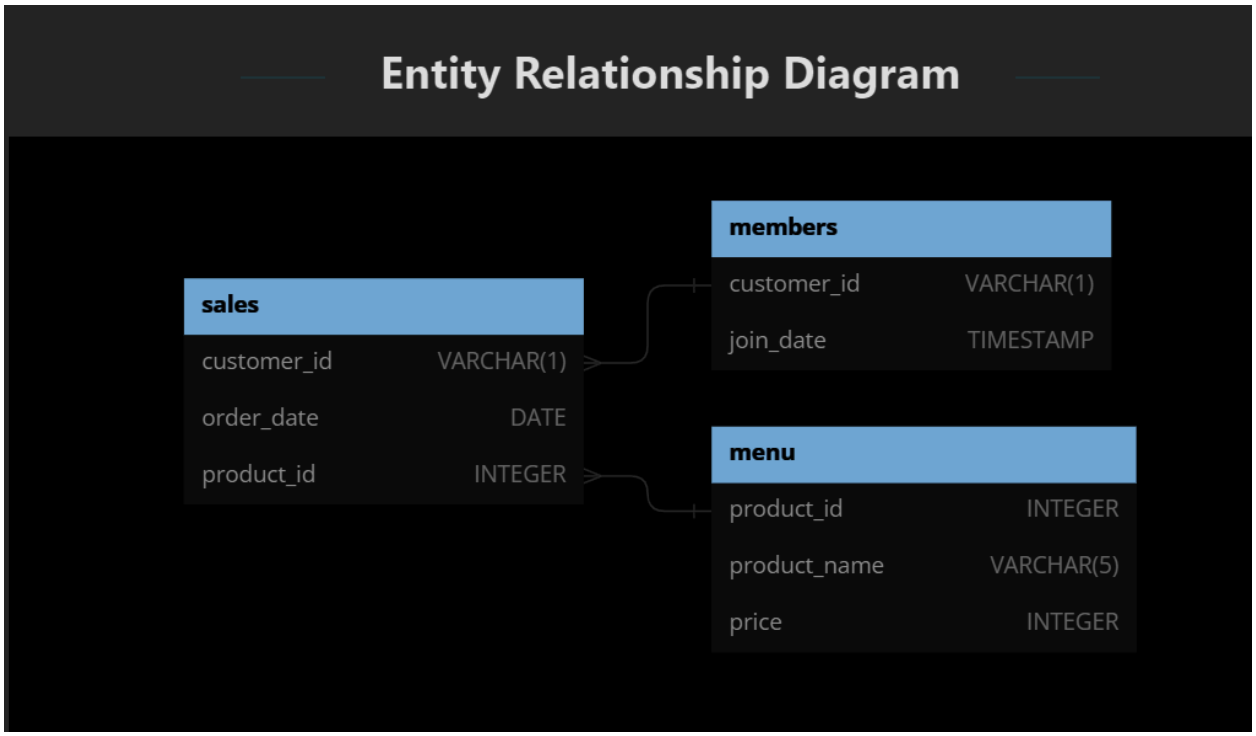
Restaurant Data Analysis

Relationship Diagram



Questions and Answers

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

```
SELECT customer_id , Sum(price)
from sales
LEFT JOIN menu ON sales.product_id = menu.product_id
GROUP BY 1
```

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

```
Select  customer_id  ,  count( distinct order_date) AS total_days_visited
From sales
Group by 1
```

3. How many orders received for each product?

```
SELECT PRODUCT_NAME, COUNT(*) AS TOAL_ORDERS_RECEIVED
FROM SALES
LEFT JOIN MENU ON SALES.PRODUCT_ID = MENU.PRODUCT_ID
GROUP BY 1
```

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

```
SELECT customer_id, product_name
FROM (
    SELECT customer_id , product_name,
    ROW_NUMBER() over(partition BY customer_id ORDER BY order_date ASC ) AS rank
    FROM sales
    LEFT JOIN menu ON sales.product_id = menu.product_id
)
WHERE RANK = 1
```

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

```
SELECT PRODUCT_NAME, COUNT(*) AS TOTAL_ORDERS
FROM sales
LEFT JOIN menu ON sales.product_id = menu.product_id
GROUP BY 1
ORDER BY TOTAL_ORDERS DESC
LIMIT 1
```

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

```
SELECT *
FROM (
  SELECT *, ROW_NUMBER() OVER(PARTITION BY CUSTOMER_ID ORDER BY TOTAL_ORDERS DESC) AS MY_RANK
  FROM (
      SELECT CUSTOMER_ID, PRODUCT_NAME, COUNT(*) AS TOTAL_ORDERS
      FROM sales
      LEFT JOIN menu ON sales.product_id = menu.product_id
      GROUP BY 1, 2
  )
)
WHERE MY_RANK = 1
```

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

```
SELECT CUSTOMER_ID, PRODUCT_NAME
FROM (
    SELECT SALES.CUSTOMER_ID, MENU.PRODUCT_NAME,
    ROW_NUMBER() OVER(PARTITION BY SALES.CUSTOMER_ID ORDER BY ORDER_DATE ASC) AS MY_RANK
    FROM SALES
    LEFT JOIN MEMBERS ON SALES.CUSTOMER_ID = MEMBERS.CUSTOMER_ID
    LEFT JOIN MENU ON MENU.PRODUCT_ID = SALES.PRODUCT_ID
    WHERE ORDER_DATE > JOIN_DATE
)
WHERE MY_RANK = 1
```

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

```
SELECT CUSTOMER_ID, PRODUCT_NAME
FROM (
    SELECT SALES.CUSTOMER_ID, MENU.PRODUCT_NAME,
    ROW_NUMBER() OVER(PARTITION BY SALES.CUSTOMER_ID ORDER BY ORDER_DATE DESC) AS MY_RANK
    FROM SALES
    LEFT JOIN MEMBERS ON SALES.CUSTOMER_ID = MEMBERS.CUSTOMER_ID
    LEFT JOIN MENU ON MENU.PRODUCT_ID = SALES.PRODUCT_ID
    WHERE ORDER_DATE < JOIN_DATE
)
WHERE MY_RANK = 1
```

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

```sql
SELECT SALES.CUSTOMER_ID, COUNT(SALES.CUSTOMER_ID) AS TOTAL_ORDERS, SUM(MENU.PRICE) AS TOTAL_AMOUNT
FROM SALES
LEFT JOIN MEMBERS ON SALES.CUSTOMER_ID = MEMBERS.CUSTOMER_ID
LEFT JOIN MENU ON MENU.PRODUCT_ID = SALES.PRODUCT_ID
WHERE ORDER_DATE < JOIN_DATE
GROUP BY 1
```

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

```sql
SELECT CUSTOMER_ID, SUM(POINTS) AS TOTAL_POINTS
FROM (
  SELECT *,
  (CASE
   WHEN PRODUCT_NAME = "sushi" THEN PRICE * 20
   ELSE PRICE * 10
   END) as POINTS
  FROM SALES
  LEFT JOIN MENU ON SALES.PRODUCT_ID = MENU.PRODUCT_ID

 )
 GROUP BY 1
```