# GrocerEase
# An Online Grocery E-commerce Platform

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## 1 Entity - Relationship Model

**Entity Relationship models (ER Models)** are used to plan how different entities in a project interact with each other. It provides a layer of logical abstraction while building the database and helps ensure articulate planning before moving on to actually implementing the database management system.

Our **ER Model** captures the idea of a Grocery delivering application, '**GrocerEase**', and has been designed keeping in mind the standard structure of the **ER Model** and captures details like *ternary relationships, cardinality*, and other important minute details.

### 1.1 Ternary Relationships

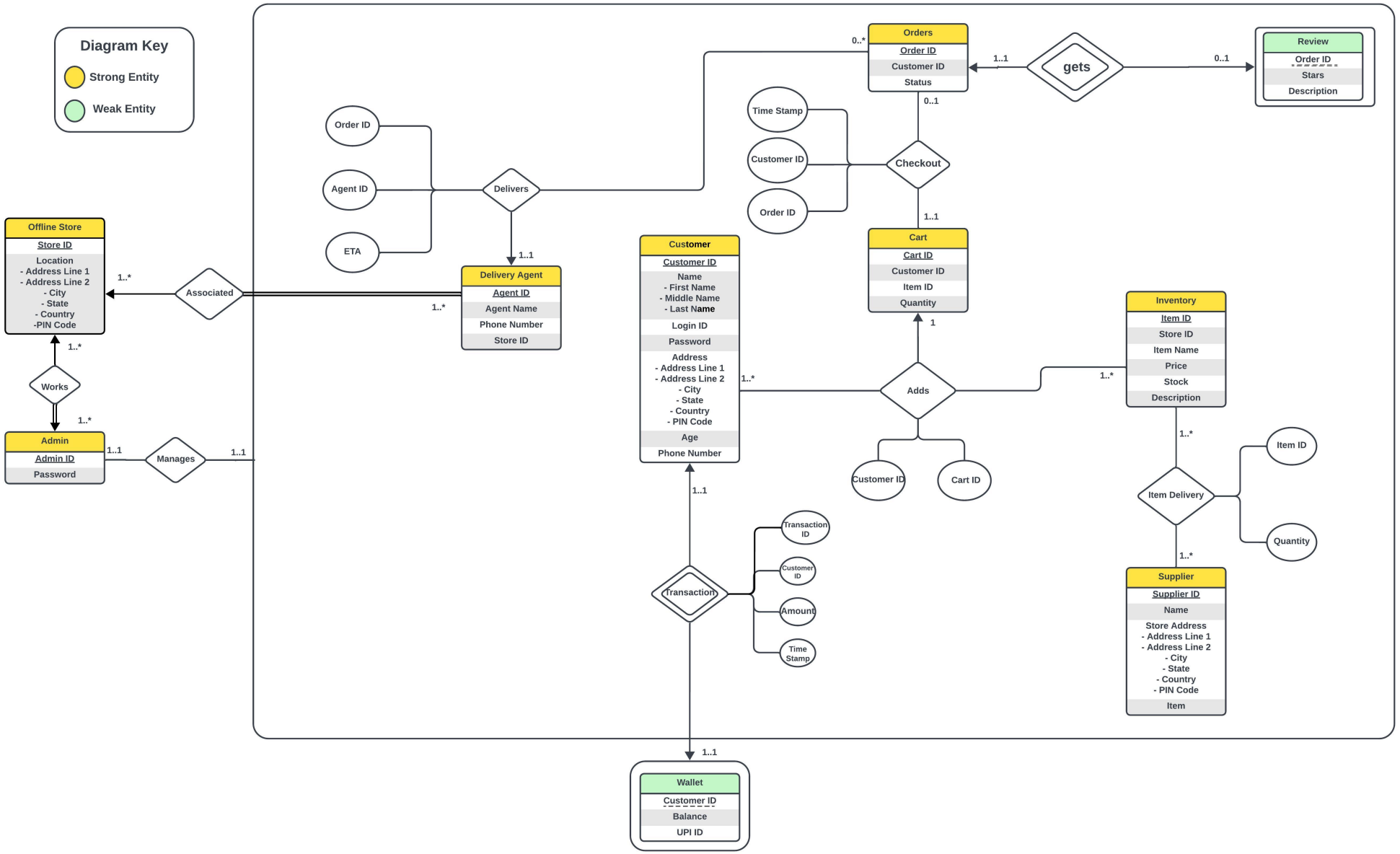
**Customer - Cart - Inventory (Adds)**: A customer can browse through the inventory and add items from the inventory to the cart. This is implemented through a *ternary relationship* "**Adds**" with "**Customer ID**" and "**Cart ID**" as attributes.

- **Customer - Cart (One - One)**: Each customer has one cart, and each cart is associated with one customer.
- **Customer - Inventory (Many - Many)**: Many customers can browse through a list of several products available at the grocery store.
- **Inventory - Cart (Many to Many)**: Many products can be added to different carts if available in the store.

### 1.2 Weak Entities

- **Wallet**: Customers may or may not link a wallet to their account. Hence, the wallet is a *weak entity.*
- **Review**: A customer may or may not add a review for their order. Hence, it is a *weak entity.*

# GrocerEase: Entity-Relationship Model



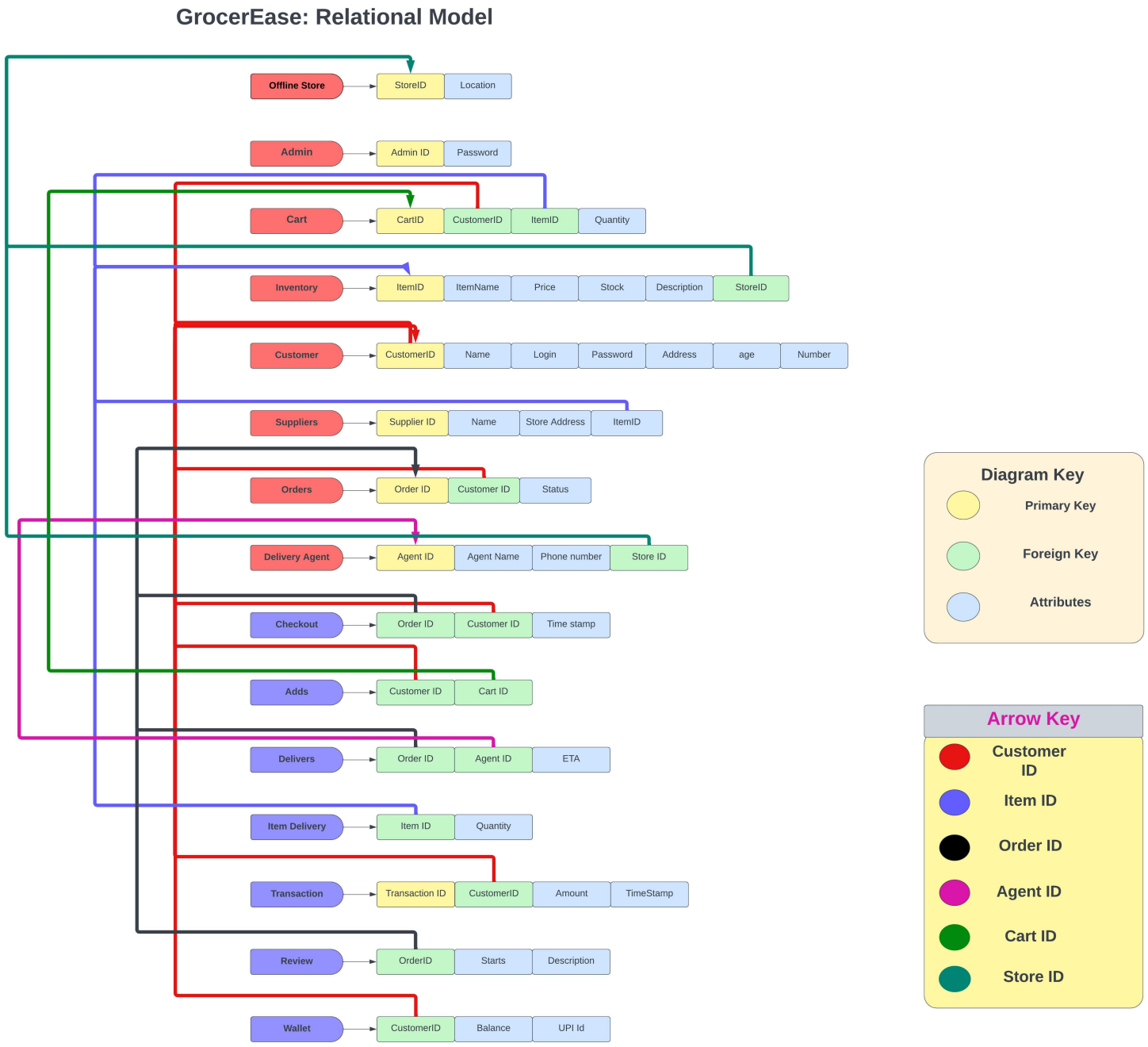



Figure 2: Relational Model

## 2 Relational Model

**Relational models** are used to represent how data will be stored in the database, along with the attributes of each entity and relationship. The **Relational model** is designed in accordance with the standard set of rules.

**NOTE**: The arrow represents that a field is derived from another. For example, *customer ID* in *Orders* is a derived attribute from *customer ID* in *customer*.

# Member Contribution

- **Anushka Srivastava (2022086)**: Ideated and created the Entity-Relationship Diagram.
- **Riya Gupta (2022410)**: Ideated and created the Entity-Relationship Diagram.
- **Sujal Suri (2022514)**: Ideated for Entity-Relationship Diagram, Created the Relational Model.
- **Vimansh Mahajan (2022572)**: Ideated for Entity-Relationship Diagram, Created the document.

*All the group members discussed and came to a unanimous conclusion about the entities being used, their nature, and the relationships between them, their cardinalities etc. Everyone ideated and contributed equally while creating the ER Model and Relational Model*