Create database db2;

Use db2;

| CREATE TABLE sales ( |
| --- |
| customer\_id VARCHAR(1), |
| order\_date DATE, |
| product\_id INTEGER |
| ); |
|  |
| INSERT INTO sales ( |
| customer\_id, order\_date, product\_id |
| ) |
| VALUES |
| ('A', '2021-01-01', '1'), |
| ('A', '2021-01-01', '2'), |
| ('A', '2021-01-07', '2'), |
| ('A', '2021-01-10', '3'), |
| ('A', '2021-01-11', '3'), |
| ('A', '2021-01-11', '3'), |
| ('B', '2021-01-01', '2'), |
| ('B', '2021-01-02', '2'), |
| ('B', '2021-01-04', '1'), |
| ('B', '2021-01-11', '1'), |
| ('B', '2021-01-16', '3'), |
| ('B', '2021-02-01', '3'), |
| ('C', '2021-01-01', '3'), |
| ('C', '2021-01-01', '3'), |
| ('C', '2021-01-07', '3'); |
|  |
| CREATE TABLE menu ( |
| product\_id INTEGER, |
| product\_name VARCHAR(5), |
| price INTEGER |
| ); |
|  |
| INSERT INTO menu (product\_id, product\_name, price) |
| VALUES |
| (1, 'sushi', 10), |
| (2, 'curry', 15), |
| (3, 'ramen', 12); |
|  |
|  |
| CREATE TABLE members ( |
| customer\_id VARCHAR(1), |
| join\_date DATE |
| ); |
|  |
| INSERT INTO members (customer\_id, join\_date) |
| VALUES |
| ('A', '2021-01-07'), |
| ('B', '2021-01-09'); |

-- 2. How many days has each customer visited the restaurant?

select customer\_id,

count(distinct order\_date) as visit\_count

from sales

group by customer\_id;

-- 4. What is the most purchased item on the menu and

-- how many times was it purchased by all customers?

select product\_name as pname,

count(sales.product\_id) as cnt

from menu

inner join sales

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

group by product\_name

order by cnt desc

LIMIT 1;

-- 8. What is the total items and amount spent

-- for each member before they became a member?

select sales.customer\_id,

sum(price) as sprice,

count(product\_name) as prname

from menu

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

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

where join\_date>order\_date

group by customer\_id

order by customer\_id;

**Question:** Write a query to find customers who have purchased 'ramen' more than three times. Include the customer ID and the number of times they purchased 'ramen'.

SELECT

s.customer\_id,

COUNT(\*) AS ramen\_purchases

FROM sales s

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

WHERE m.product\_name = 'ramen'

GROUP BY s.customer\_id

HAVING ramen\_purchases >3;

-- Question: Write a query to find the top 2 products

-- that generated the highest revenue. Include the product name and total revenue.

-- Sort the results by total revenue in descending order.

SELECT

m.product\_name,

SUM(m.price) AS total\_revenue

FROM sales s

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

GROUP BY m.product\_name

ORDER BY total\_revenue DESC

LIMIT 2;

**Question:** Write a query to find the total sales amount for each member before and after they became a member. Include the customer ID, total sales before membership, and total sales after membership.

SELECT

s.customer\_id,

SUM(CASE WHEN s.order\_date < mb.join\_date THEN m.price ELSE 0 END) AS sales\_before\_membership,

SUM(CASE WHEN s.order\_date >= mb.join\_date THEN m.price ELSE 0 END) AS sales\_after\_membership

FROM sales s

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

JOIN members mb ON s.customer\_id = mb.customer\_id

GROUP BY s.customer\_id;

-- 9. 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\*20

ELSE price\*10

END) AS customer\_points

FROM menu AS m

INNER JOIN sales AS s ON m.product\_id = s.product\_id

GROUP BY customer\_id

ORDER BY customer\_id;