8-WEEK

SQL-CHALLENGE

WEEK-1

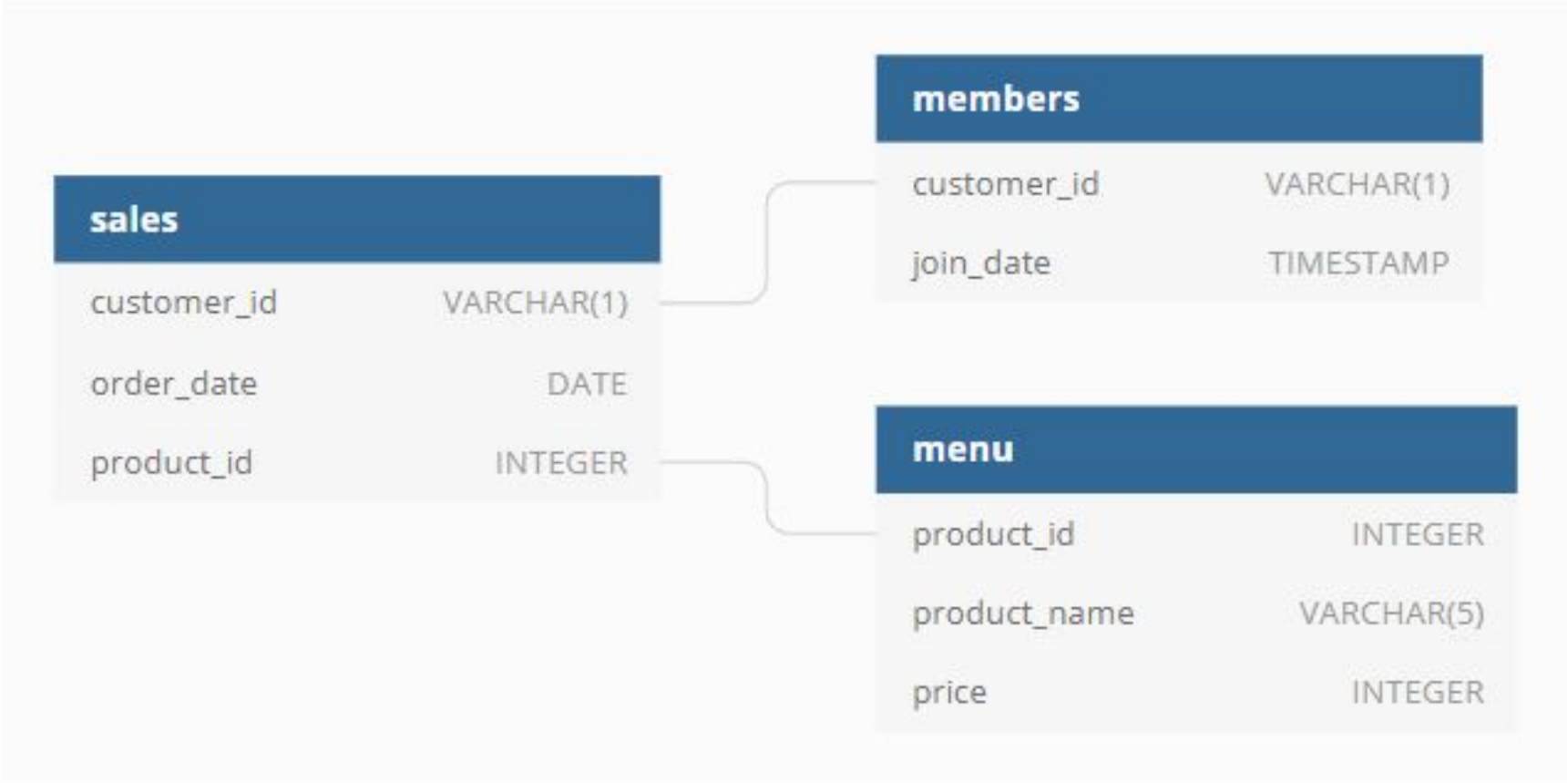
Case Study#1

Danny's Diner

OVERVIEW

1. Entity Relationship Diagram
2. Question and Solution

Entity Relationship Diagram



Question and Solution

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

```
SELECT
 sales.customer_id,
  SUM(menu.price) AS total_sales
FROM sales
INNER JOIN menu
  ON sales.product_id = menu.product_id
GROUP BY customer_id
ORDER BY customer_id ASC;
```

Answer

	customer_id	total_sales
1	A	76
2	B	74
3	C	36

Question and Solution

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

```
SELECT
  sales.customer_id,
  COUNT(DISTINCT order_date) AS visit_count
FROM sales
GROUP BY customer_id;
```

Answer

	customer_id	visit_count
1	A	4
2	B	6
3	C	2

Question and Solution

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

```
 WITH ordered_sales AS (
SELECT
  sales.customer_id,
  sales.order_date,
  menu.product_name,
  DENSE_RANK() OVER (
    PARTITION BY sales.customer_id
    ORDER BY sales.order_date) AS rank
FROM sales AS sales
INNER JOIN menu AS menu
  ON sales.product_id = menu.product_id
)
SELECT
  customer_id,
  product_name
FROM ordered_sales
WHERE rank = 1
GROUP BY customer_id, product_name;
```

Answer

	customer_id	product_name
1	A	curry
2	A	sushi
3	B	curry
4	C	ramen

Question and Solution

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

```
SELECT TOP 1
  menu.product_name,
  COUNT(sales.product_id) AS most_purchased_item
FROM sales AS sales
INNER JOIN menu AS menu
  ON sales.product_id = menu.product_id
GROUP BY menu.product_name
ORDER BY most_purchased_item DESC;
```

Answer

	product_name	most_purchased_item
1	ramen	8

Question and Solution

-- 5. Which item was the most popular for each customer?

```
WITH most_popular AS (
  SELECT
    sales.customer_id,
    menu.product_name,
    COUNT(menu.product_id) AS order_count,
    DENSE_RANK() OVER (
      PARTITION BY sales.customer_id
      ORDER BY COUNT(sales.customer_id) DESC) AS rank
  FROM menu
  INNER JOIN sales
    ON menu.product_id = sales.product_id
  GROUP BY sales.customer_id, menu.product_name
)

SELECT
  customer_id,
  product_name,
  order_count
FROM most_popular
WHERE rank = 1;
```

Answer

	customer_id	product_name	order_count
1	A	ramen	3
2	B	sushi	2
3	B	curry	2
4	B	ramen	2
5	C	ramen	3