**SQL PROJECT – COFFEE STORE ANALYSIS**

**Q.What is the total no. of customers having loyalty card.(Make two column for Yes and No respectively with count of loyalty card in 1st row)**

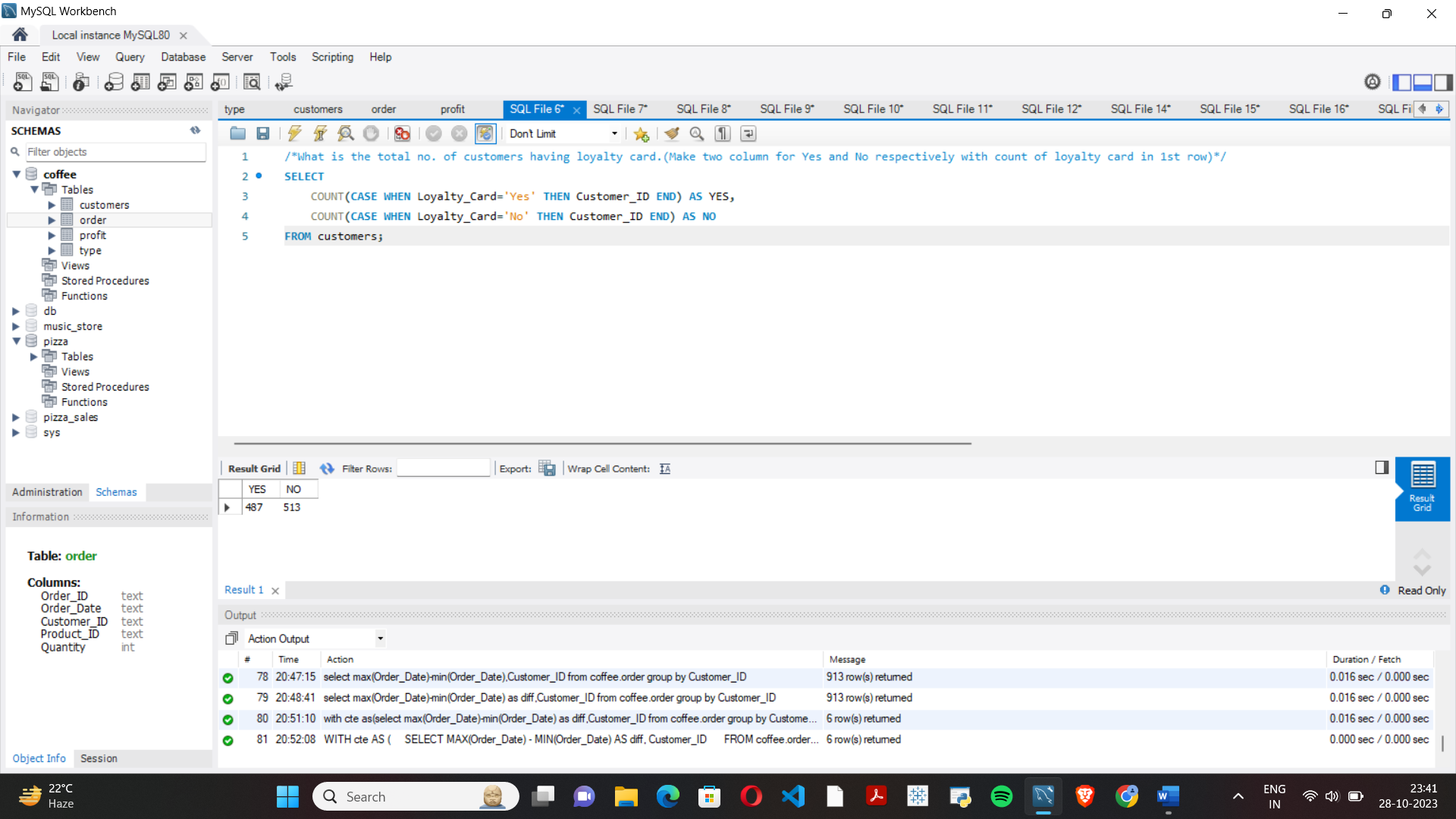
**SELECT**

**COUNT(CASE WHEN Loyalty\_Card='Yes' THEN Customer\_ID END) AS YES,**

**COUNT(CASE WHEN Loyalty\_Card='No' THEN Customer\_ID END) AS NO**

**FROM customers;**

**RESULT:**

****

**Q.Change the datatype of Order\_Date from char to date.**

**UPDATE coffee.order**

**SET Order\_Date = STR\_TO\_DATE(Order\_Date, '%d-%m-%Y');**

**Q.How Many quantity of coffee sold between 14-08-2019 and 25-04-2020?**

**SELECT SUM(quantity) AS Total FROM coffee.order**

**WHERE Order\_Date BETWEEN '2019-06-14' AND '2020-01-20'**

**RESULT:**

****

**Q.Print no. of sales Yearwise.**

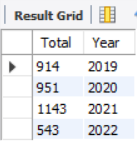
**SELECT SUM(quantity) AS Total, YEAR(Order\_Date) AS Year**

**FROM coffee.order**

**GROUP BY Year**

**ORDER BY Year;**

**RESULT:**

****

**Q.Which customer ordered the most quantity of products?**

**SELECT SUM(o.quantity) AS Total, c.customer\_name AS Name**

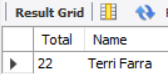
**FROM coffee.order o**

**JOIN customers c ON c.customer\_id = o.customer\_id**

**GROUP BY Name**

**ORDER BY Total DESC LIMIT 1;**

**RESULT:**

****

**Q.Print no. of sales monthwise(rowwise) with Years as column.**

**SELECT MONTH(Order\_Date) as Month,**

**COUNT(CASE WHEN YEAR(Order\_Date) = '2019' THEN MONTH(Order\_Date) END) as '2019',**

**COUNT(CASE WHEN YEAR(Order\_Date) = '2020' THEN MONTH(Order\_Date) END) as '2020',**

**COUNT(CASE WHEN YEAR(Order\_Date) = '2021' THEN MONTH(Order\_Date) END) as '2021',**

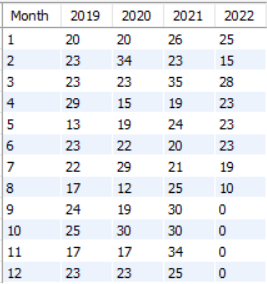
**COUNT(CASE WHEN YEAR(Order\_Date) = '2022' THEN MONTH(Order\_Date) END) as '2022'**

**FROM coffee.order**

**GROUP BY Month**

**ORDER BY Month;**

**RESULT:**

****

**/\*Which Country has the most Loyal customers to total customer by percentage.\*/**

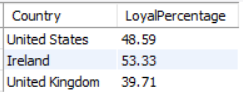
**SELECT Country,**

**ROUND(COUNT(CASE WHEN Loyalty\_Card='Yes' THEN Customer\_ID END)\*100/COUNT(Customer\_ID), 2) AS LoyalPercentage**

**FROM customers**

**GROUP BY Country;**

**RESULT:**

****

**/\*Write profits over month for each year and Average profit over months.\*/**

**WITH cte AS (**

**SELECT MONTH(Order\_Date) AS Month,**

**SUM(CASE WHEN YEAR(Order\_Date) = '2019' THEN o.Quantity \* p.Unit\_Price END) AS Year2019,**

**SUM(CASE WHEN YEAR(Order\_Date) = '2020' THEN o.Quantity \* p.Unit\_Price END) AS Year2020,**

**SUM(CASE WHEN YEAR(Order\_Date) = '2021' THEN o.Quantity \* p.Unit\_Price END) AS Year2021,**

**SUM(CASE WHEN YEAR(Order\_Date) = '2022' THEN o.Quantity \* p.Unit\_Price END) AS Year2022**

**FROM coffee.order o**

**JOIN profit p ON o.product\_id = p.product\_id**

**GROUP BY MONTH(Order\_Date)**

**)**

**SELECT cte.Month,**

**ROUND(SUM(Year2019) OVER (ORDER BY cte.Month),2) AS Year2019,**

**ROUND(SUM(Year2020) OVER (ORDER BY cte.Month),2) AS Year2020,**

**ROUND(SUM(Year2021) OVER (ORDER BY cte.Month),2) AS Year2021,**

**ROUND(SUM(Year2022) OVER (ORDER BY cte.Month),2) AS Year2022,**

**ROUND((CASE WHEN Year2022=0 THEN (Year2019+Year2020+Year2021+Year2022)/4**

**ELSE (Year2019+Year2020+Year2021)/3 END),2) AS Avg**

**FROM cte;**

**RESULT:**

****

**/\*write the name of the top 10 customer who spent the most money?(round off to 2 decimal places)\*/**

**SELECT c.Customer\_Name, ROUND(SUM(o.Quantity \* p.Unit\_Price), 2) AS Total**

**FROM customers c**

**JOIN coffee.order o ON c.customer\_id = o.customer\_id**

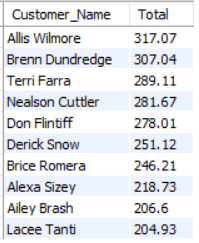
**JOIN profit p ON o.product\_id = p.product\_id**

**GROUP BY c.Customer\_Name**

**ORDER BY Total DESC**

**LIMIT 10;**

**RESULT:**

****

**/\*What is name of the top 3 customers with most quantities ordered?(customer with same orders will have same rank)\*/**

**SELECT \***

**FROM (**

**SELECT \*,**

**DENSE\_RANK() OVER (ORDER BY Total DESC) AS rank\_no**

**FROM (**

**SELECT SUM(o.quantity) AS Total, c.customer\_name AS Name**

**FROM coffee.order o**

**JOIN customers c ON c.customer\_id = o.customer\_id**

**GROUP BY Name**

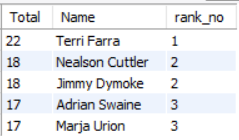
**ORDER BY Total DESC**

**) AS t**

**) AS ranked**

**WHERE rank\_no <= 3;**

**RESULT:**

****

**/\*How many customers are there where city name ends with Junction.\*/**

**SELECT COUNT(customer\_id) AS COUNT**

**FROM customers**

**WHERE RIGHT(Address\_Line1, 8) = 'Junction';**

**RESULT:**

****

**/\*Write top 3 product for each coffee type according to profit?\*/**

**SELECT \***

**FROM (**

**SELECT \*,**

**ROW\_NUMBER() OVER (PARTITION BY Coffee\_Type ORDER BY Profit DESC) AS rank\_no**

**FROM (**

**SELECT t.Product\_ID AS Product\_ID, t.coffee\_type AS Coffee\_Type, p.profit AS Profit**

**FROM type t**

**JOIN profit p ON t.Product\_ID = p.Product\_ID**

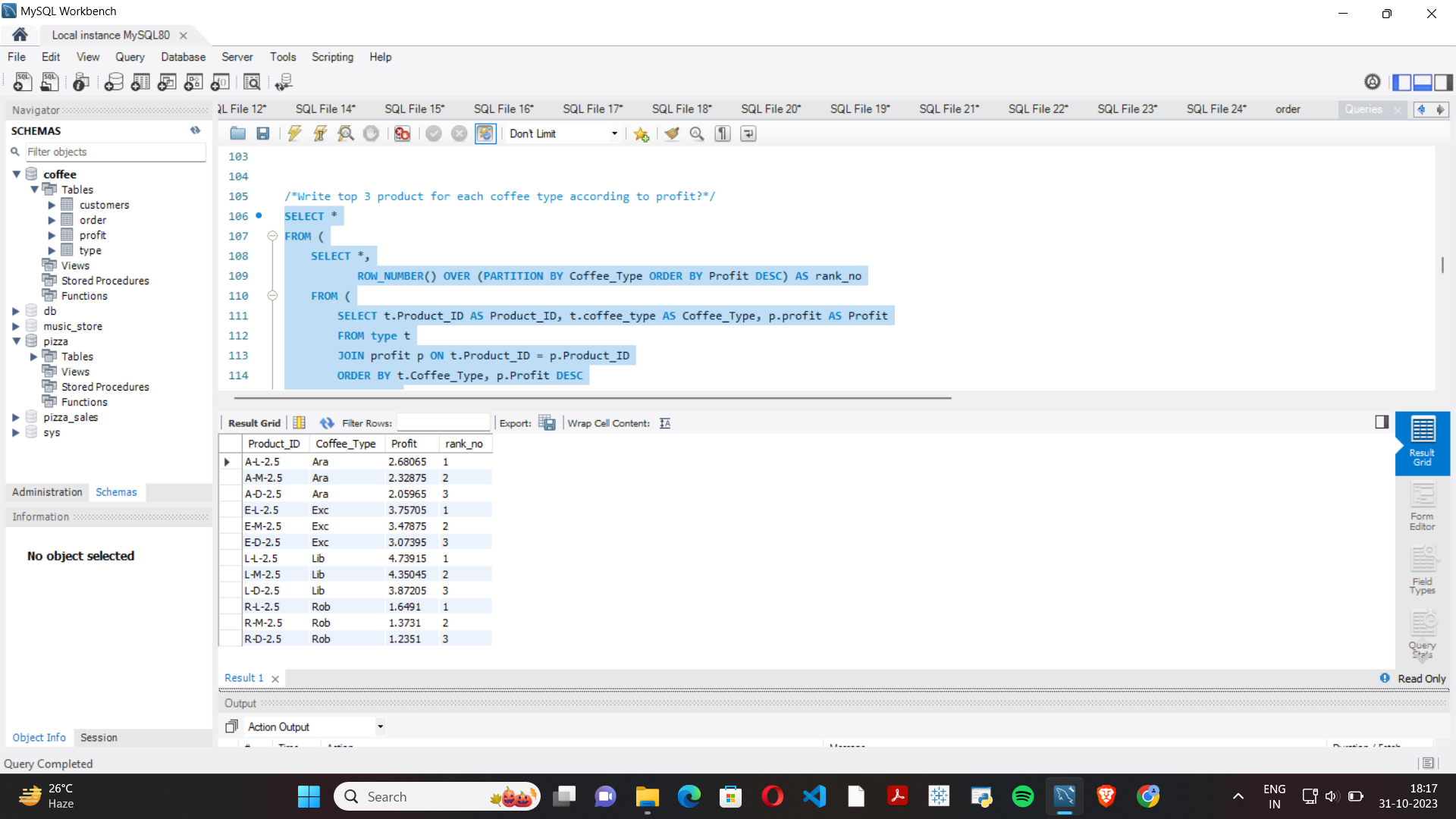
**ORDER BY t.Coffee\_Type, p.Profit DESC**

**) AS subquery**

**) AS ranked**

**WHERE rank\_no < 4;**

**RESULT:**

****

**/\*Write cummulative profits over the months for year 2020.\*/**

**WITH cte AS (**

**SELECT MONTH(Order\_Date) AS Month,**

**SUM(CASE WHEN YEAR(Order\_Date) = '2020' THEN o.Quantity \* p.Unit\_Price END) AS Year2020**

**FROM coffee.order o**

**JOIN profit p ON o.product\_id = p.product\_id**

**GROUP BY MONTH(Order\_Date)**

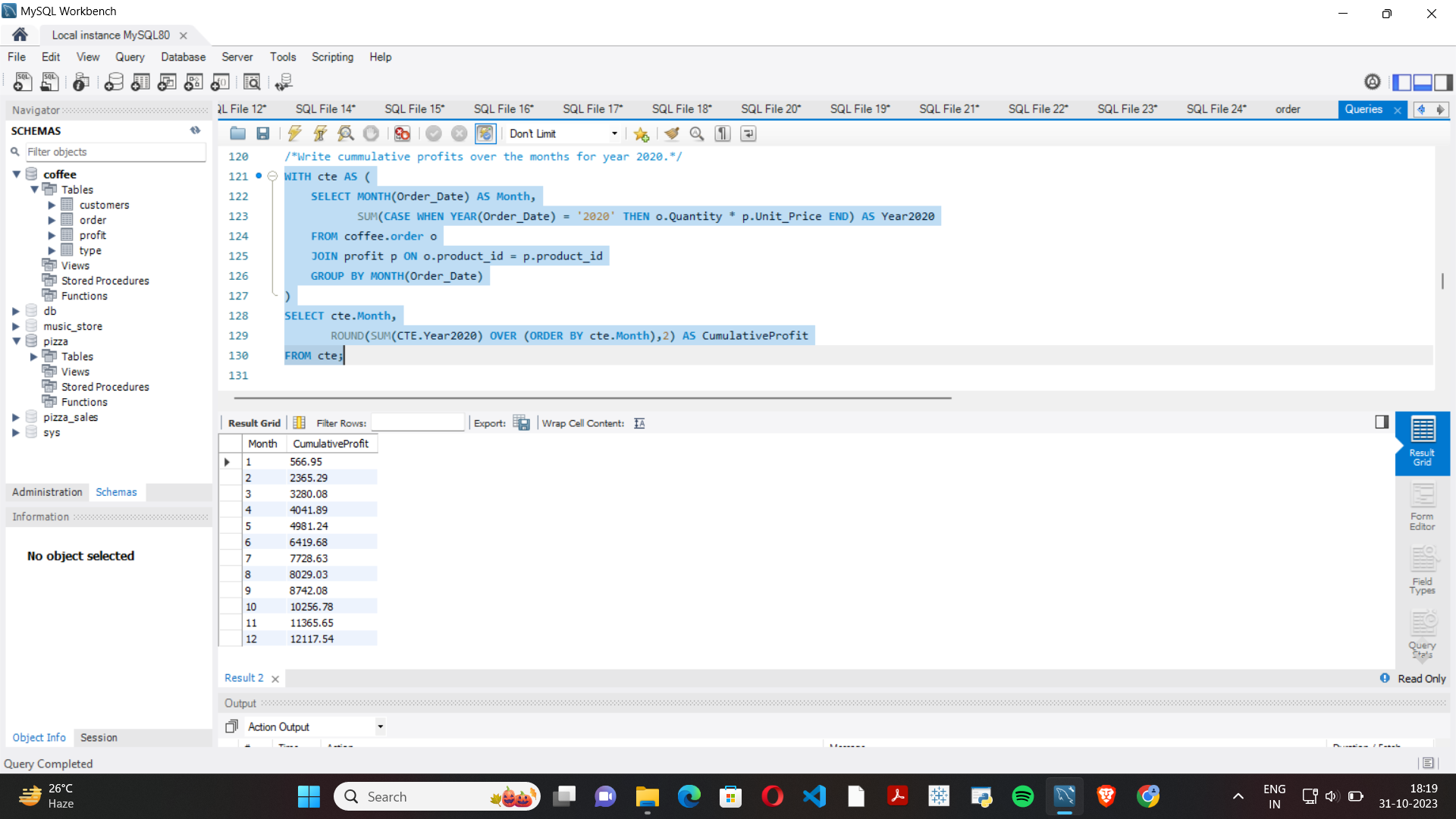
**)**

**SELECT cte.Month,**

**ROUND(SUM(CTE.Year2020) OVER (ORDER BY cte.Month),2) AS CumulativeProfit**

**FROM cte;**

**RESULT:**

****

**/\*What is the top 3 City giving maximum profit for each country.\*/**

**WITH CTE AS (**

**SELECT ROUND(SUM(o.Quantity \* p.Unit\_Price), 2) AS Total, c.Country, c.City**

**FROM customers c**

**JOIN coffee.order o ON c.customer\_id = o.customer\_id**

**JOIN profit p ON o.product\_id = p.product\_id**

**GROUP BY c.Country, c.City),**

**CTE2 AS (**

**SELECT \*, ROW\_NUMBER() OVER (PARTITION BY Country ORDER BY Total DESC) AS r**

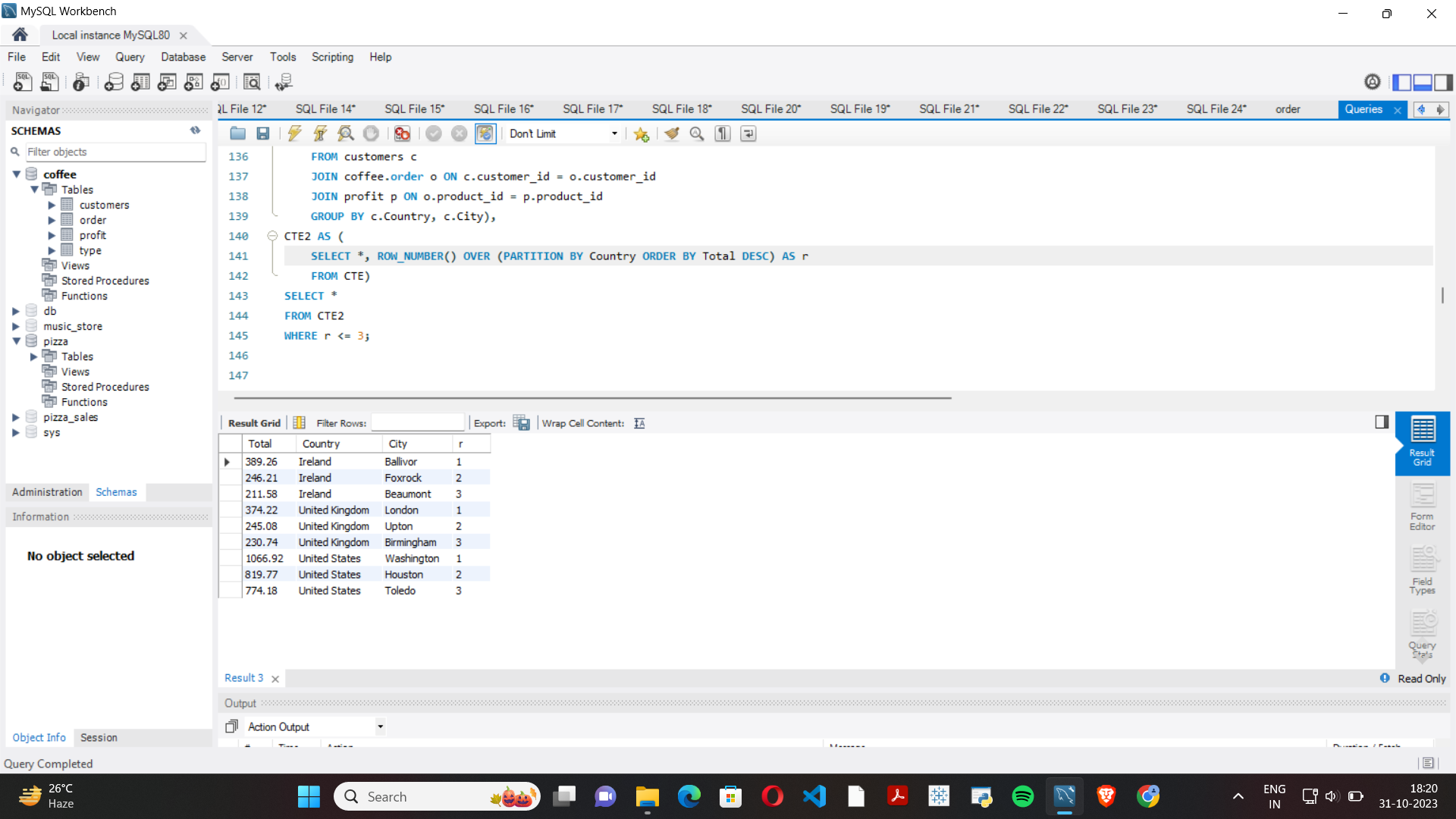
**FROM CTE)**

**SELECT \***

**FROM CTE2**

**WHERE r <= 3;**

**RESULT:**

****

**/\*Write the name of the third highest customer who spent the most money?(round off to 2 decimal places)**

**(Query should not include limit and window functions)\*/**

**/\*METHOD 1 \*/**

**WITH CTE AS (**

**SELECT c.Customer\_Name, ROUND(SUM(o.Quantity \* p.Unit\_Price), 2) AS Total**

**FROM customers c**

**JOIN coffee.order o ON c.customer\_id = o.customer\_id**

**JOIN profit p ON o.product\_id = p.product\_id**

**GROUP BY c.Customer\_Name**

**)**

**SELECT Total as Third\_Highest, Customer\_Name**

**FROM CTE**

**WHERE Total = (**

**SELECT MAX(Total)**

**FROM CTE**

**WHERE Total < (**

**SELECT MAX(Total)**

**FROM CTE**

**WHERE Total < (SELECT MAX(Total)**

**FROM CTE)**

**)**

**);**

**/\* METHOD 2 \*/**

**WITH CTE AS (**

**SELECT c.Customer\_Name as Customer\_Name, ROUND(SUM(o.Quantity \* p.Unit\_Price), 2) AS Total**

**FROM customers c**

**JOIN coffee.order o ON c.customer\_id = o.customer\_id**

**JOIN profit p ON o.product\_id = p.product\_id**

**GROUP BY c.Customer\_Name**

**)**

**SELECT DISTINCT(Total),Customer\_Name**

**FROM CTE c1**

**WHERE 3 = (SELECT COUNT(DISTINCT Total)**

**FROM CTE c2**

**WHERE c1.Total <= c2.Total);**

**RESULT:**

****

**/\*Write the name of the customer who order in two consecutive days.\*/**

**WITH cte AS (**

**SELECT o1.Customer\_id, o2.Order\_Date AS Order\_Date1, o1.Order\_Date AS Order\_Date2**

**FROM coffee.order o1**

**JOIN coffee.order o2**

**ON DATEDIFF(o1.Order\_Date, o2.Order\_Date) = 1 AND o1.Customer\_id = o2.Customer\_id**

**)**

**SELECT c1.customer\_name, c.Order\_Date1, c.Order\_Date2**

**FROM customers c1**

**JOIN cte c**

**ON c1.Customer\_ID = c.Customer\_id;**

**RESULT:**

****

**/\*Who are the longest customers of the coffee store?\*/**

**WITH cte AS (**

**SELECT MAX(Order\_Date) - MIN(Order\_Date) AS diff, Customer\_ID**

**FROM coffee.order**

**GROUP BY Customer\_ID**

**)**

**SELECT c.Customer\_Name, c1.diff**

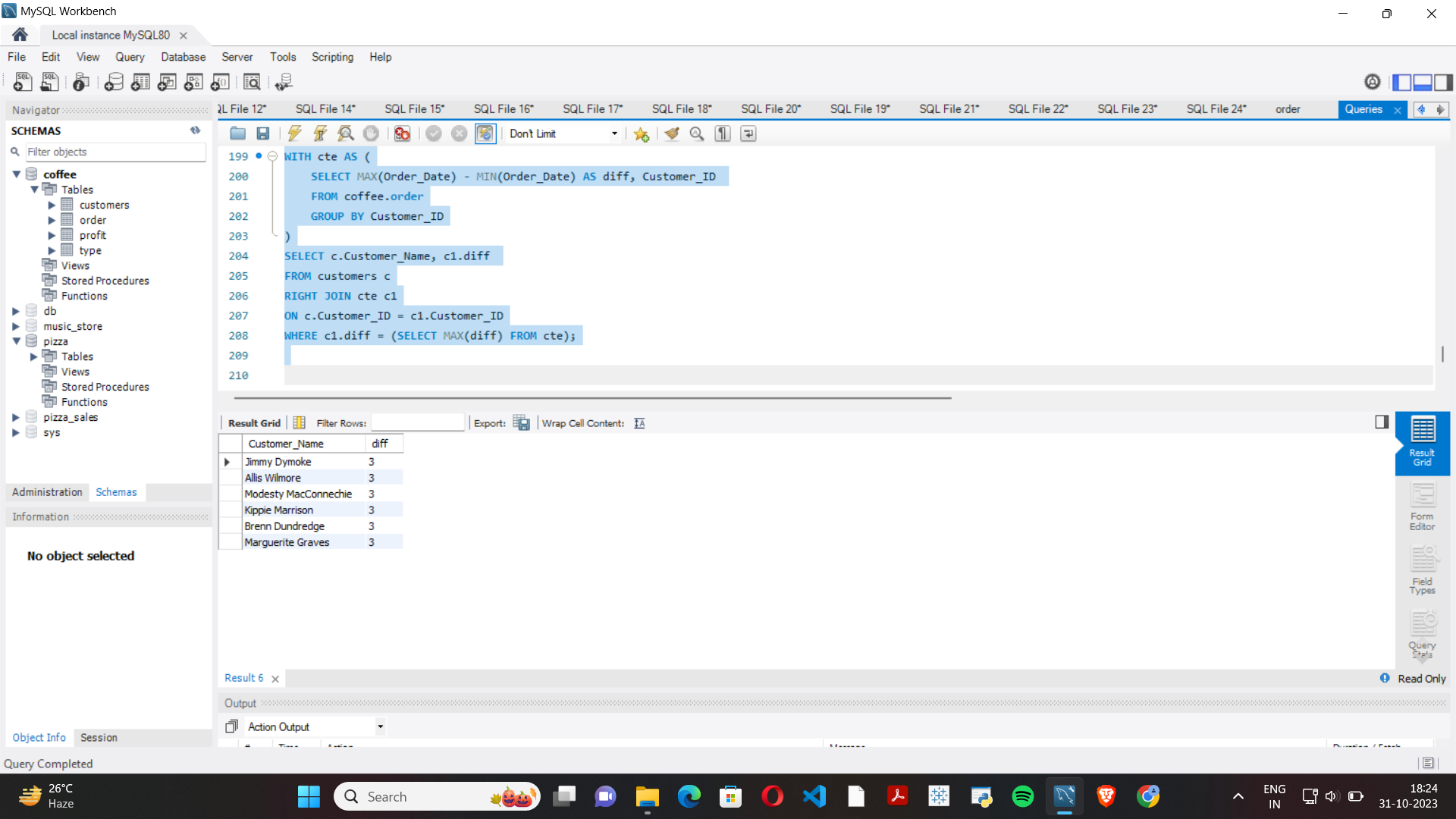
**FROM customers c**

**RIGHT JOIN cte c1**

**ON c.Customer\_ID = c1.Customer\_ID**

**WHERE c1.diff = (SELECT MAX(diff) FROM cte);**

**RESULT:**

****

**/\*Name an interval of 10 days (difference between start date and end date is 10) in which maximum orders have been received.\*/**

**WITH cte AS (**

**SELECT DISTINCT**

**order\_date AS start\_date, DATE\_ADD(order\_date, INTERVAL 10 DAY) AS end\_date**

**FROM coffee.order**

**)**

**SELECT**

**COUNT(o.order\_id) AS MAX, c.start\_date, c.end\_date**

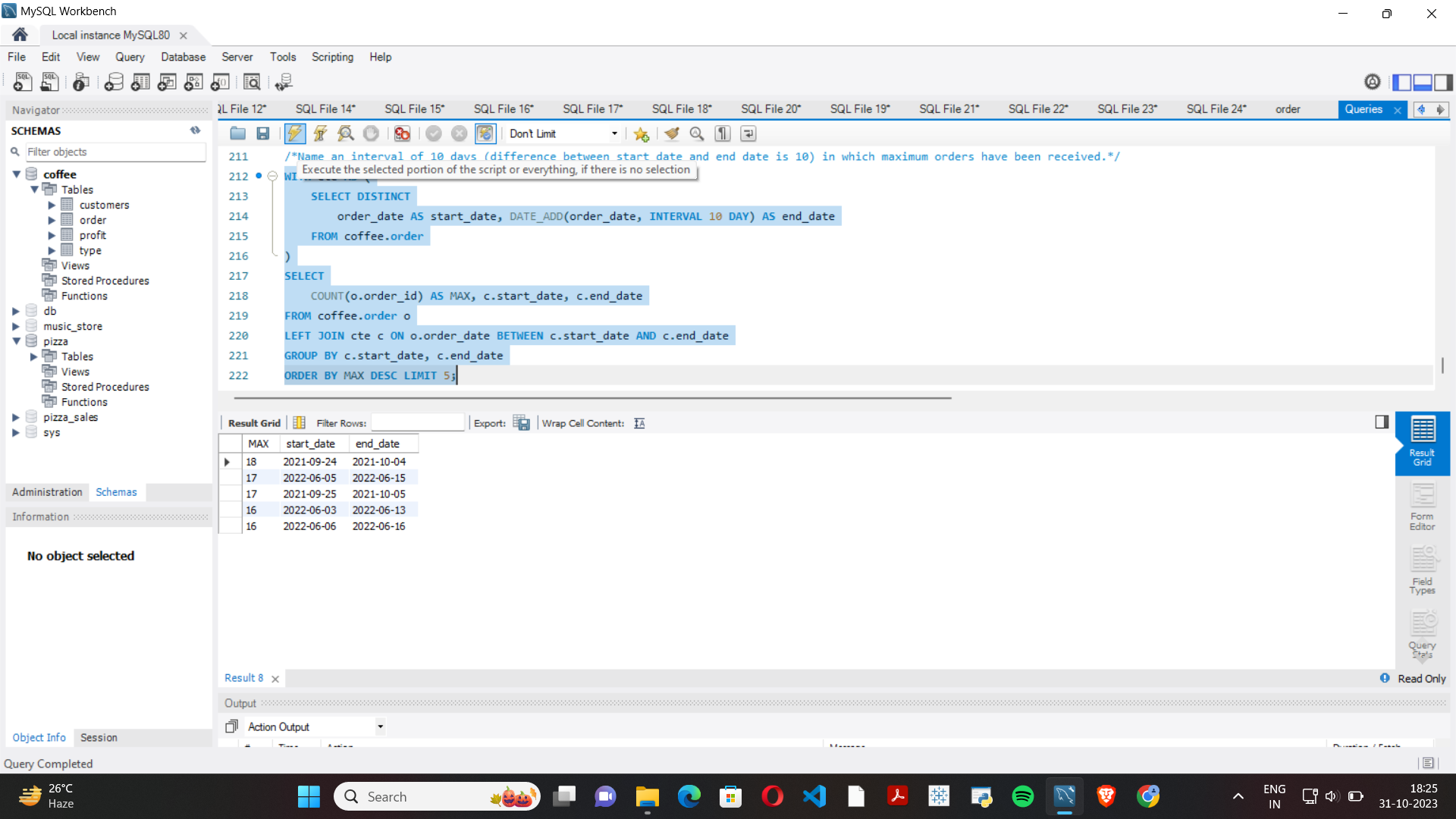
**FROM coffee.order o**

**LEFT JOIN cte c ON o.order\_date BETWEEN c.start\_date AND c.end\_date**

**GROUP BY c.start\_date, c.end\_date**

**ORDER BY MAX DESC LIMIT 5;**

**RESULT:**

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