Project Part I Changes, Group 2, Query Wizards
Mackenzie Culver, Millie D'Souza, Ethan Flora, Sasha Lipkind, Josh Thorner
El Rincon Cocina Restaurant Database

Changes Description: While completing Project Part II, our group made a few notable changes to our requirements, ER diagram, and mapped relational schema to better reflect how El Rincon Cocina Restaurant can most efficiently reflect its transactions and operations in a Microsoft Access Database. These changes consist of deleting our ORDER entity, deleting and/or altering various attributes of each of our remaining entities, and changing our ER diagram and mapped relational schema to express these changes. Below, we provided you with the original copy of our Project Part as well as a transformed version of Project Part I to express these edits and alterations.

Project Part I - Original

Step 1: Requirements

Five Selected Entities and Their Respective Attributes:

Purpose: Track all transactions completed at the restaurant in order to understand top menu performers, employee involvement, and repeat customers.

- Customer
  - **CustomerLoyaltyNumber (PK)**
  - CustomerEmail
  - CustomerName
    - FirstName
    - LastName
  - **ReservationID (FK)**
- Transaction
  - **TransactionID (PK)**
  - TransactionDuration
  - TransactionTotal
  - **EmployeeID (FK)**
  - **CustomerLoyaltyNumber (FK)**
- Employee
  - **EmployeeID (PK)**
  - EmployeeName
    - FirstName
    - LastName
  - EmployeeType
- Order
  - **OrderID (PK)**
  - OrderDateTime
  - OrderPrice
  - **CustomerLoyaltyName (FK)**
  - **ProductID (FK)**
- Product
  - **ProductID (PK)**
  - ProductName
  - **OrderID (FK)**
- Reservation
  - **ReservationID (PK)**
  - ReservationDateTime
  - ReservationType
  - ReservationSize
  - **CustomerLoyaltyNumber (FK)**

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- *For each **customer**: a customer loyalty number (unique), a customer name, a customer name, consisting of first and last name;*
- *For each **transaction**: a transaction ID (unique), a transaction duration, a transaction total;*
- *For each **employee**: an employee ID (unique), an employee name, consisting of first and last name, an employee type;*
- *For each **order** placed: an order ID (unique), an order date/time, an order price;*
- *For each **product** being sold: a product ID (unique), a product name;*
- *For each **reservation** scheduled: a reservation ID (unique), a reservation date/time, a reservation type, a reservation size;*

Attribute Relationships:

- Reservation → WorksOn → Employee **(M:1)**
- Employee → WorksOn → Reservation **(1:M)**
    - *Each reservation is to be worked on by exactly one employee. Each employee is to work between no and many reservations.*
- Reservation → BelongsTo → Customer **(1:M)**
- Customer → BelongsTo → Reservation **(M:1)**
    - *Each reservation belongs to between one and many customers. Each customer belongs to exactly one reservation.*
- Customer → Has → Transaction **(M:1)**
- Transaction → Has → Customer **(1:M)**
    - *Each customer has exactly one transaction. Each transaction has between one and many customers.*
- Employee → Oversees → Transaction **(1:M)**
- Transaction → Oversees → Employee **(M:1)**
    - *Each employee oversees between no and many transactions. Each transaction is overseen by exactly one employee.*
- Transaction → Contains → Order **(1:1)**
- Order → Contains → Transaction **(1:1)**
    - *Each transaction contains exactly one order. Each order contains exactly one transaction.*
- Order → Includes → Product **(M:N)**
- Product → Includes → Order **(M:N)**
    - *Each order includes between one and many products. Each product includes between no and many orders.*

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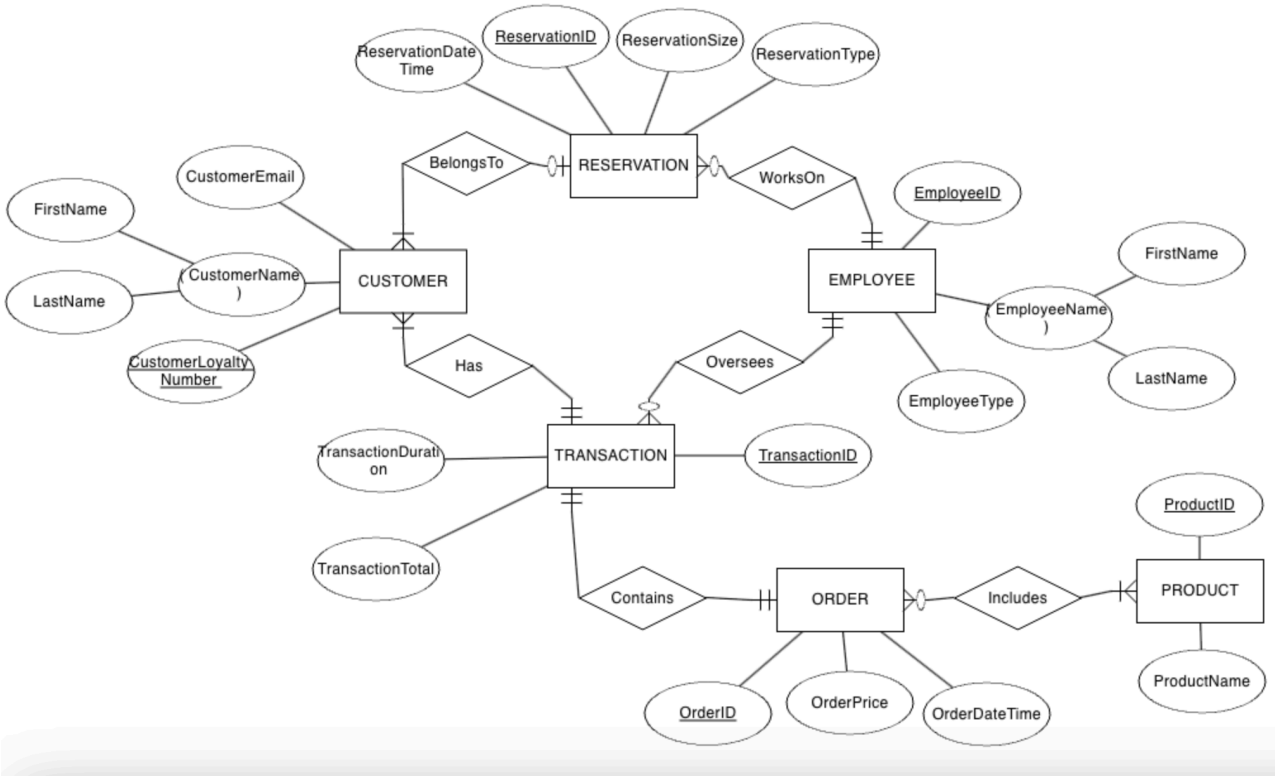
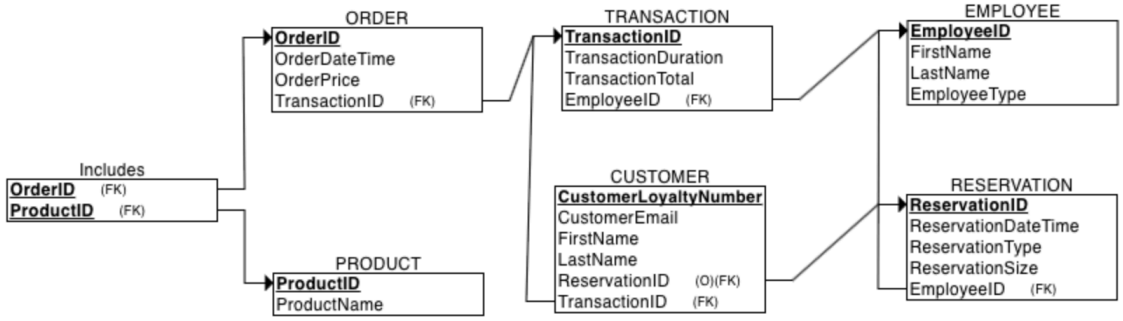
Step 2: ER Diagram



Step 3: Mapped Relational Schema



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Project Part I - Transformed

Step 1: Requirements

Five Selected Entities and Their Respective Attributes:

Purpose: Track all transactions completed at the restaurant in order to understand top menu performers, employee involvement, and repeat customers.

- Customer
  - **CustomerLoyaltyNumber (PK)**
  - CustomerEmail
  - CustomerName
    - FirstName
    - LastName
  - **ReservationID (FK)**
- Transaction
  - **TransactionID (PK)**
  - TransactionType
  - TransactionPrice
  - **EmployeeID (FK)**
  - **CustomerLoyaltyNumber (FK)**
- Employee
  - **EmployeeID (PK)**
  - EmployeeName
    - FirstName
    - LastName
  - EmployeeType
- Product
  - **ProductID (PK)**
  - ProductName
  - **OrderID (FK)**
- Reservation
  - **ReservationID (PK)**
  - ReservationDate
  - ReservationType
  - ReservationSize

- *For each **customer**: a customer loyalty number (unique), a customer email, a customer name, consisting of first and last name;*
- *For each **transaction**: a transaction ID (unique), a transaction type, a transaction price;*
- *For each **employee**: an employee ID (unique), an employee name, consisting of first and last name, an employee type;*
- *For each **order** placed: an order ID (unique), an order date/time, an order price;*
- *For each **reservation** scheduled: a reservation ID (unique), a reservation date, a reservation type, a reservation size;*

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Attribute Relationships:

- Reservation → BelongsTo → Customer **(1:M)**
- Customer → BelongsTo → Reservation **(M:1)**
    - *Each reservation belongs to between one and many customers. Each customer belongs to exactly one reservation.*
- Customer → Has → Transaction **(M:1)**
- Transaction → Has → Customer **(1:M)**
    - *Each customer has exactly one transaction. Each transaction has between one and many customers.*
- Employee → Oversees → Transaction **(1:M)**
- Transaction → Oversees → Employee **(M:1)**
    - *Each employee oversees between no and many transactions. Each transaction is overseen by exactly one employee.*
- Transaction → Includes → Product **(M:N)**
- Product → Includes → Transaction **(M:N)**
    - *Each transaction includes between one and many products. Each product includes between no and many transactions.*

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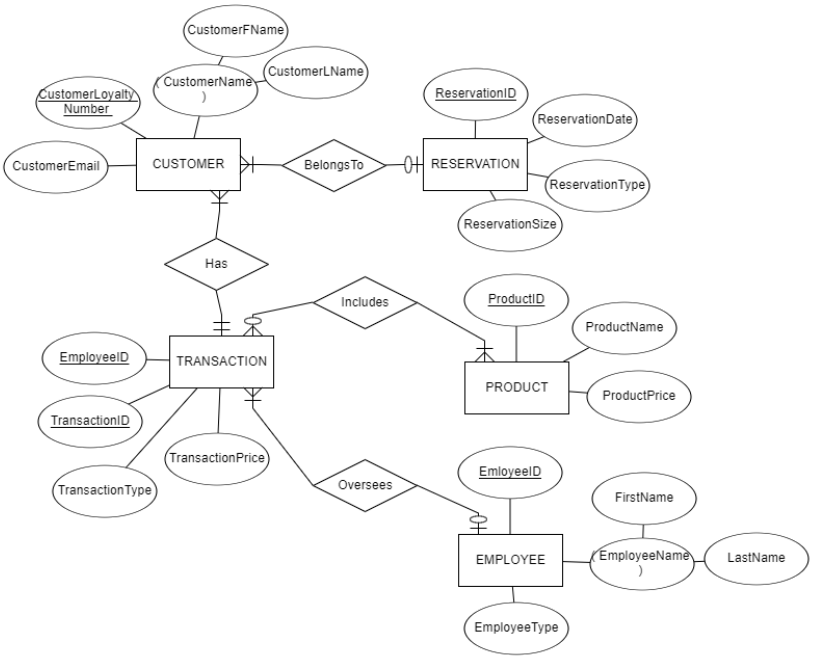
Step 2: ER Diagram



Step 3: Mapped Relational Schema