

Mapping

1. Customer => Table

```
Customer(  
    customer_id (PK),  
    f_name,  
    l_name,  
    email,  
    password,  
    address  
)
```

2. Customer_phone => Table

```
Customer_phone(  
    phone_id (PK),  
    customer_id (FK),  
    phone_num  
)
```

3. Cart => Table

```
Cart(  
    cart_id (PK),  
    customer_id (FK),  
    quantity,
```

created_at

)

4. Cart_item => Table

Cart item(

cart_item_id (PK),

cart_id (FK),

product_id (FK),

quantity

)

5. Products => Table

Products(

product_id (PK),

name,

sku,

stock,

cost,

retail_price

)

6. Order Item => Table

Order item(

```
order_item_id (PK),  
order_id (FK),  
product_id (FK),  
quantity,  
price  
)
```

7. Order => Table

```
Order(  
order_id (PK),  
customer_id (FK),  
created_at,  
total_price,  
status  
)
```

8. Payment => Table

```
Payment(  
payment_id (PK),  
customer_id (FK),  
amount,  
method,
```

date

)

Relational Schema

Customer(customer_id PK, f_name, l_name, email, password, address)

Customer_phone(phone_id PK, customer_id FK, phone_num)

Cart(cart_id PK, customer_id FK, quantity, created_at)

Cart item(cart_item_id PK, cart_id FK, product_id FK, quantity)

Products(product_id (PK), name, sku, stock, cost, retail_price)

Order item(order_item_id (PK), order_id (FK), product_id (FK), quantity, price)

Order(order_id (PK), customer_id (FK), created_at, total_price, status)

Payment(payment_id (PK), customer_id (FK), amount, method, date)

Data Dictionary

Table	Column	Data type	Description	Constraints
Customers	customer_id	int	The client number	PK, AUTO INCREMENT
Customers	f_name	varchar(50)	Client First name	NOT NULL
Customers	l_name	varchar(50)	Client Last name	NOT NULL
Customers	email	varchar(50)	Client email for login	UNIQUE, NOT NULL
Customers	password	varchar(100)	Client email password	NOT NULL
Customers	address	Varchar(100)	Client address	NOT NULL
Customer Phones	phone_id	INT	Phone Id	PK, AUTO INCREMENT
Customer Phones	customer_id	INT	The client whos has the phone number	FK, CASCADE
Customer Phones	Phone_num	Varchar(20)	The client phone number	NOT NULL
Cart	cart_id	INT	Cart number	PK, AUTO INCREMENT
Cart	customer_id	INT	The client who owns the cart	FK, CASCADE
Cart	quantity	INT	Number of carts which client owns	Default 0
Cart	created_at	DATETIME	The date of cart creation	NOT NULL
Cart item	cart_item_id	INT	The cart item id	PK, AUTO INCREMENT
Cart item	cart_id	INT	The cart which contains the card item	FK, CASCADE
Cart item	product_id	INT	The product which include the cart item	FK
Cart item	quantity	INT	The quantity of the card item	NOT NULL
Products	product_id	INT	The product id	PK, AUTO INCREMENT
Products	name	VARCHAR(100)	Product name	NOT NULL
Products	sku	VARCHAR(50)	Stock keeping Unit	UNIQUE
Products	stock	INT	The quantity currently available in inventory	DEFAULT 0

Products	cost	DECIMAL	The cost to acquire the products (purchase price)	NOT NULL
Products	retail_price	DECIMAL	The selling price for customers	NOT NULL
Order item	order_item_id	INT	Unique identifier for the order line item.	PK, AUTO INCREMENT
Order item	order_id	INT	Links to the parent Order	FK, CASCADE
Order item	product_id	INT	Links to the parent product	FK
Order item	quantity	INT	Quantity purchased of this product.	NOT NULL
Order item	price	DECIMAL	Snapshot of the product price at the time of purchase.	NOT NULL
Order	order_id	INT	Unique identifier for the order.	PK, AUTO INCREMENT
Order	customer_id	INT	The customer who placed the order.	FK
Order	created_at	DATETIME	The date & time when the order was placed.	NOT NULL
Order	total_price	DECIMAL	Total monetary value of the order.	NOT NULL
Order	status	VARCHAR(20)	Current status (e.g., Pending, Shipped, Delivered).	NOT NULL
Payment	payment_id	INT	Unique identifier for the payment transaction.	PK, AUTO INCREMENT
Payment	customer_id	INT	The customer who made the payment.	FK
Payment	amount	INT	The amount paid.	Not Null
Payment	method	VARCHAR(50)	Payment method (e.g., Credit Card, PayPal, Cash).	Not Null
Payment	date	DATETIME	The date & time of the payment transaction.	Not Null