## Restaurant, cuisine, customer based advanced SQL analytics

Below are the steps executed starting from creating database, table and then inserting data into table. Later, I carried out writing advance SQL queries to address different business scenarios using Mysql.

**1) create the database project2**

CREATE DATABASE project2;

**2) Create the orders table**

CREATE TABLE project2.orders

(

Order\_id VARCHAR(20),

Customer\_code VARCHAR(20),

Placed\_at DATETIME,

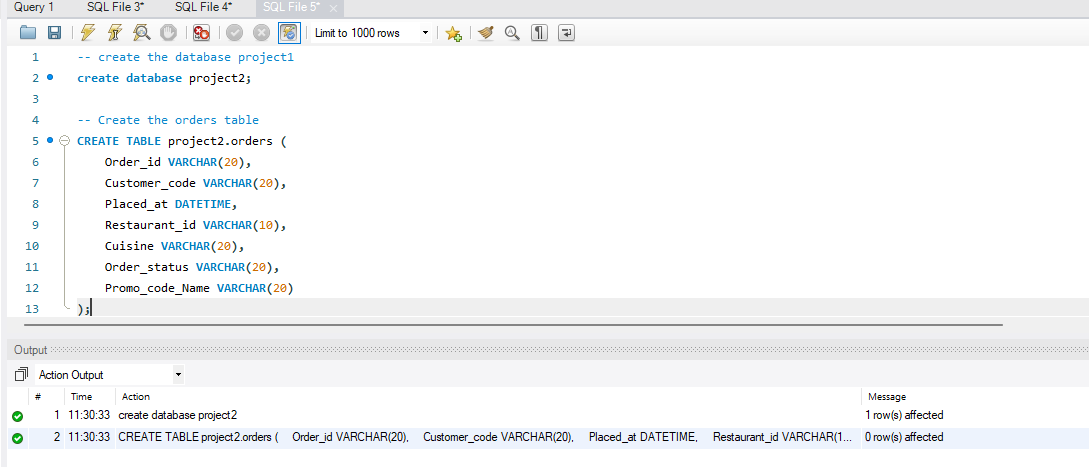
Restaurant\_id VARCHAR(10),

Cuisine VARCHAR(20),

Order\_status VARCHAR(20),

Promo\_code\_Name VARCHAR(20)

);



**3) Insert data into orders table**

INSERT INTO proect2.orders VALUES ('OF1900191801','UFDDN1991918XUY1','2025-01-01 15:30:20','KMKMH6787','Lebanese','Delivered','Tasty50');

INSERT INTO proect2.orders VALUES ('OF1900191802','UFDDN1991918XUY1','2025-01-02 12:15:45','LEBANESE2','Lebanese','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191803','UFDDN1991918XUY1','2025-01-10 18:45:30','PIZZA123','Italian','Cancelled','HUNGRY20');

INSERT INTO proect2.orders VALUES ('OF1900191804','UFDDN1991918XUY1','2025-01-15 19:20:15','ITALIAN2','Italian','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191805','UFDDN1991918XUY1','2025-01-20 11:30:00','BURGER99','American','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191806','ABC1234567890XYZ','2025-01-01 08:45:00','AMERICAN2','American','Delivered','NEWUSER');

INSERT INTO proect2.orders VALUES ('OF1900191807','ABC1234567890XYZ','2025-01-05 13:20:00','TACO789','Mexican','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191808','DEF9876543210XYZ','2025-01-02 09:15:00','MEXICAN2','Mexican','Delivered','FIRSTORDER');

INSERT INTO proect2.orders VALUES ('OF1900191809','GHI5678901234XYZ','2025-01-03 14:30:00','SUSHI456','Japanese','Delivered','NEWUSER');

INSERT INTO proect2.orders VALUES ('OF1900191810','JKL3456789012XYZ','2025-01-04 12:00:00','JAPANESE2','Japanese','Delivered','FIRSTORDER');

INSERT INTO proect2.orders VALUES ('OF1900191811','MNO7890123456XYZ','2025-01-05 19:45:00','KMKMH6787','Lebanese','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191812','PQR1234567890ABC','2025-01-06 11:30:00','LEBANESE2','Lebanese','Delivered','NEWUSER');

INSERT INTO proect2.orders VALUES ('OF1900191813','STU9876543210ABC','2025-01-07 13:15:00','PIZZA123','Italian','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191814','VWX5678901234ABC','2025-01-08 18:00:00','ITALIAN2','Italian','Delivered','FIRSTORDER');

INSERT INTO proect2.orders VALUES ('OF1900191815','YZA3456789012ABC','2025-01-09 12:45:00','BURGER99','American','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191816','BCD7890123456ABC','2025-01-10 20:15:00','AMERICAN2','American','Delivered','NEWUSER');

INSERT INTO proect2.orders VALUES ('OF1900191817','EFG1234567890DEF','2025-01-11 09:30:00','TACO789','Mexican','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191818','HIJ9876543210DEF','2025-01-12 14:45:00','MEXICAN2','Mexican','Delivered','FIRSTORDER');

INSERT INTO proect2.orders VALUES ('OF1900191819','KLM5678901234DEF','2025-01-13 17:30:00','SUSHI456','Japanese','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191820','NOP3456789012DEF','2025-01-14 12:15:00','JAPANESE2','Japanese','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191821','QRS7890123456DEF','2025-01-15 19:00:00','KMKMH6787','Lebanese','Delivered','NEWUSER');

INSERT INTO proect2.orders VALUES ('OF1900191822','TUV1234567890GHI','2025-01-16 10:45:00','LEBANESE2','Lebanese','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191823','WXY9876543210GHI','2025-01-17 15:30:00','PIZZA123','Italian','Delivered','FIRSTORDER');

INSERT INTO proect2.orders VALUES ('OF1900191824','ZAB5678901234GHI','2025-01-18 18:15:00','ITALIAN2','Italian','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191825','CDE3456789012GHI','2025-01-19 11:00:00','BURGER99','American','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191826','FGH7890123456GHI','2025-01-20 20:45:00','AMERICAN2','American','Delivered','NEWUSER');

INSERT INTO proect2.orders VALUES ('OF1900191827','IJK1234567890JKL','2025-01-21 09:15:00','TACO789','Mexican','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191828','LMN9876543210JKL','2025-01-22 14:30:00','MEXICAN2','Mexican','Delivered','FIRSTORDER');

INSERT INTO proect2.orders VALUES ('OF1900191829','OPQ5678901234JKL','2025-01-23 17:45:00','SUSHI456','Japanese','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191830','RST3456789012JKL','2025-01-24 12:30:00','JAPANESE2','Japanese','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191831','UVW7890123456JKL','2025-01-25 19:15:00','KMKMH6787','Lebanese','Delivered','NEWUSER');

INSERT INTO proect2.orders VALUES ('OF1900191832','XYZ1234567890MNO','2025-01-26 10:00:00','LEBANESE2','Lebanese','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191833','ABC9876543210MNO','2025-01-27 15:15:00','PIZZA123','Italian','Delivered','FIRSTORDER');

INSERT INTO proect2.orders VALUES ('OF1900191834','DEF5678901234MNO','2025-01-28 18:30:00','ITALIAN2','Italian','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191835','GHI3456789012MNO','2025-01-29 11:45:00','BURGER99','American','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191836','JKL7890123456MNO','2025-01-30 20:00:00','AMERICAN2','American','Delivered','NEWUSER');

INSERT INTO proect2.orders VALUES ('OF1900191837','MNO1234567890PQR','2025-01-31 09:45:00','TACO789','Mexican','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191838','PQR9876543210PQR','2025-01-31 14:00:00','MEXICAN2','Mexican','Delivered','FIRSTORDER');

INSERT INTO proect2.orders VALUES ('OF1900191839','STU5678901234PQR','2025-01-31 17:15:00','SUSHI456','Japanese','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191840','VWX3456789012PQR','2025-01-31 12:00:00','JAPANESE2','Japanese','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191841','JAN\_ONLY\_ORDER1','2025-01-15 13:30:00','KMKMH6787','Lebanese','Delivered','NEWUSER');

INSERT INTO proect2.orders VALUES ('OF1900191842','JAN\_ONLY\_ORDER2','2025-01-20 18:45:00','LEBANESE2','Lebanese','Delivered','FIRSTORDER');

INSERT INTO proect2.orders VALUES ('OF1900191843','NO\_ORDER\_LAST7\_1','2025-02-01 12:15:00','PIZZA123','Italian','Delivered','NEWUSER');

INSERT INTO proect2.orders VALUES ('OF1900191844','NO\_ORDER\_LAST7\_2','2025-02-05 19:30:00','ITALIAN2','Italian','Delivered','FIRSTORDER');

INSERT INTO proect2.orders VALUES ('OF1900191845','THIRD\_ORDER\_CUST1','2025-01-05 11:45:00','BURGER99','American','Delivered','NEWUSER');

INSERT INTO proect2.orders VALUES ('OF1900191846','THIRD\_ORDER\_CUST1','2025-01-10 14:15:00','AMERICAN2','American','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191847','THIRD\_ORDER\_CUST1','2025-01-15 17:45:00','BURGER99','American','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191848','THIRD\_ORDER\_CUST2','2025-01-10 10:30:00','TACO789','Mexican','Delivered','FIRSTORDER');

INSERT INTO proect2.orders VALUES ('OF1900191849','THIRD\_ORDER\_CUST2','2025-01-15 13:45:00','MEXICAN2','Mexican','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191850','THIRD\_ORDER\_CUST2','2025-01-20 16:30:00','TACO789','Mexican','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191851','MULTI\_CUISINE\_CUST','2025-01-05 12:00:00','KMKMH6787','Lebanese','Delivered','NEWUSER');

INSERT INTO proect2.orders VALUES ('OF1900191852','MULTI\_CUISINE\_CUST','2025-01-10 15:30:00','LEBANESE2','Lebanese','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191853','MULTI\_CUISINE\_CUST','2025-01-15 18:45:00','PIZZA123','Italian','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191854','MULTI\_CUISINE\_CUST','2025-01-20 11:15:00','ITALIAN2','Italian','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191855','MULTI\_CUISINE\_CUST','2025-01-25 14:45:00','BURGER99','American','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191856','SINGLE\_ORDER\_JAN','2025-01-10 19:00:00','AMERICAN2','American','Delivered','FIRSTORDER');

INSERT INTO proect2.orders VALUES ('OF1900191857','NO\_ORDER\_RECENT','2025-02-10 12:30:00','TACO789','Mexican','Delivered','NEWUSER');

INSERT INTO proect2.orders VALUES ('OF1900191858','NO\_ORDER\_RECENT','2025-02-15 18:00:00','MEXICAN2','Mexican','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191859','PROMO\_FIRST\_ONLY','2025-02-01 11:45:00','SUSHI456','Japanese','Delivered','WELCOME50');

INSERT INTO proect2.orders VALUES ('OF1900191860','PROMO\_FIRST\_ONLY','2025-02-05 14:15:00','JAPANESE2','Japanese','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191861','PROMO\_FIRST\_ONLY','2025-02-10 17:30:00','SUSHI456','Japanese','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191862','LAST\_ORDER\_7DAYS','2025-03-20 10:00:00','KMKMH6787','Lebanese','Delivered','FIRSTORDER');

INSERT INTO proect2.orders VALUES ('OF1900191863','LAST\_ORDER\_7DAYS','2025-03-25 13:15:00','LEBANESE2','Lebanese','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191864','LAST\_ORDER\_7DAYS','2025-03-31 16:30:00','KMKMH6787','Lebanese','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191865','ABC9876543210MNO','2025-02-27 15:15:00','PIZZA123','Italian','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191866','CDE3456789012GHI','2025-03-27 15:15:00','PIZZA123','Italian','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191867','ABC9876543210MNO','2025-03-15 15:15:00','LEBANESE2','Lebanese','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191868','ZZZ9876543210MNO','2025-03-20 15:15:00','LEBANESE2','Lebanese','Delivered','NEWUSER');

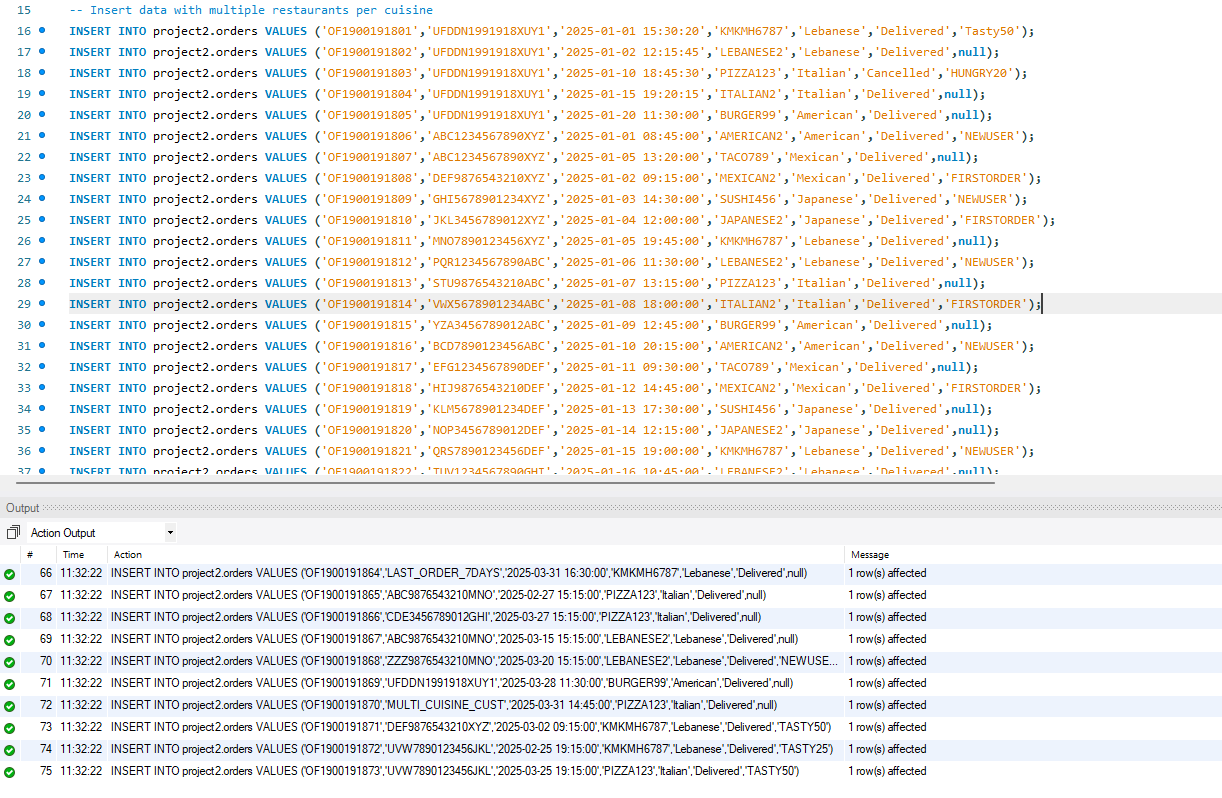
INSERT INTO proect2.orders VALUES ('OF1900191869','UFDDN1991918XUY1','2025-03-28 11:30:00','BURGER99','American','Delivered',null);

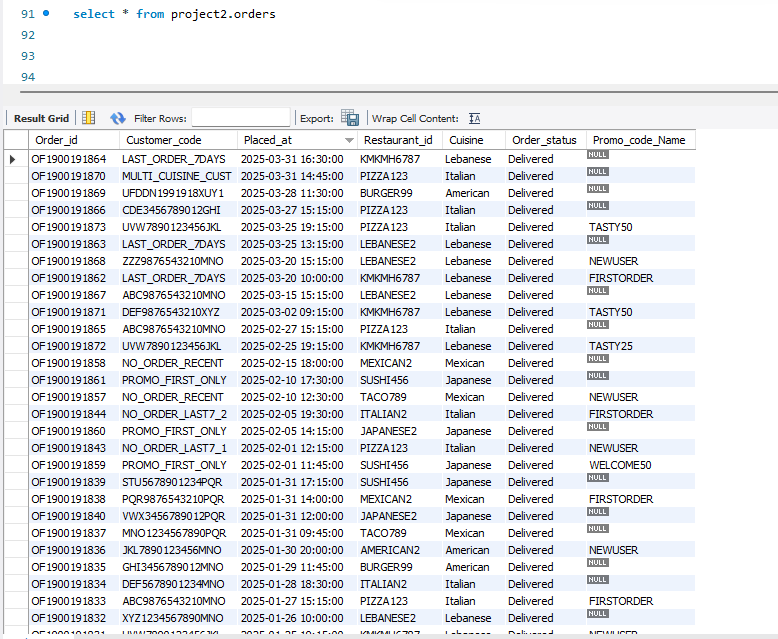
INSERT INTO proect2.orders VALUES ('OF1900191870','MULTI\_CUISINE\_CUST','2025-03-31 14:45:00','PIZZA123','Italian','Delivered',null);

INSERT INTO proect2.orders VALUES ('OF1900191871','DEF9876543210XYZ','2025-03-02 09:15:00','KMKMH6787','Lebanese','Delivered','TASTY50');

INSERT INTO proect2.orders VALUES ('OF1900191872','UVW7890123456JKL','2025-02-25 19:15:00','KMKMH6787','Lebanese','Delivered','TASTY25');

INSERT INTO proect2.orders VALUES ('OF1900191873','UVW7890123456JKL','2025-03-25 19:15:00','PIZZA123','Italian','Delivered','TASTY50');





**4) Find top 3 restaurants for each cuisine based on no of orders**

select \* from (

select a.\*, row\_number() over(partition by cuisine order by order\_count desc) as rnk

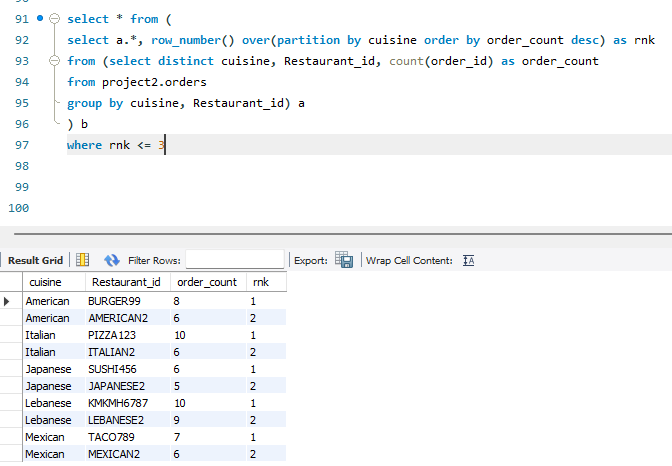
from (select distinct cuisine, Restaurant\_id, count(order\_id) as order\_count

from project2.orders

group by cuisine, Restaurant\_id) a

) b

where rnk <= 3



**5) Find the total customers per day and then find how many new customers placed order in each day**

select ordered\_date, sum(total\_customer\_count) as total\_customer\_count, sum(new\_customer\_count) as new\_customer\_count from (

select ordered\_date, count(Customer\_code) as total\_customer\_count,

case when is\_new\_customer = 'Yes' then count(Customer\_code) else 0 end as new\_customer\_count

from (

select cast(a.Placed\_at as date) as ordered\_date, a.Customer\_code,

case when a.Placed\_at > b.first\_ordered\_date then 'No' else 'Yes' end as is\_new\_customer

from project2.orders a

left join (select Customer\_code, min(Placed\_at) as first\_ordered\_date

from project2.orders

group by Customer\_code) b

on a.Customer\_code = b.Customer\_code

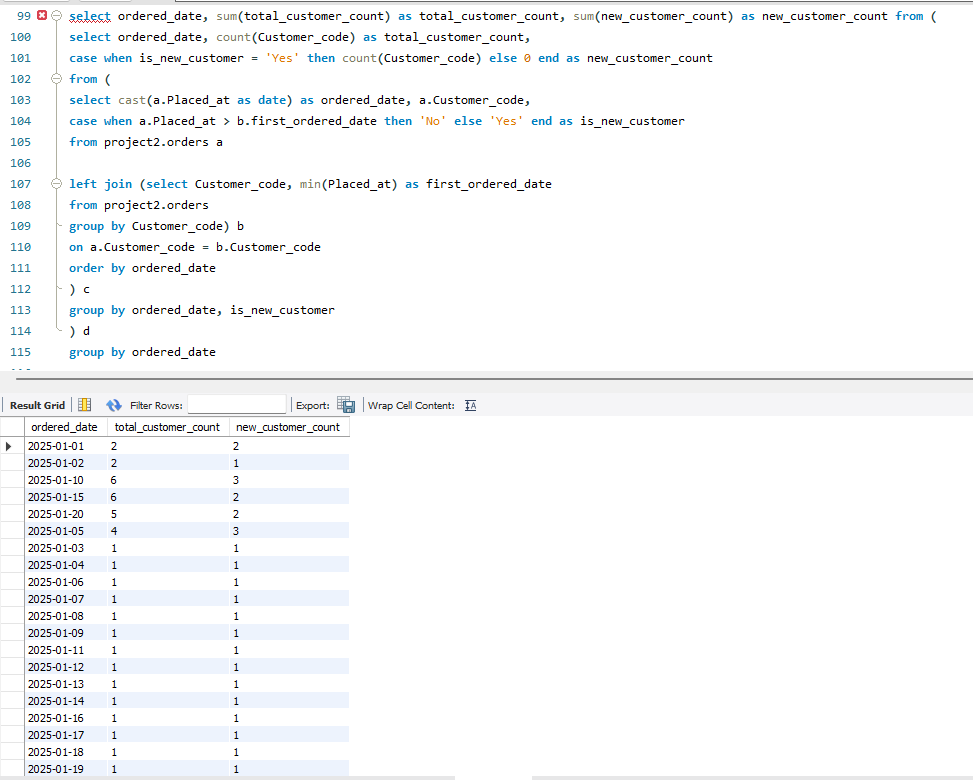
order by ordered\_date

) c

group by ordered\_date, is\_new\_customer

) d

group by ordered\_date



**6) Find the customers placed orders in Jan 2025 and only placed one order in Jan 2025 but not placed any other order**

select distinct a.Customer\_code

from project2.orders a

left join (select Customer\_code, count(Order\_id) as order\_count

from project2.orders

where CONCAT(YEAR(Placed\_at), '-', MONTH(Placed\_at)) = '2025-1'

group by Customer\_code) b

on a.Customer\_code = b.Customer\_code

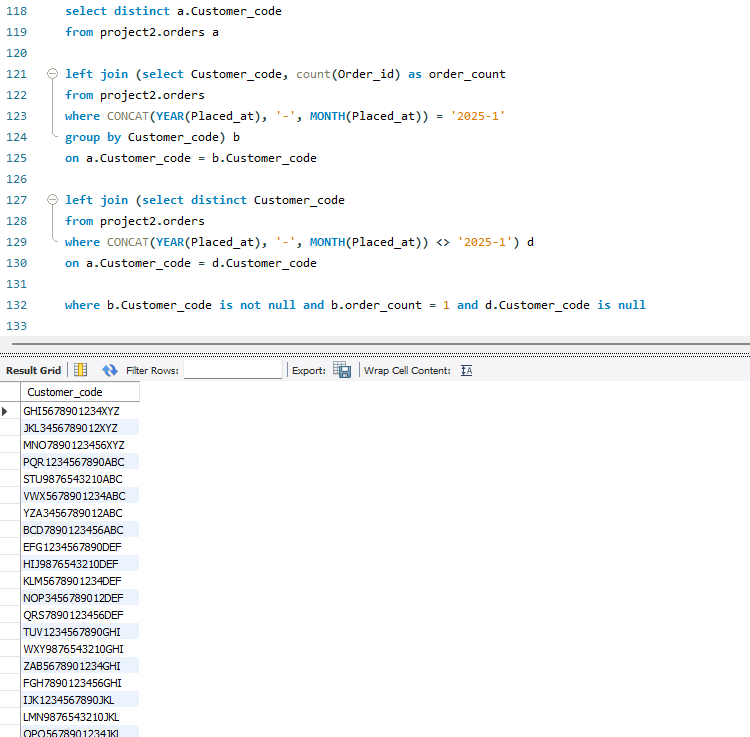
left join (select distinct Customer\_code

from project2.orders

where CONCAT(YEAR(Placed\_at), '-', MONTH(Placed\_at)) <> '2025-1') d

on a.Customer\_code = d.Customer\_code

where b.Customer\_code is not null and b.order\_count = 1 and d.Customer\_code is null



**7) Find the customers who didn't placed any order in last 7 days but acquired first order 1 month ago with promo**

select distinct Customer\_code

from project2.orders

where Customer\_code in (select distinct Customer\_code from project2.orders group by Customer\_code having max(placed\_at) < date\_add('2025-03-31', interval -7 day))

and Customer\_code in (select distinct Customer\_code from project2.orders where Promo\_code\_Name is not null group by Customer\_code having min(placed\_at) < date\_add('2025-03-31', interval -1 month))



**8) Write a query to fetch customer details who have placed minimum 3 orders and get the ordered date when the customer orders every 3rd order. This helps to send them personalized message after every 3rd order.**

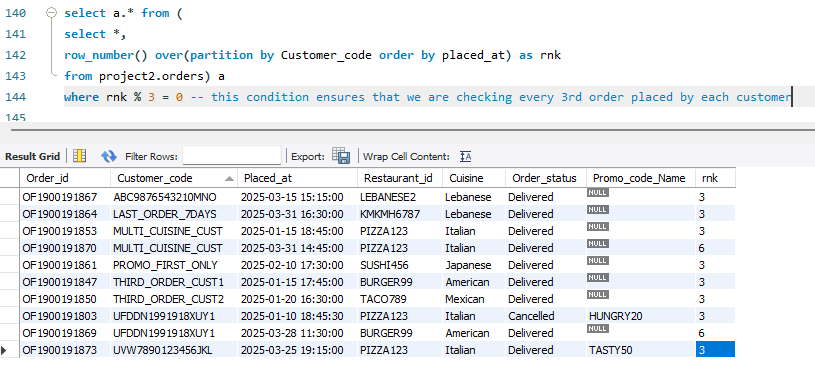
select a.\* from (

select \*,

row\_number() over(partition by Customer\_code order by placed\_at) as rnk

from project2.orders) a

where rnk % 3 = 0 -- this condition ensures that we are checking every 3rd order placed by each customer

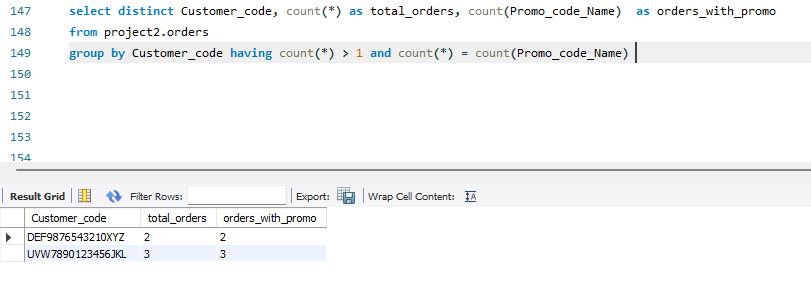


9) Find customers who placed multiple orders and all of them are with promo code

select distinct Customer\_code, count(\*) as total\_orders, count(Promo\_code\_Name) as orders\_with\_promo

from project2.orders

group by Customer\_code having count(\*) > 1 and count(\*) = count(Promo\_code\_Name)



**10) What percent of customers acquired in Jan 2025 where their first order was placed without promo**

select d.\*,

round((customers\_without\_promo\_code / total\_customers) \* 100, 2) as percentage\_without\_promo from

(select count(distinct a.Customer\_code) as total\_customers, count(distinct b.Customer\_code) as customers\_without\_promo\_code

from project2.orders a

left join (select c.\* from (select distinct Customer\_code,

row\_number() over(partition by Customer\_code order by placed\_at) as rnk

from project2.orders

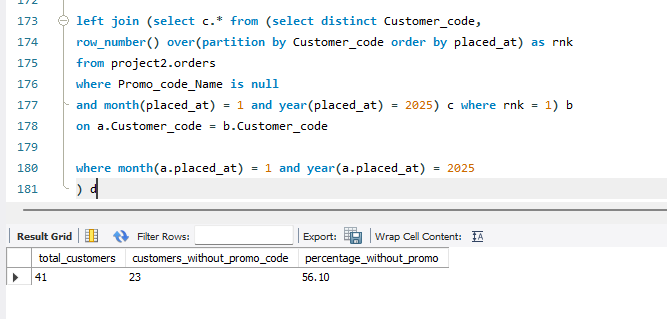
where Promo\_code\_Name is null

and month(placed\_at) = 1 and year(placed\_at) = 2025) c where rnk = 1) b

on a.Customer\_code = b.Customer\_code

where month(a.placed\_at) = 1 and year(a.placed\_at) = 2025

) d



**11) Create a query to extract KPIs for total\_orders, weekend\_orders, week\_orders, percentage\_of\_weekend\_orders, promo\_orders, percentage\_of\_promo\_ordersfor each cuisine**

select cuisine, sum(total\_orders) as total\_orders,

sum(weekend\_orders) as weekend\_orders,

sum(week\_orders) as week\_orders,

round((sum(weekend\_orders) / sum(total\_orders)) \* 100, 1) as percentage\_of\_weekend\_orders,

sum(promo\_orders) as promo\_orders,

round((sum(promo\_orders) / sum(total\_orders)) \* 100, 1) as percentage\_of\_promo\_orders

from (

select cuisine, count(\*) as total\_orders,

case when dayofweek(placed\_at) in (1, 7) then count(\*) else 0 end as weekend\_orders,

case when dayofweek(placed\_at) not in (1, 7) then count(\*) else 0 end as week\_orders,

case when Promo\_code\_Name is not null then count(\*) end as promo\_orders

from project2.orders

group by cuisine, placed\_at, Promo\_code\_Name) a

group by cuisine

