**Case Study #1 - Danny's Diner**

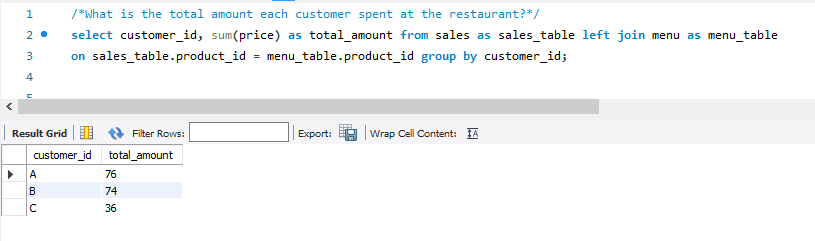
**Q1. What is the total amount each customer spent at the restaurant?**

**Ans : Query**

SELECT customer\_id, sum(price) as total\_amount from sales as sales\_table left join menu as menu\_table

on sales\_table.product\_id = menu\_table.product\_id group by customer\_id;

example :

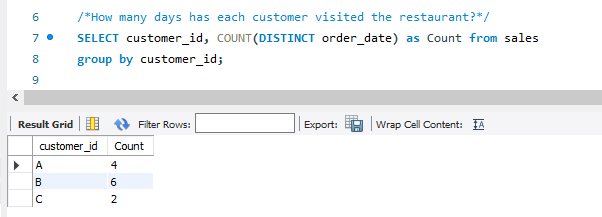


**Q2. How many days has each customer visited the restaurant?**

**Ans:**

SELECT customer\_id, COUNT(DISTINCT order\_date) as Count from sales

group by customer\_id;



**Q3. What was the first item from the menu purchased by each customer?**

**Ans :**

SELECT customer\_id, product\_name

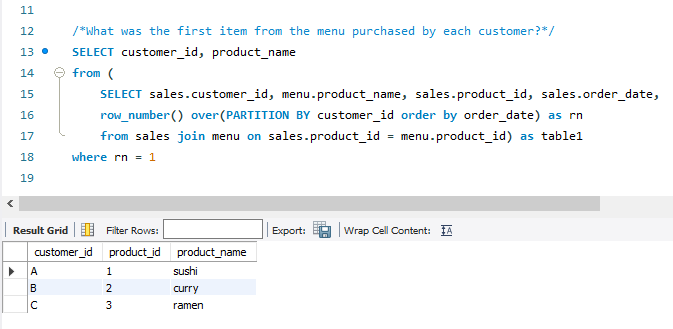
from (

SELECT sales.customer\_id, menu.product\_name, sales.product\_id, sales.order\_date,

row\_number() over(PARTITION BY customer\_id order by order\_date) as rn

from sales join menu on sales.product\_id = menu.product\_id) as table1

where rn = 1



**Q4. What is the most purchased item on the menu and how many times was it purchased by all customers?**

**Ans**:

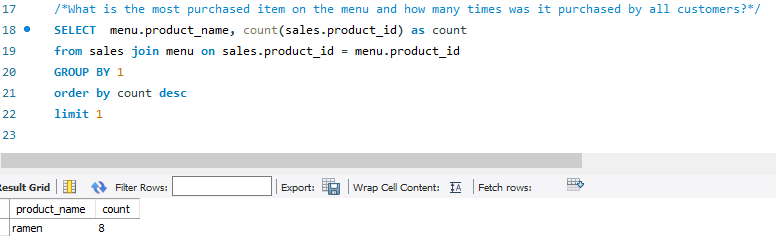
SELECT menu.product\_name, count(sales.product\_id) as count

from sales join menu on sales.product\_id = menu.product\_id

GROUP BY 1

order by count desc

limit 1



**Q5.? Which item was the most popular for each customer**

**Ans:**

with cte as (

select customer\_id, product\_name, count, max(count) over(partition by customer\_id) as max\_count

from(

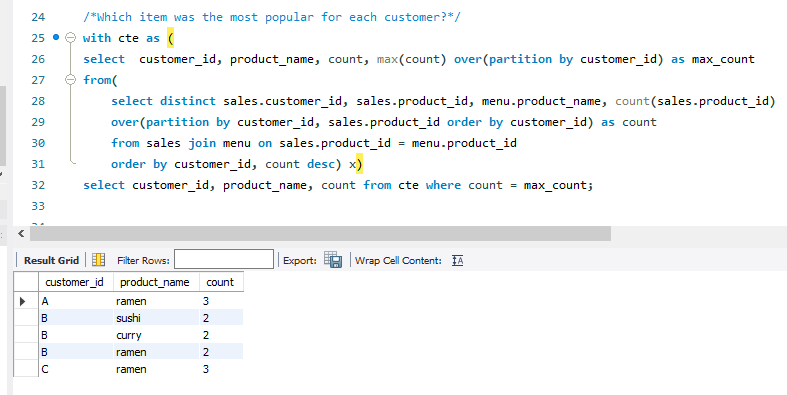
select distinct sales.customer\_id, sales.product\_id, menu.product\_name, count(sales.product\_id)

over(partition by customer\_id, sales.product\_id order by customer\_id) as count

from sales join menu on sales.product\_id = menu.product\_id

order by customer\_id, count desc) x)

select customer\_id, product\_name, count from cte where count = max\_count;



**Q6. Which item was purchased first by the customer after they became a member?**

**Ans:**

with cte as (SELECT sales.customer\_id, product\_id, order\_date,

row\_number() over(partition by sales.customer\_id order by order\_date) as rn

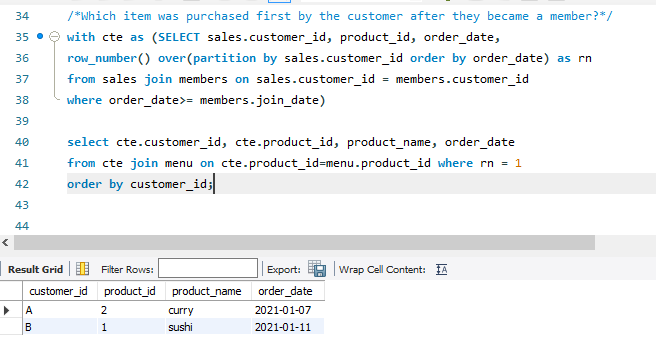
from sales join members on sales.customer\_id = members.customer\_id

where order\_date>= members.join\_date)

select cte.customer\_id, cte.product\_id, product\_name, order\_date

from cte join menu on cte.product\_id=menu.product\_id where rn = 1

order by customer\_id;



**Q7. Which item was purchased just before the customer became a member?**

**Ans**:

with cte as(

select sales.customer\_id, product\_id, order\_date, join\_date

from sales join members on sales.customer\_id = members.customer\_id

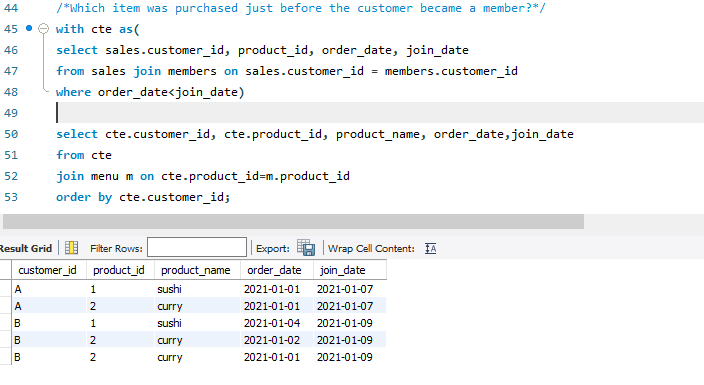
where order\_date<join\_date)

select cte.customer\_id, cte.product\_id, product\_name, order\_date,join\_date

from cte

join menu m on cte.product\_id=m.product\_id

order by cte.customer\_id;



**Q8.What is the total items and amount spent for each member before they became a member?**

**Ans**:

select distinct sales.customer\_id,

count(sales.product\_id) over(partition by sales.customer\_id) as total\_items,

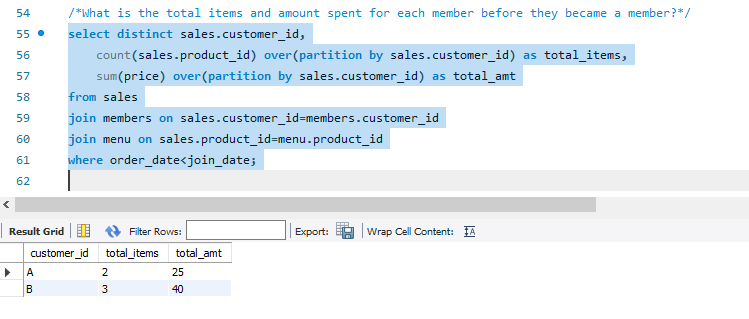
sum(price) over(partition by sales.customer\_id) as total\_amt

from sales

join members on sales.customer\_id=members.customer\_id

join menu on sales.product\_id=menu.product\_id

where order\_date<join\_date;



**Q9. If each $1 spent equates to 10 points and sushi has a 2x points multiplier - how many points would each customer have?**

**Ans:**

with cte as(

SELECT sales.customer\_id, sales.product\_id, product\_name, price,

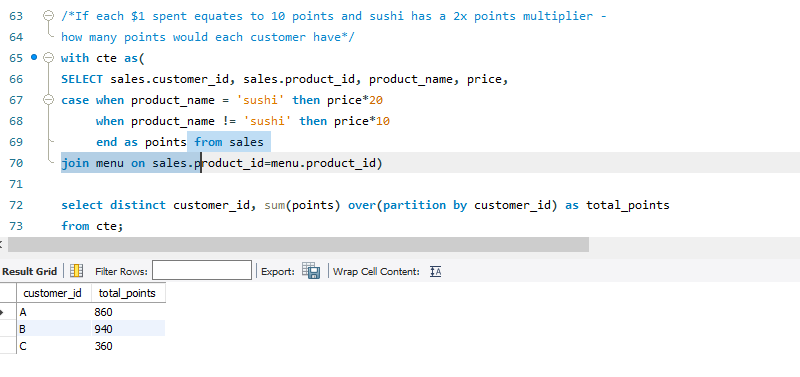
case when product\_name = 'sushi' then price\*20

when product\_name != 'sushi' then price\*10

end as points from sales join menu on sales.product\_id=menu.product\_id)

select distinct customer\_id, sum(points) over(partition by customer\_id) as total\_points

from cte;



**Q10.**

**In the first week after a customer joins the program (including their join date) they earn 2x points on all items, not just sushi - how many points do customer A and B have at the end of January?**

**Ans:**

select distinct customer\_id, sum(points) over(partition by customer\_id) total\_point

from(

select sales.customer\_id as customer\_id, order\_date, price,

CASE when day(order\_date) <=7 then price\*20

when day(order\_date) > 7 then price\*10

end as points from sales

join members on sales.customer\_id=members.customer\_id

join menu on sales.product\_id=menu.product\_id

where order\_date>= join\_date and month(order\_date)=1) x

