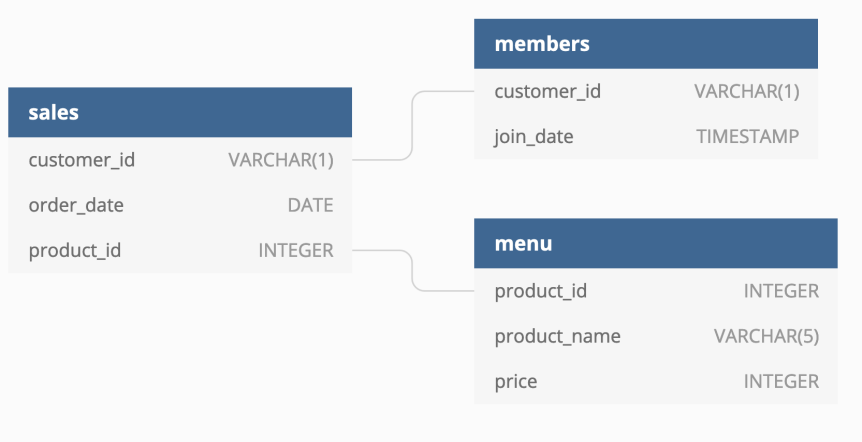
VAN DELI'S ORDER ANALYSIS APP :

PROBLEM STATEMENT

Van deli is a small business that was recently started and is seeking help to design a simple web app where they can view their order related analysis for a few questions they are trying to answer. This would be a big help for them to grow their business and to make it a cleaner process since they have been struggling with too many csv files over the last couple of months. Provided below is the entity relationship diagram for the 3 key datasets for this app. The request is to create these tables, store the provided sample data in a backend database and then query this database to display the analysis results to the UI. (Please note due to privacy concerns, Van deli had to provide only sample data and hope it is sufficient to write the queries)



QUESTIONS FROM VAN DELI

1. What is the most purchased item on the menu and also how many times was it purchased by all customers?
2. Write a query and display data in the required format provided at the end of this file.

REQUIREMENTS

- The web UI can display the above 2 analysis results in a simple format.
- Prepare to explain your design choices and assumptions for the queries.
- 48 hours prior to your interview please share the code with your contact at Intuit. Use github or similar software version control.

TECHNOLOGY

- The client should be a simple html page hosted locally using javascript to render templates and fetch data.
- The server can be a web api of your design implemented in your choice of Java/JEE or Python
- The data should be loaded to a database which will serve as the backend db.

DISCUSSION POINTS DURING THE INTERVIEW

- What assumptions did you make when implementing your solution and what impact did they have on the design?
- How would you go about testing your application especially on the database end?
- Further exploration/analysis questions based on Van Deli data

SAMPLE DATA

a. Sales

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

b. Menu

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

c. Members

customer_id	customer_name	join_date
A	Anne	2021-01-07
B	Bob	2021-01-09

REQUIRED FORMAT FOR 2ND QUESTION

member is a new field to be displayed based on order_date and join_date
ranking is based on order_date
order for rows of same rank can be different from what is given below

customer_id	order_date	product_name	price	member	ranking
A	2021-01-01	curry	15	N	1
A	2021-01-01	sushi	10	N	1
A	2021-01-07	curry	15	Y	2
A	2021-01-10	ramen	12	Y	3
A	2021-01-11	ramen	12	Y	4
A	2021-01-11	ramen	12	Y	4
B	2021-01-01	curry	15	N	1
B	2021-01-02	curry	15	N	2
B	2021-01-04	sushi	10	N	3

B	2021-01-11	sushi	10	Y	4
B	2021-01-16	ramen	12	Y	5
B	2021-02-01	ramen	12	Y	6
C	2021-01-01	ramen	12	N	1
C	2021-01-01	ramen	12	N	1
C	2021-01-07	ramen	12	N	2