

8WEEKSQLCHALLENGE.COM

# CASE STUDY #1



THE TASTE OF SUCCESS

## What is the total amount each customer spent at the restaurant?



```
SELECT customer_id, SUM(price) AS total_amount_spent  
FROM sales  
JOIN menu  
ON sales.product_id = menu.product_id  
group by customer_id;
```



	customer_id	total_amount_spent
▶	A	76
	B	74
	C	36

## How many days has each customer visited the restaurant?



```
SELECT customer_id, COUNT(DISTINCT order_date) AS customer_visit  
from sales  
group by customer_id;
```

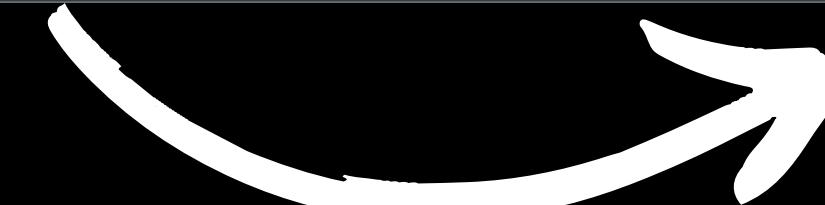


	customer_id	customer_visit
▶	A	8

## What was the first item from the menu purchased by each customer?



```
WITH first AS (
    SELECT customer_id, product_name,
           RANK() OVER(PARTITION BY customer_id ORDER BY order_date) AS rnk
    FROM sales
   INNER JOIN menu
     ON sales.product_id = menu.product_id
)
SELECT *
  FROM first
 WHERE rnk = 1;
```



	customer_id	product_name	rnk
▶	A	sushi	1
	A	curry	1
	B	curry	1
	C	ramen	1
	C	ramen	1

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



```
SELECT product_name, COUNT(*) AS most_purchased_item  
FROM sales  
JOIN menu  
ON sales.product_id = menu.product_id  
group by product_name;
```



	product_name	most_purchased_item
▶	sushi	3
	curry	4
	ramen	8

## Which item was the most popular for each customer?

```
● ● ●  
WITH CTE AS (  
    SELECT product_name,  
           customer_id,  
           COUNT(order_date) AS orders,  
           RANK() OVER (PARTITION BY customer_id ORDER BY COUNT(order_date) DESC  
AS rnk,  
           ROW_NUMBER() OVER (PARTITION BY customer_id ORDER BY COUNT(order_date  
DESC) AS rn  
    FROM sales  
  JOIN menu  
  ON sales.product_id = menu.product_id  
 GROUP BY customer_id, product_name  
)  
SELECT customer_id,  
       product_name  
FROM CTE  
WHERE rn = 1;
```



	customer_id	product_name
▶	A	ramen
	B	curry
	C	ramen

## Which item was purchased first by the customer after they became members?



```
SELECT sales.customer_id, product_name, order_date  
FROM sales  
JOIN menu  
ON sales.product_id = menu.product_id  
JOIN members  
ON sales.customer_id = members.customer_id  
WHERE order_date > join_date;
```



	customer_id	product_name	order_date
▶	B	sushi	2021-01-11
	B	ramen	2021-02-01
	B	ramen	2021-01-16
	A	ramen	2021-01-11
	A	ramen	2021-01-11
	A	ramen	2021-01-10

## Which item was purchased first by the customer before they became members?



```
WITH CTE AS (
    SELECT sales.customer_id, product_name, order_date, join_date,
           RANK() OVER(PARTITION BY sales.customer_id ORDER BY order_date DESC) AS rnk,
           ROW_NUMBER() OVER(PARTITION BY sales.customer_id ORDER BY order_date
DESC) AS rn
    FROM sales
    JOIN menu
    ON sales.product_id = menu.product_id
    JOIN members
    ON sales.customer_id = members.customer_id
    WHERE order_date > join_date
)
SELECT *
FROM CTE
WHERE rn = 1;
```



	customer_id	product_name	order_date	join_date	rnk	rn
▶	A	ramen	2021-01-11	2021-01-07	1	1
	B	ramen	2021-02-01	2021-01-09	1	1

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



```
SELECT sales.customer_id, menu.product_name, COUNT(menu.product_name), SUM(price),
join_date, order_date
FROM sales
JOIN menu
ON sales.product_id=menu.product_id
JOIN members
ON sales.customer_id = members.customer_id
WHERE order_date < join_date
GROUP BY customer_id,menu.product_name,join_date,order_date;
```

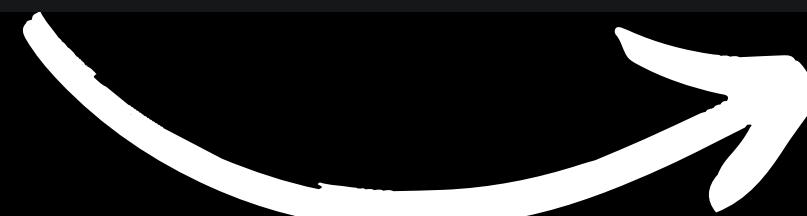


	customer_id	product_name	COUNT(menu.product_name)	SUM(price)	join_date	order_date
▶	B	sushi	1	10	2021-01-09	2021-01-04
	A	sushi	1	10	2021-01-07	2021-01-01
	B	curry	1	15	2021-01-09	2021-01-02
	B	curry	1	15	2021-01-09	2021-01-01
	A	curry	1	15	2021-01-07	2021-01-01

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



```
SELECT customer_id,  
       SUM(CASE  
             WHEN product_name = 'sushi' THEN price * 10 * 2  
             ELSE price * 10  
           END) AS points  
  FROM menu  
  JOIN sales  
    ON sales.product_id = menu.product_id  
 GROUP BY customer_id;
```



customer_id	points
A	860
B	940
C	360

THANKYOU