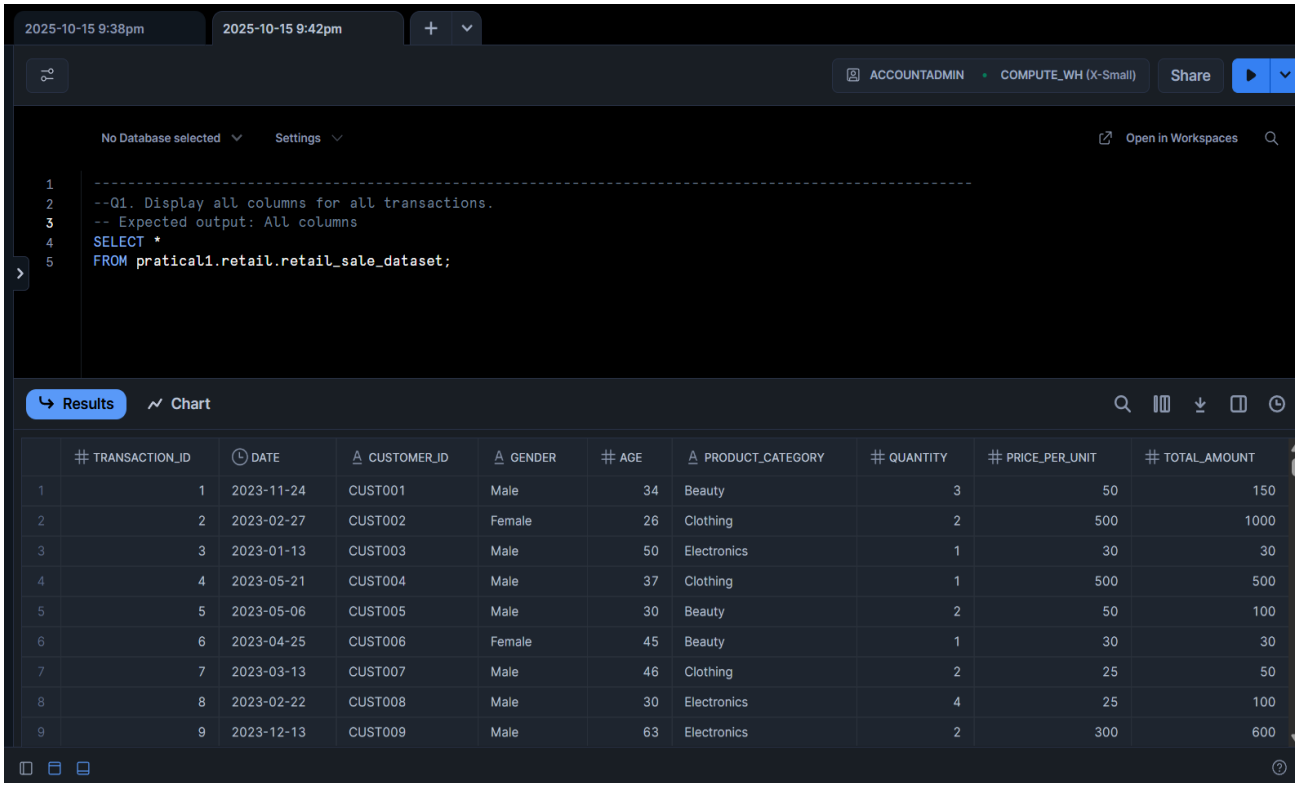
Sindiswa Jachin Shongwe

Practical 1: BrightLight Data Analytics Coding Practical Basic SQL Syntax

Question 1

-- Q1. Display all columns for all transactions.

-- Expected output: All columns

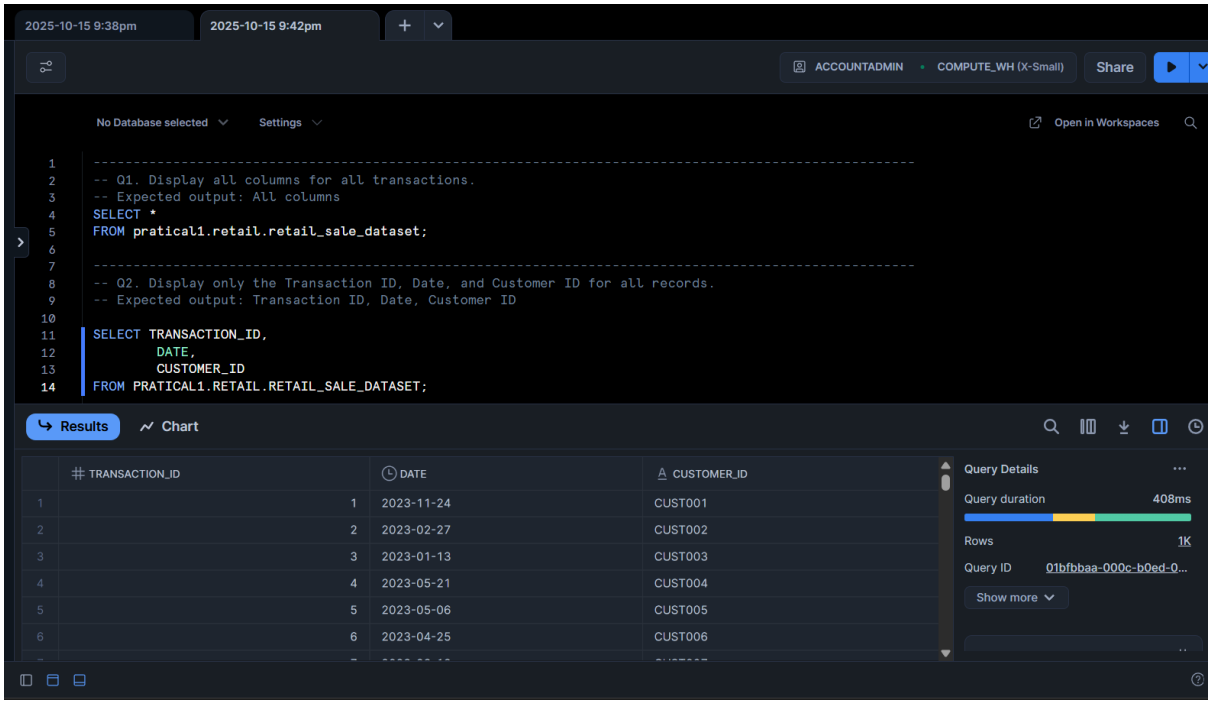


	TRANSACTION_ID	DATE	CUSTOMER_ID	GENDER	AGE	PRODUCT_CATEGORY	QUANTITY	PRICE_PER_UNIT	TOTAL_AMOUNT
1	1	2023-11-24	CUST001	Male	34	Beauty	3	50	150
2	2	2023-02-27	CUST002	Female	26	Clothing	2	500	1000
3	3	2023-01-13	CUST003	Male	50	Electronics	1	30	30
4	4	2023-05-21	CUST004	Male	37	Clothing	1	500	500
5	5	2023-05-06	CUST005	Male	30	Beauty	2	50	100
6	6	2023-04-25	CUST006	Female	45	Beauty	1	30	30
7	7	2023-03-13	CUST007	Male	46	Clothing	2	25	50
8	8	2023-02-22	CUST008	Male	30	Electronics	4	25	100
9	9	2023-12-13	CUST009	Male	63	Electronics	2	300	600

Question 2

-- Q2. Display only the Transaction ID, Date, and Customer ID for all records.

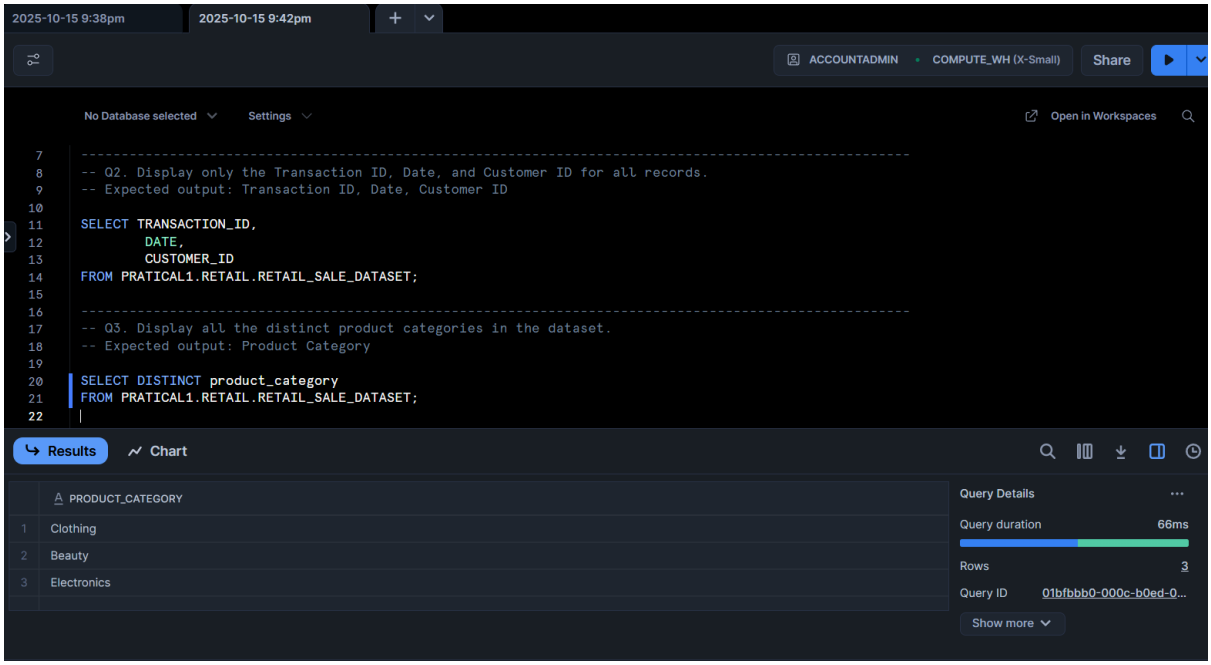
-- Expected output: Transaction ID, Date, Customer ID



Question 3

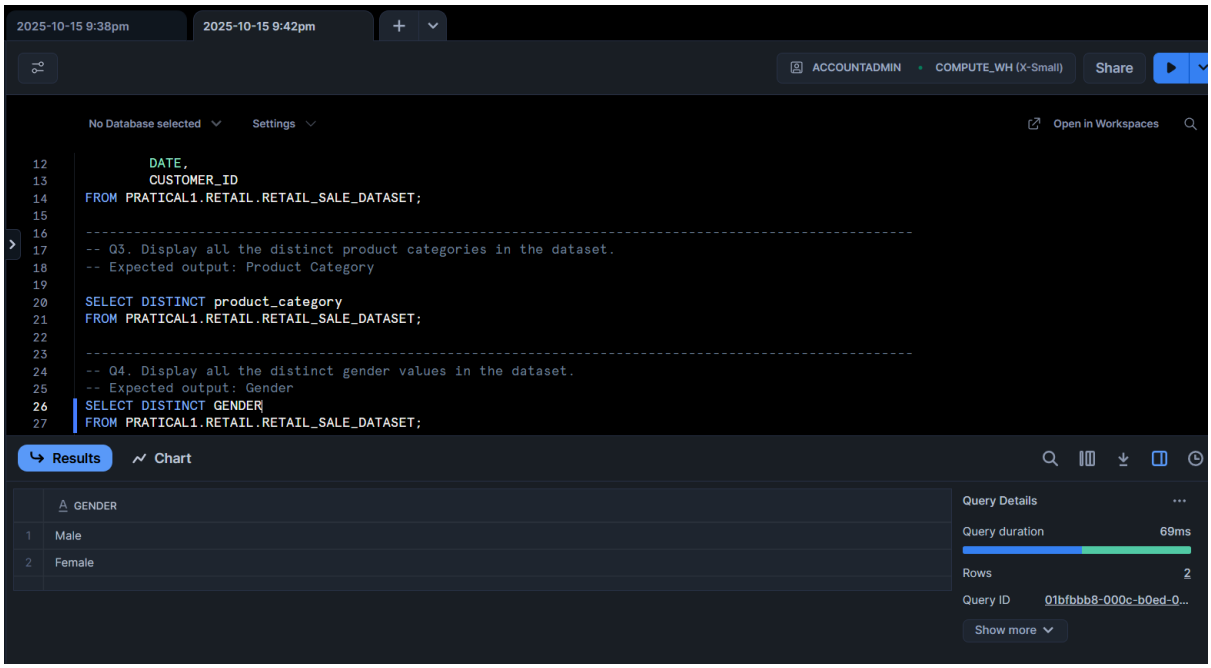
-- Q3. Display all the distinct product categories in the dataset.

-- Expected output: Product Category



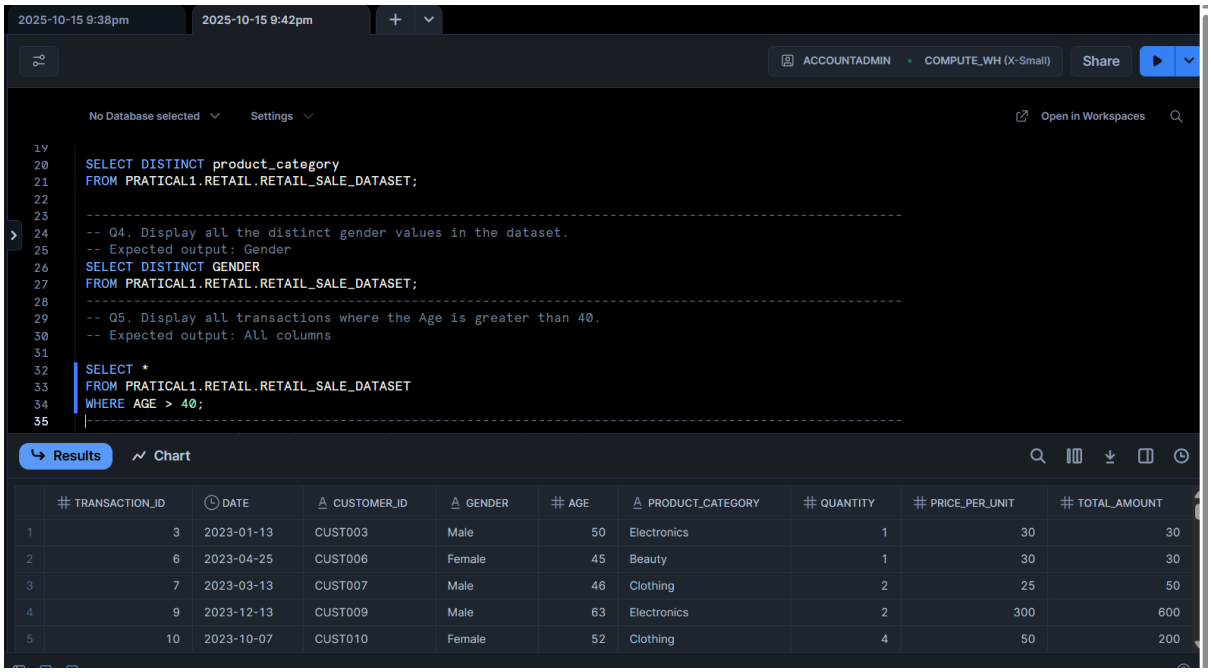
-- Q4. Display all the distinct gender values in the dataset.

-- Expected output: Gender



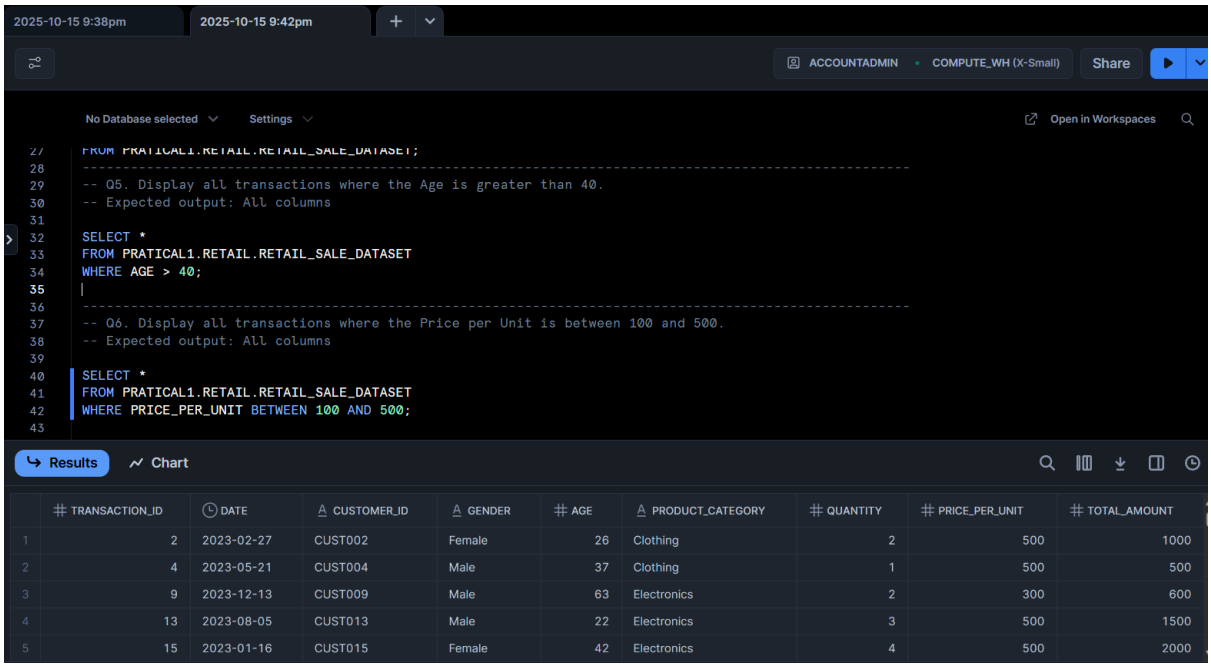
-- Q5. Display all transactions where the Age is greater than 40.

-- Expected output: All columns



-- Q6. Display all transactions where the Price per Unit is between 100 and 500.

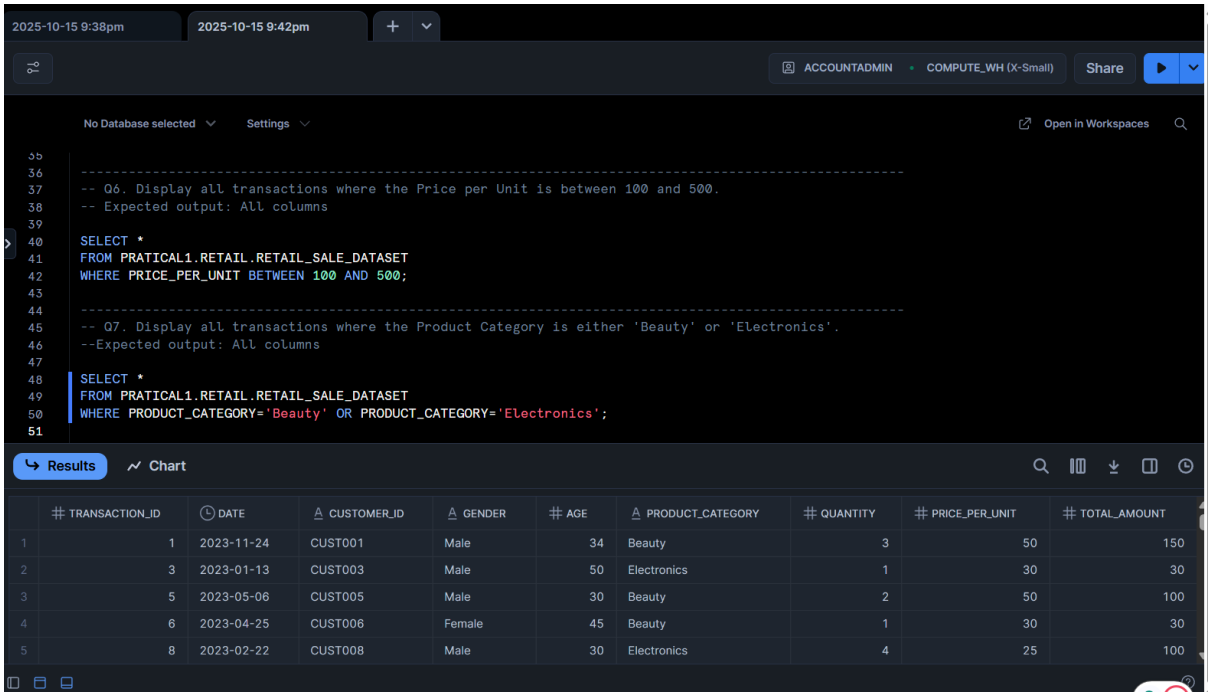
-- Expected output: All columns



	TRANSACTION_ID	DATE	CUSTOMER_ID	GENDER	AGE	PRODUCT_CATEGORY	QUANTITY	PRICE_PER_UNIT	TOTAL_AMOUNT
1	2	2023-02-27	CUST002	Female	26	Clothing	2	500	1000
2	4	2023-05-21	CUST004	Male	37	Clothing	1	500	500
3	9	2023-12-13	CUST009	Male	63	Electronics	2	300	600
4	13	2023-08-05	CUST013	Male	22	Electronics	3	500	1500
5	15	2023-01-16	CUST015	Female	42	Electronics	4	500	2000

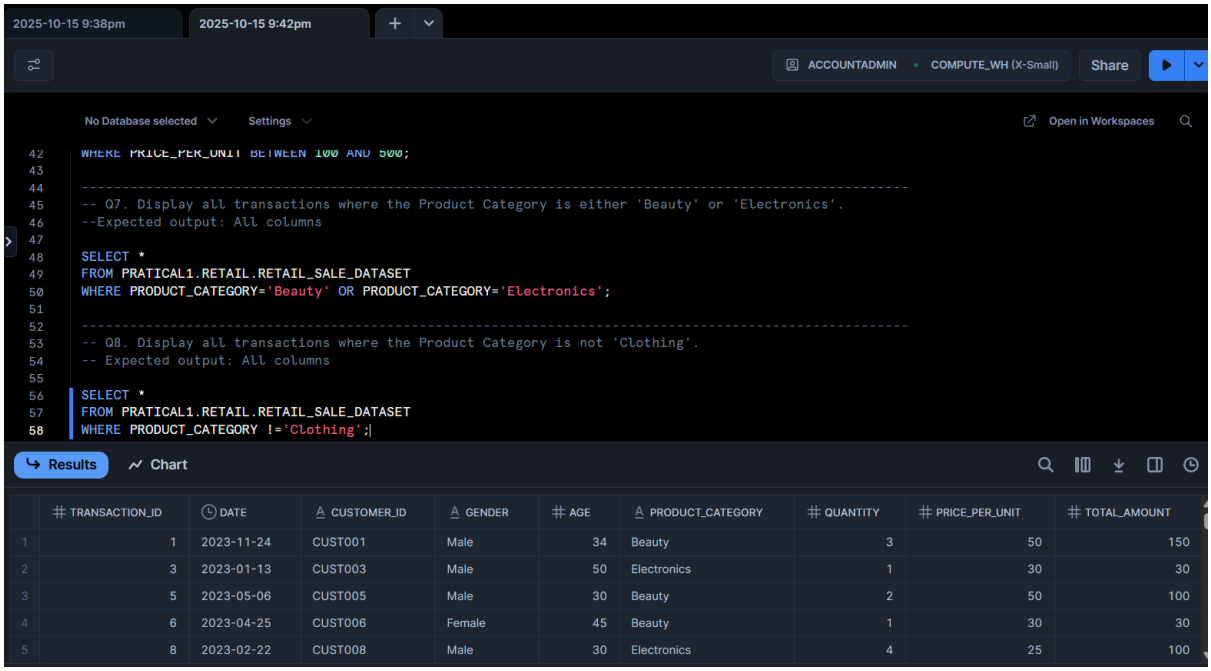
-- Q7. Display all transactions where the Product Category is either 'Beauty' or 'Electronics'.

--Expected output: All columns



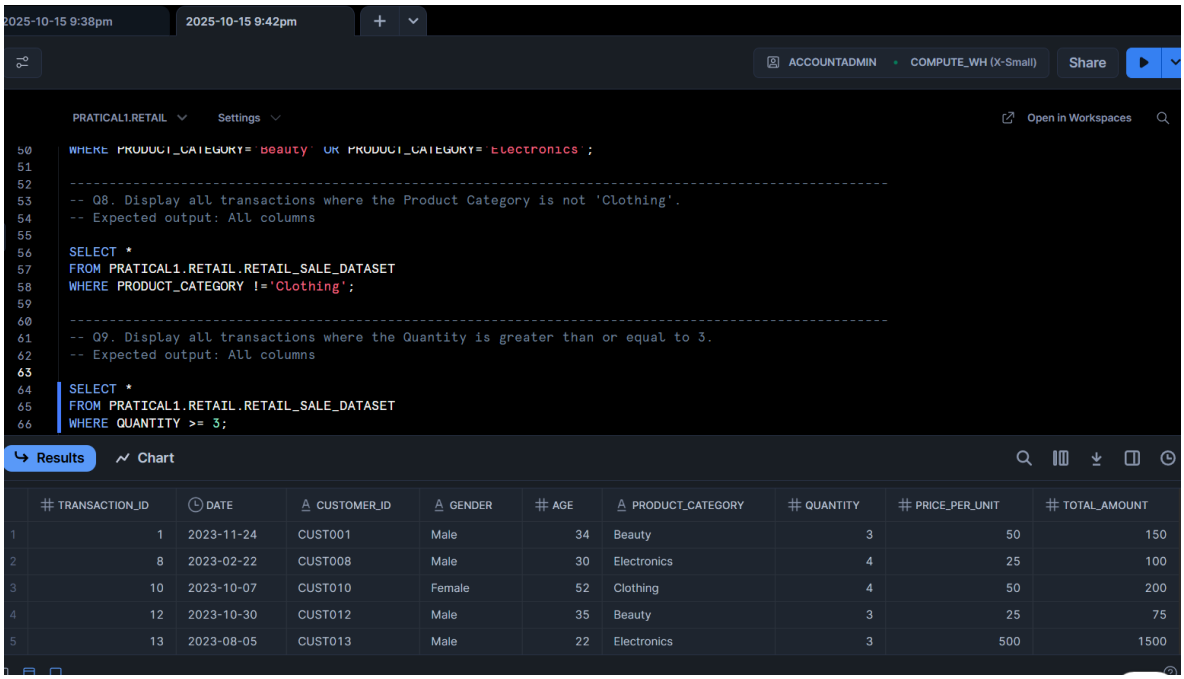
-- Q8. Display all transactions where the Product Category is not 'Clothing'.

-- Expected output: All columns



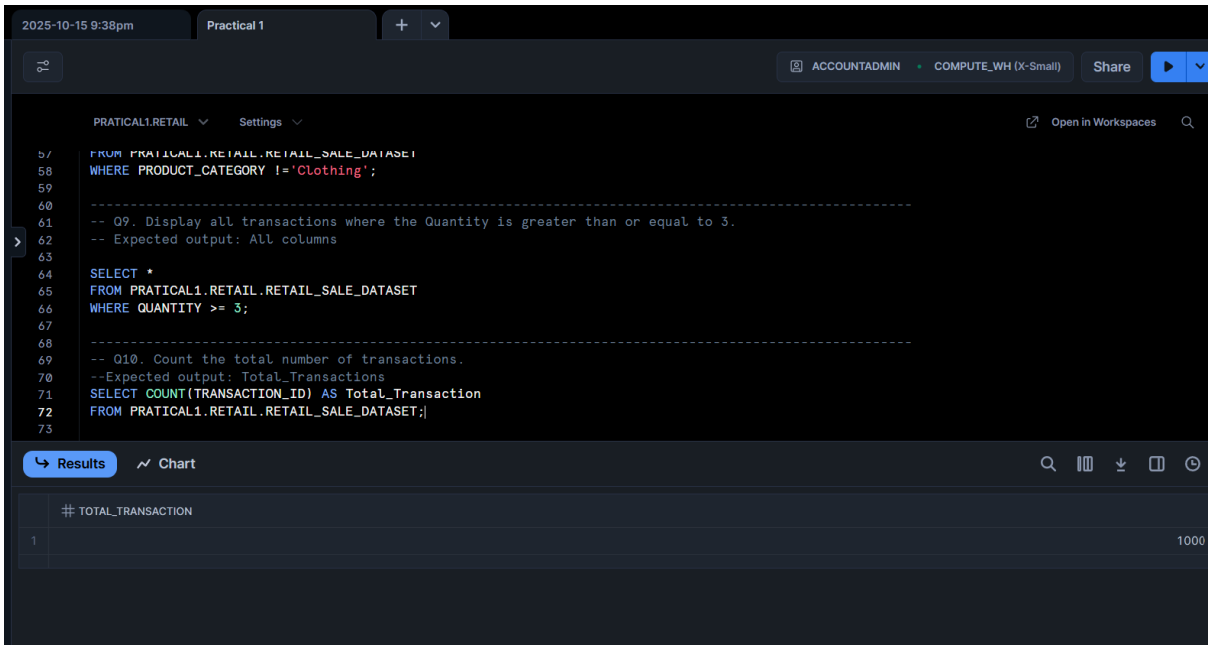
-- Q9. Display all transactions where the Quantity is greater than or equal to 3.

-- Expected output: All columns



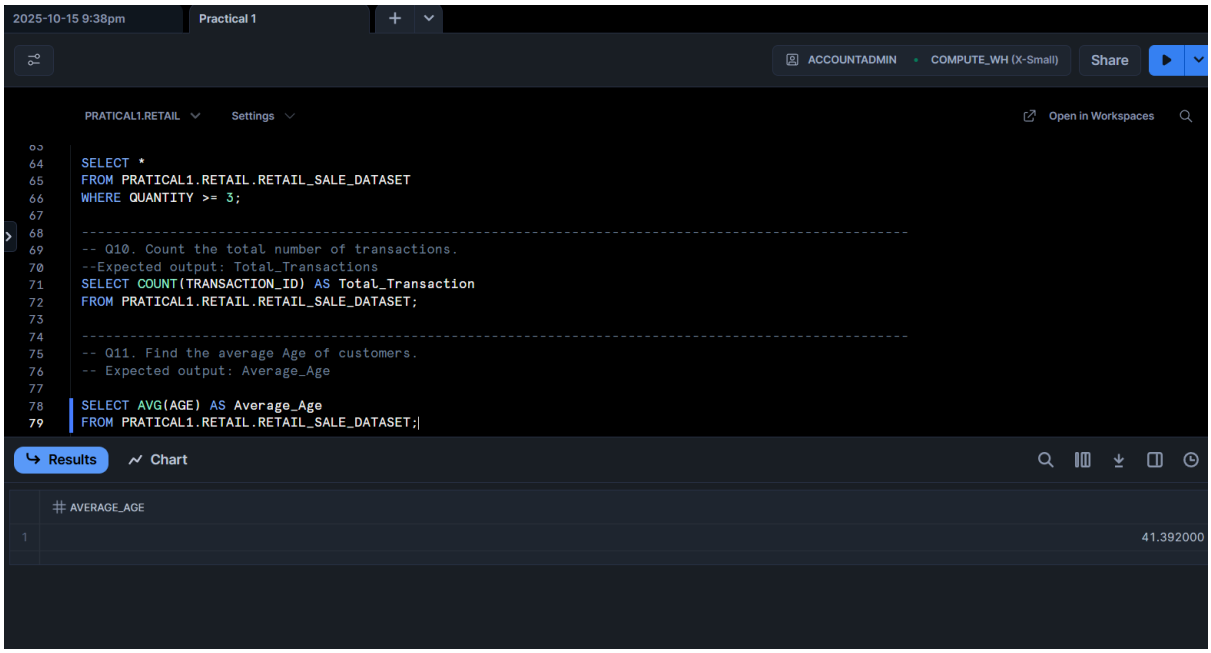
-- Q10. Count the total number of transactions.

--Expected output: Total_Transactions



-- Q11. Find the average Age of customers.

-- Expected output: Average_Age

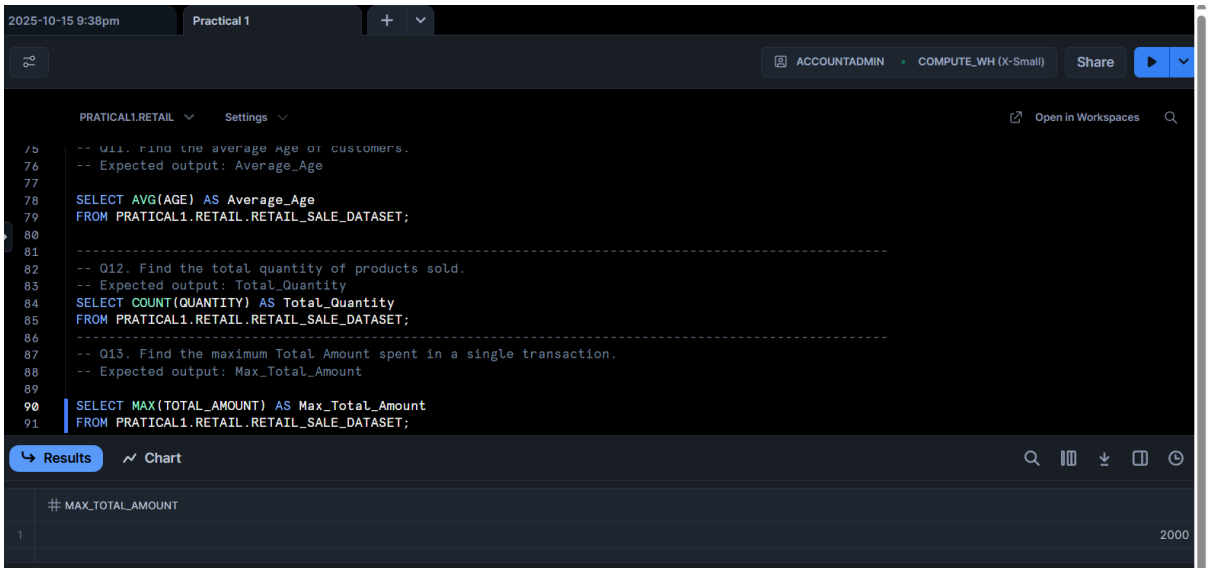


-- Q12. Find the total quantity of products sold.

-- Expected output: Total_Quantity

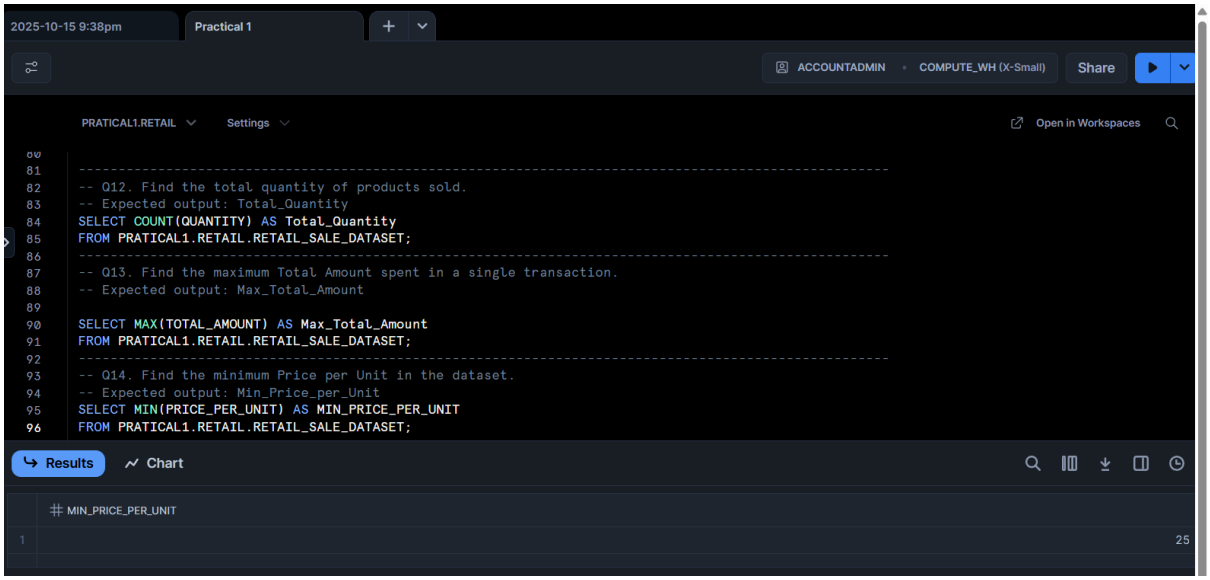
-- Q13. Find the maximum Total Amount spent in a single transaction.

-- Expected output: Max_Total_Amount



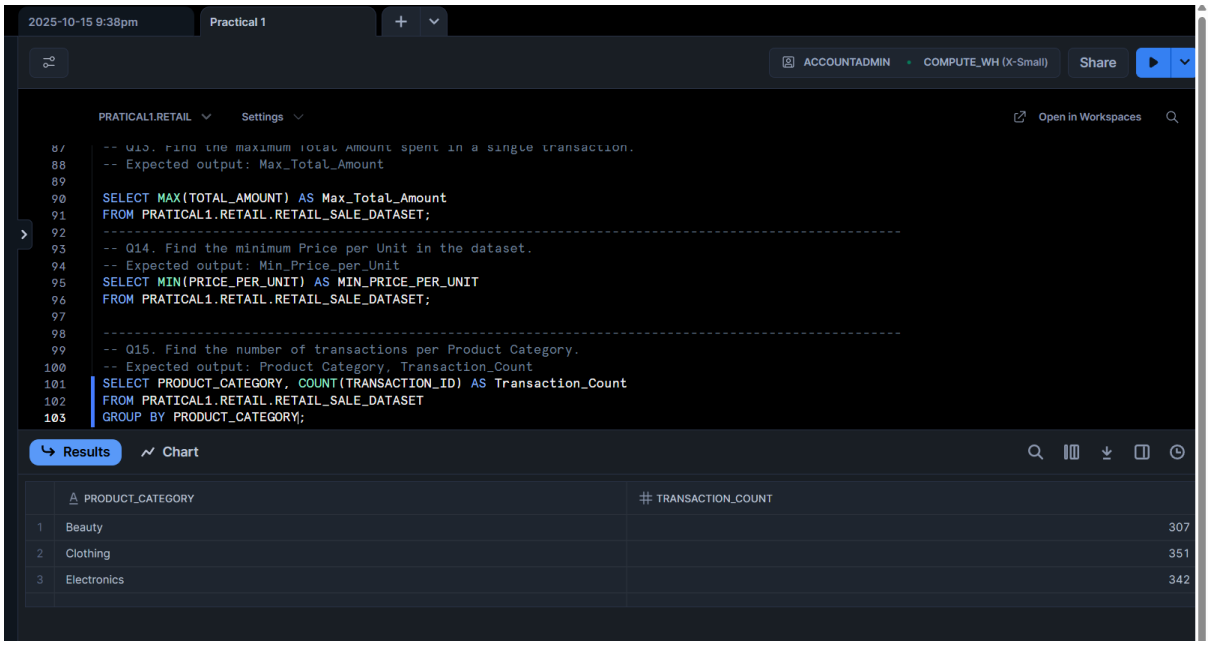
-- Q14. Find the minimum Price per Unit in the dataset.

-- Expected output: Min_Price_per_Unit



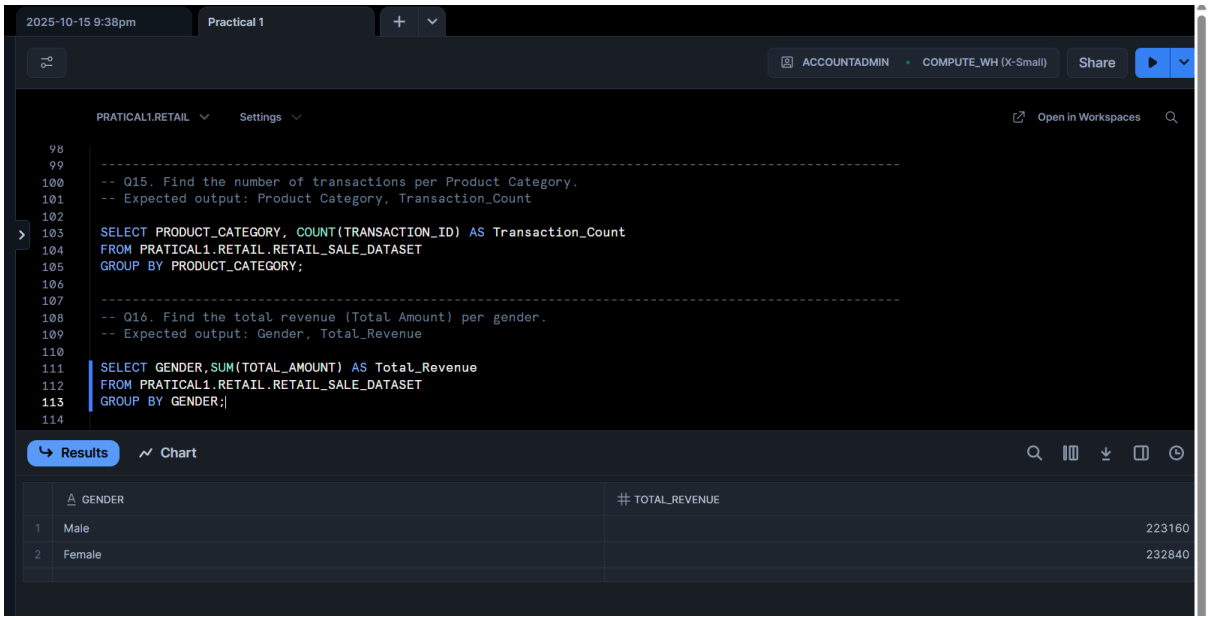
-- Q15. Find the number of transactions per Product Category.

-- Expected output: Product Category, Transaction_Count



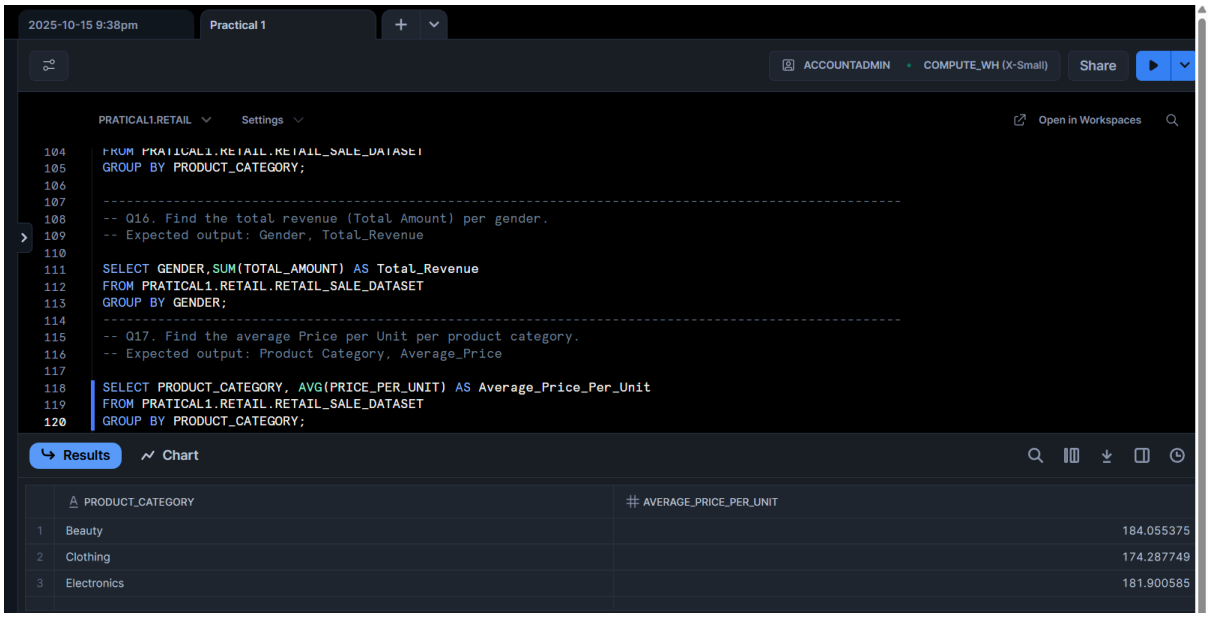
-- Q16. Find the total revenue (Total Amount) per gender.

-- Expected output: Gender, Total_Revenue



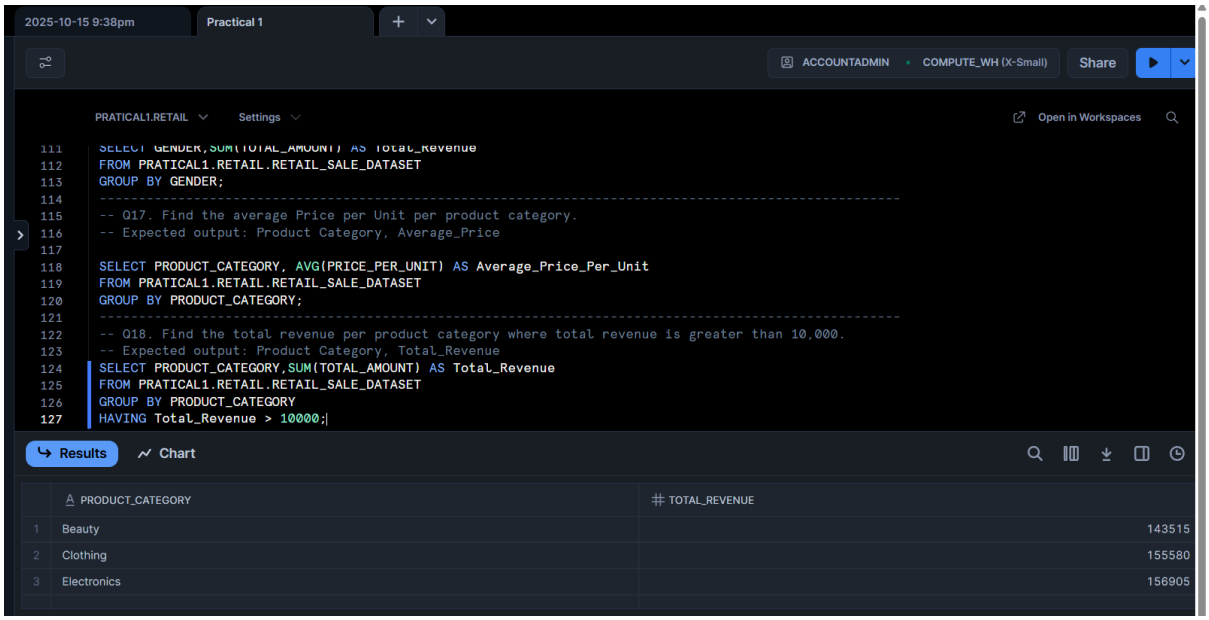
-- Q17. Find the average Price per Unit per product category.

-- Expected output: Product Category, Average_Price



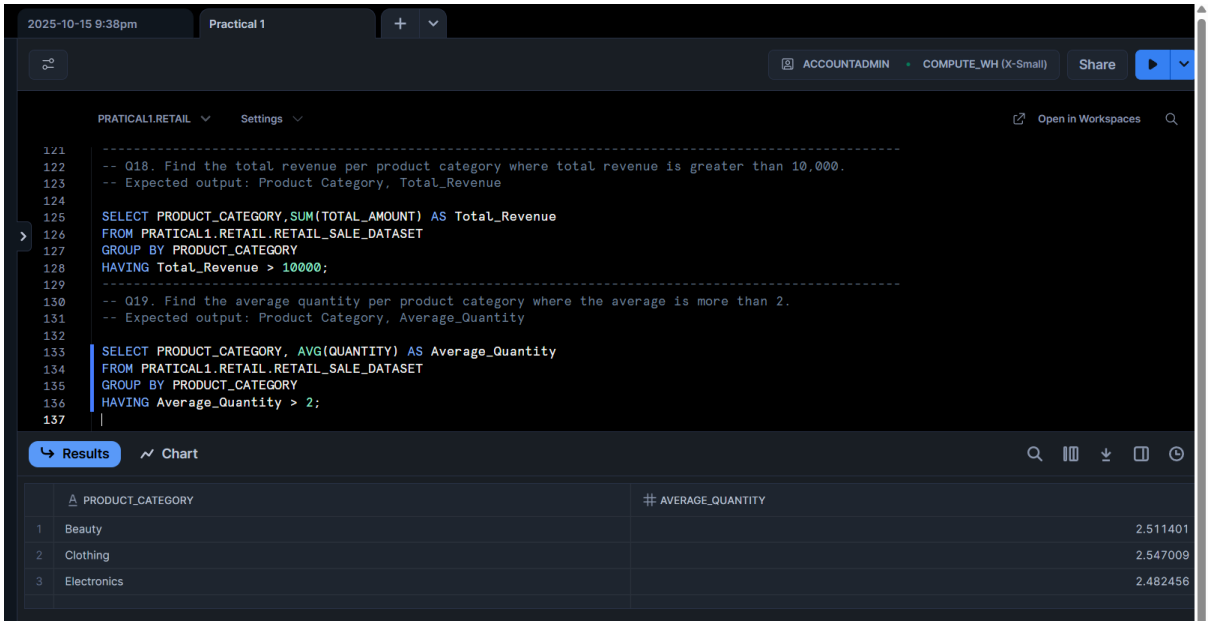
-- Q18. Find the total revenue per product category where total revenue is greater than 10,000.

-- Expected output: Product Category, Total_Revenue



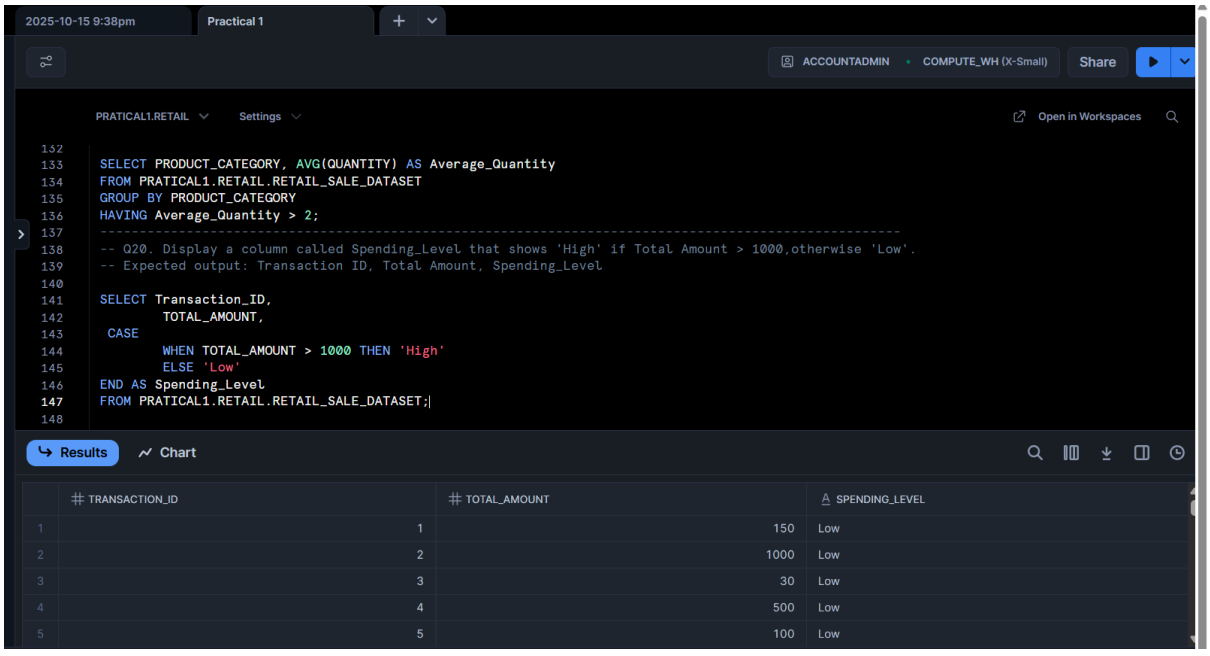
-- Q19. Find the average quantity per product category where the average is more than 2.

-- Expected output: Product Category, Average_Quantity



-- Q20. Display a column called Spending_Level that shows 'High' if Total Amount > 1000, otherwise 'Low'.

-- Expected output: Transaction ID, Total Amount, Spending_Level



-- Q21. Display a new column called Age_Group that labels customers as:

-- • 'Youth' if Age < 30

-- • 'Adult' if Age is between 30 and 59

-- • 'Senior' if Age >= 60

-- Expected output: Customer ID, Age, Age_Group