#case Study Questions

#Each of the following case study questions can be answered using a single SQL statement:

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

SELECT product\_id, SUM(price) AS total\_price

FROM menu

GROUP BY product\_id;

SELECT s.customer\_id, SUM(m.price) AS total\_amount

FROM sales AS s

JOIN menu AS m ON s.product\_id = m.product\_id

GROUP BY s.customer\_id;

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

SELECT s.customer\_id, COUNT(DISTINCT s.order\_date) AS visit\_days

FROM sales AS s

JOIN members AS m ON s.customer\_id = m.customer\_id

GROUP BY s.customer\_id;

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

SELECT s.customer\_id, MIN(s.order\_date) AS first\_purchase\_date, m.product\_name AS first\_item

FROM sales AS s

JOIN menu AS m ON s.product\_id = m.product\_id

GROUP BY s.customer\_id;

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

SELECT m.product\_name, COUNT(s.product\_id) AS purchase\_count

FROM sales AS s

JOIN menu AS m ON s.product\_id = m.product\_id

GROUP BY s.product\_id

ORDER BY purchase\_count DESC

LIMIT 1;

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

SELECT s.customer\_id, m.product\_name AS most\_popular\_item

FROM sales AS s

JOIN menu AS m ON s.product\_id = m.product\_id

GROUP BY s.customer\_id

ORDER BY COUNT(s.product\_id) DESC;

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

SELECT m.product\_name, s.customer\_id

FROM sales AS s

JOIN menu AS m ON s.product\_id = m.product\_id

JOIN members AS mem ON s.customer\_id = mem.customer\_id

WHERE s.order\_date > mem.join\_date

ORDER BY s.order\_date ASC

LIMIT 1;

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

SELECT m.product\_name, s.customer\_id

FROM sales AS s

JOIN menu AS m ON s.product\_id = m.product\_id

JOIN members AS mem ON s.customer\_id = mem.customer\_id

WHERE s.order\_date < mem.join\_date

ORDER BY s.order\_date DESC

LIMIT 1;

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

SELECT s.customer\_id, COUNT(s.product\_id) AS total\_items, SUM(m.price) AS total\_amount

FROM sales AS s

JOIN menu AS m ON s.product\_id = m.product\_id

JOIN members AS mem ON s.customer\_id = mem.customer\_id

WHERE s.order\_date < mem.join\_date

GROUP BY s.customer\_id;

**## 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?**

SELECT s.customer\_id, SUM(

CASE

WHEN s.order\_date <= DATE\_ADD(mem.join\_date, INTERVAL 1 WEEK) THEN m.price \* 2 \* 10

ELSE m.price \* 10

END

) AS total\_points

FROM sales AS s

JOIN menu AS m ON s.product\_id = m.product\_id

JOIN members AS mem ON s.customer\_id = mem.customer\_id

WHERE MONTH(s.order\_date) = 1

GROUP BY s.customer\_id;