# Danny’s Diner Project – MYSQL

MYSQL

Soniya Shende

**Problem Statement:**

Danny wants to use the data to answer a few simple questions about his customers, especially about their visiting patterns, how much money they’ve spent and also which menu items are their favourite. Having this deeper connection with his customers will help him deliver a better and more personalised experience for his loyal customers.

He plans on using these insights to help him decide whether he should expand the existing customer loyalty program - additionally he needs help to generate some basic datasets so his team can easily inspect the data without needing to use SQL.

Danny has provided you with a sample of his overall customer data due to privacy issues - but he hopes that these examples are enough for you to write fully functioning SQL queries to help him answer his questions!

Danny has shared 3 key datasets for this case study:

* sales
* menu
* members

Let us start by creating the database.

Step 1: Create Database dannys\_diner;

Step 2: Now let us create our tables.

1. Sales table: Contains fields like customer\_id, order\_date and product\_id.

CREATE TABLE sales (

customer\_id VARCHAR(1),

order\_date date,

product\_id int

);

1. Menu table: Contains fields such as product\_id, product\_name and price.

CREATE TABLE menu (

product\_id INT,

product\_name VARCHAR(10),

price INT

);

1. Members table: Contains fields such as customer\_id and join\_date.

CREATE TABLE members (

customer\_id VARCHAR(1),

join\_date DATE

);

Step 3: Inserting values into the tables.

1. Sales table:

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');

1. Menu table:

INSERT INTO menu

(product\_id, product\_name, price)

VALUES

('1', 'sushi', '10'),

('2', 'curry', '15'),

('3', 'ramen', '12');

1. Members table:

INSERT INTO members

(customer\_id, join\_date)

VALUES

('A', '2021-01-07'),

('B', '2021-01-09');

Questions answered:

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

SELECT

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

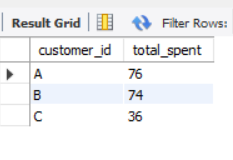
FROM

sales s

INNER JOIN

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

GROUP BY s.customer\_id;



1. How many days has each customer visited the restaurant?

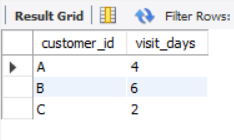
SELECT

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

FROM

sales

GROUP BY customer\_id;



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

WITH CTE AS (

SELECT

s.customer\_id,

s.order\_date,

m.product\_name,

DENSE\_RANK() OVER (

PARTITION BY s.customer\_id

ORDER BY s.order\_date) AS rnk

FROM sales s

INNER JOIN menu m

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

)

SELECT

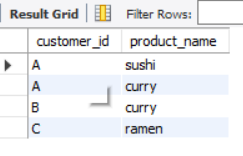
customer\_id,

product\_name

FROM CTE

WHERE rnk = 1

GROUP BY customer\_id, product\_name;



1. 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 most\_purchased\_item

FROM

sales s

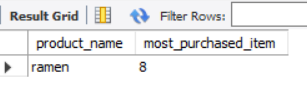
INNER JOIN

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

GROUP BY m.product\_name

ORDER BY most\_purchased\_item DESC

LIMIT 1;



1. Which item was the most popular for each customer?

WITH most\_popular AS (

SELECT

s.customer\_id,

m.product\_name,

COUNT(m.product\_id) AS order\_count,

DENSE\_RANK() OVER (

PARTITION BY s.customer\_id

ORDER BY COUNT(s.customer\_id) desc ) AS rnk

FROM menu m

INNER JOIN sales s

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

GROUP BY s.customer\_id, m.product\_name

)

SELECT

customer\_id,

product\_name,

order\_count

FROM most\_popular

WHERE rnk = 1;

