Example Datasets

All datasets exist within the `dannys_diner` database schema - be sure to include this reference within your SQL scripts as you start exploring the data and answering the case study questions.

Table 1: sales

The `sales` table captures all `customer_id` level purchases with an corresponding `order_date` and `product_id` information for when and what menu items were ordered.

customer_id	order_date	product_id
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

Table 2: menu

The menu table maps the product_id to the actual product_name and price of each menu item.

product_id	product_name	price
1	sushi	10
2	curry	15
3	ramen	12

Table 3: members

The final members table captures the join_date when a customer_id joined the beta version of the Danny's Diner loyalty program.

customer_id	join_date
A	2021-01-07
B	2021-01-09

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

```
SELECT s.customer_id, SUM(m.price) total_amount
```

FROM menu m INNER JOIN sales s

ON s.product_id=m.product_id GROUP BY s.customer_id

	customer_id	total_amount
1	A	76
2	B	74
3	C	36

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

SELECT customer_id, COUNT(DISTINCT order_date) total_visits

FROM sales GROUP BY customer_id

	customer_id	total_visits
1	A	4
2	B	6
3	C	2

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

SELECT s.customer_id,m.product_name FROM (SELECT *, ROW_NUMBER()

OVER (PARTITION BY customer_id ORDER BY order_date)as row FROM sales) as s

INNER JOIN menu m ON m.product_id=s.product_id

WHERE row=1

	customer_id	product_name
1	A	sushi
2	B	curry
3	C	ramen

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

```
SELECT m.product_name,s.total FROM menu m INNER JOIN

(SELECT TOP 1 product_id,COUNT(product_id) total FROM sales

GROUP BY product_id ORDER BY total DESC ) as s

ON s.product_id=m.product_id
```

	product_name	total
1	ramen	8

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

```
SELECT s.customer_id,m.product_name FROM (SELECT customer_id,product_id,
COUNT( product_id) total_purchased,

RANK() OVER(PARTITION BY customer_id ORDER BY COUNT( product_id)) row

FROM sales GROUP BY customer_id,product_id ) as s INNER JOIN

menu m ON m.product_id=s.product_id WHERE row=1
```

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

-- 6. Which item was purchased first by the customer after they became a member?

SELECT a.customer_id,me.product_name FROM (SELECT s.customer_id,product_id,order_date,

RANK() OVER (PARTITION BY s.Customer_id ORDER BY s.Order_date) row

FROM sales s INNER JOIN members m

ON m.customer_id=s.customer_id

AND m.join_date<s.order_date) as a INNER JOIN menu me ON me.product_id=a.product_id WHERE row=1

	customer_id	product_name
1	A	ramen
2	B	sushi

-- 7. Which item was purchased just before the customer became a member?

SELECT a.customer_id,me.product_name FROM (SELECT s.customer_id,product_id,order_date,

RANK() OVER (PARTITION BY s.Customer_id ORDER BY s.order_date) row

FROM sales s INNER JOIN members m

ON m.customer_id=s.customer_id

AND m.join_date>s.order_date) as a INNER JOIN menu me ON me.product_id=a.product_id WHERE row=1

	customer_id	product_name
1	A	sushi
2	A	curry
3	B	curry

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

SELECT s.customer_id, COUNT(s.product_id) count_of_items, SUM(m.price) total_price

FROM menu m INNER JOIN sales s ON s.product_id=m.product_id

INNER JOIN members mb ON mb.customer_id=s.customer_id GROUP BY s.customer_id

	customer_id	count_of_items	total_price
1	A	6	76
2	B	6	74

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

SELECT s.customer_id, SUM(CASE WHEN m.product_name ='sushi' THEN price*20 ELSE price*10

END) points FROM sales s INNER JOIN menu m ON m.product_id=s.product_id

GROUP BY s.customer_id

	customer_id	points
1	A	860
2	B	940
3	C	360

-- 10. 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>=mb.join_date AND

DATEDIFF(day,mb.join_date,s.order_date)<7 THEN m.price*20

WHEN m.product_name='sushi' THEN price*20

ELSE m.price*10 END) as points FROM sales s INNER JOIN menu m ON m.product_id=s.product_id

INNER JOIN members mb ON mb.customer_id=s.customer_id WHERE s.order_date BETWEEN '2021-01-01'

AND '2021-01-31'GROUP BY s.customer_id

	customer_id	points
1	A	1370
2	B	820