Database Management Systems
Activity: Relationships and Normalization

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Order Management System

Imagine you are developing a simple Order Management System for "Sweet Crumbs Bakery", a local artisan bakery renowned for its custom cakes and pastries. The bakery has built up a loyal customer base who appreciate not only the unique flavors but also the personalized service they receive.

Scenario Details

1. Every customer who places an order at Sweet Crumbs Bakery is part of the family. The bakery collects basic information from each customer when they sign up for a loyalty program or place their first order.
List the fields (columns) that you wish to collect:

2. When a customer places an order for an item, the system captures the order details.
Note: Each order is linked to the customer who placed it. Since a customer can order multiple times, there is a one-to-many relationship: one customer can have many orders.
List the fields (columns) necessary to place an order:

UML Diagram:

List the potential redundancies and anomalies:

Normalize the table/s and Update the UML Diagram:

.... contd

Introduce Many to Many Relationships and Update the UML Diagram:

.... contd

Create Table Statements with Constraints for the updated UML:

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