1. Tables:

- \*\*Customers:\*\*

- customer\_id (Primary Key)

- first\_name

- last\_name

- phone\_number

- email

- address

- \*\*Tables:\*\*

- table\_id (Primary Key)

- capacity

- status (e.g., available, occupied)

- \*\*Bookings:\*\*

- booking\_id (Primary Key)

- customer\_id (Foreign Key to Customers)

- table\_id (Foreign Key to Tables)

- booking\_date

- start\_time

- end\_time

- \*\*Ingredients:\*\*

- ingredient\_id (Primary Key)

- ingredient\_name

- quantity\_in\_stock

- unit\_of\_measure

- \*\*MenuItems:\*\*

- item\_id (Primary Key)

- item\_name

- description

- price

- preparation\_time

- \*\*Recipes:\*\*

- recipe\_id (Primary Key)

- item\_id (Foreign Key to MenuItems)

- ingredient\_id (Foreign Key to Ingredients)

- quantity

- \*\*Orders:\*\*

- order\_id (Primary Key)

- customer\_id (Foreign Key to Customers)

- table\_id (Foreign Key to Tables)

- order\_date

- status (e.g., pending, in progress, completed)

- \*\*OrderItems:\*\*

- order\_item\_id (Primary Key)

- order\_id (Foreign Key to Orders)

- item\_id (Foreign Key to MenuItems)

- quantity

2. Relationships:

- One-to-Many relationship between Customers and Bookings.

- Many-to-Many relationship between Tables and Bookings.

- Many-to-Many relationship between Ingredients and Recipes.

- Many-to-Many relationship between MenuItems and Ingredients.

- One-to-Many relationship between Orders and OrderItems.

- Many-to-Many relationship between MenuItems and Orders.

3. Additional Considerations:

- Consider adding more attributes or tables based on specific requirements, such as user authentication, employee information, payment details, etc.

- Use appropriate data types for each attribute (e.g., VARCHAR, INT, DATE).

- Implement constraints like foreign keys to maintain data integrity.

This is a basic starting point, and depending on the complexity of your restaurant management system, you may need to expand or customize the schema accordingly.

Ex

Ingredients Table:

+--------------+---------------------+-------------------+

| ingredient\_id | ingredient\_name | quantity\_in\_stock |

+--------------+---------------------+-------------------+

| 1 | Flour | 20 kg |

| 2 | Sugar | 10 kg |

| 3 | Eggs | 30 units |

| 4 | Tomatoes | 15 kg |

| 5 | Chicken | 25 kg |

| 6 | Cheese | 8 kg |

| 7 | Pasta | 12 kg |

| 8 | Beef | 18 kg |

+--------------+---------------------+-------------------+

MenuItems Table:

+---------+----------------+-----------+------------------+

| item\_id | item\_name | category | price |

+---------+----------------+-----------+------------------+

| 101 | Pancakes | Breakfast | $8.99 |

| 102 | Omelette | Breakfast | $9.99 |

| 201 | Margherita Pizza| Pizza | $12.99 |

| 202 | Spaghetti Bolognese | Pasta | $14.99 |

| 203 | Classic Burger | Burger | $10.99 |

| 204 | Caesar Salad | Salad | $8.49 |

+---------+----------------+-----------+------------------+

Recipes Table:

+-----------+---------+--------------+---------+

| recipe\_id | item\_id | ingredient\_id | quantity|

+-----------+---------+--------------+---------+

| 1 | 101 | 1 | 2 kg |

| 2 | 101 | 2 | 500 g |

| 3 | 102 | 3 | 3 units |

| 4 | 201 | 1 | 1.5 kg |

| 5 | 201 | 4 | 1 kg |

| 6 | 201 | 6 | 800 g |

| 7 | 202 | 7 | 500 g |

| 8 | 202 | 8 | 700 g |

| 9 | 203 | 5 | 1.5 kg |

| 10 | 203 | 6 | 200 g |

+-----------+---------+--------------+---------+

Orders Table:

+---------+-------------+---------+-----------+

| order\_id| customer\_id | table\_id| order\_date|

+---------+-------------+---------+-----------+

| 1 | 101 | 1 | 2024-02-05|

| 2 | 102 | 2 | 2024-02-05|

+---------+-------------+---------+-----------+

OrderItems Table:

+--------------+---------+---------+---------+

| order\_item\_id| order\_id| item\_id | quantity|

+--------------+---------+---------+---------+

| 1 | 1 | 201 | 2 |

| 2 | 1 | 203 | 1 |

| 3 | 2 | 102 | 1 |

| 4 | 2 | 204 | 3 |

+--------------+---------+---------+---------+