

Entities and Attributes

Customer Attributes:

- Customer_id(Primary Key)
- Name
- Email
- Password
- Shipping address

Represents people who purchase products from the store. Each customer has a unique ID, and essential contact and login information, as well as a shipping address.

Employee Attributes:

- Employee_id(Primary Key)
- Name
- Email
- Password
- Access level

Represents store employees. The access level creates different roles (manager or regular employee). Combined with the ID and login info, each employee is uniquely identifiable.

Cart Attributes:

- Cart_id(Primary Key)
- Customer_id(Foreign Key)

Each customer can have one active cart. This entity ensures a one-to-one relationship between customers and their carts.

Cart_item Attribute:

- CartItem_id(Primary Key)
- Cart_id (Foreign Key)
- Product_id(Foreign Key)
- Quantity

Represents items added to a cart. Each entry includes the product and how many units the customer wants to purchase. It connects products with carts and allows tracking of the cart content

Product Attributes:

- Product_id(Primary Key)
- Name
- Description
- Category
- Price
- .Stock Quantity

Represents items available for purchase. Each product has essential details such as name, price, and availability.

Order Attributes:

- Order_id(Primary Key)
- Customer_id(Foreign Key)
- Order Date
- Status
- Shipping Address
- Billing Address
- Payment Method

Represents purchases made by the customers. Stores transactional data, payment info, and shipping details.

Order_Item Attributes:

- OrderItem_id(Primary Key)
- Order_id(Foreign Key)
- Product_id(Foreign Key)
- Quantity
- Price at Order Time
- Subtotal

Tracks each product within a specific order, including quantity and pricing at the time of purchase.

Shipment Attributes:

- Shipment_id(Primary Key)
- Order_id(Foreign Key)
- Date shipped
- Tracking Number
- Notes

Manages shipping details related to an order. Includes tracking info and optional notes.

Message Attributes

- Message_id(Primary Key)
- SentBy
- Order_id(Foreign Key)
- SentAt
- Customer_id(Foreign Key)
- MessageText
- Employee_id(Foreign Key)

To manage communication between the employee and the customer related to their order or orders

Entity Relationship

Relationship	From Entity	To Entity	Cardinality	Description
has	Customer	Cart	1:1	Each customer has one cart
contains	Cart	CartItem	1:M	A cart can contain multiple items
places	Customer	Order	1:M	A customer can place multiple orders
contains	Order	OrderItem	1:M	An order contains one or more items
refers to	OrderItem	Product	M:1	Each ordered item corresponds to one product
refers to	CartItem	Product	M:1	Each cart item references one product
manages	Employee	Product	1:M	An employee manages multiple products
processes	Employee	Order	1:M	An employee processes multiple orders
has	Order	Shipment	1:1	Each order has one shipment
sends	Employee	Message	1:M	An employee can send many messages
has	Order	Message	1:M	An order can have multiple related messages
exchange	Customer	Message	1:M	A customer can be a part of multiple message exchanges with an employee

