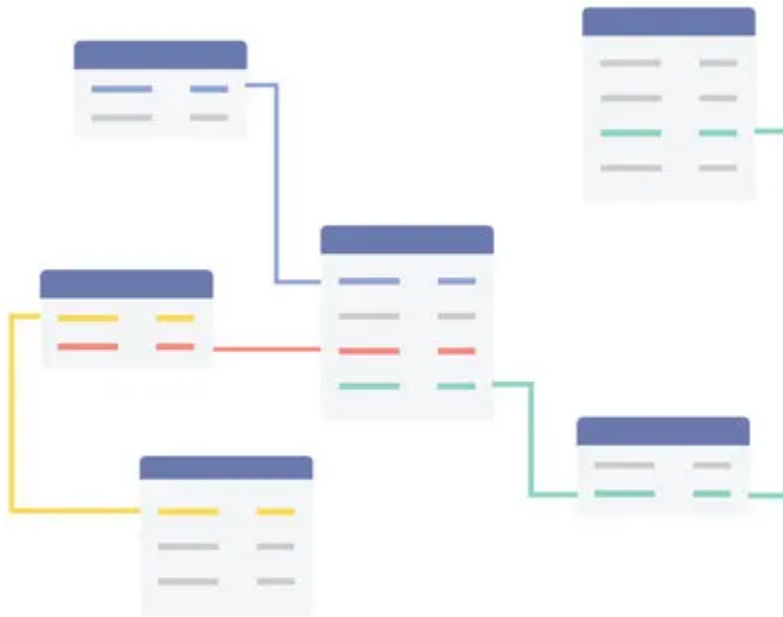


# CSE311.10 PROJECT REPORT

*A web-based Organic Farm Products Sales Management System for an SME  
that produces or sources their items locally*



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Submitted to:

RIS

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# 1. Introduction

## 1.1 Project Overview

A web-based Organic Farm Products Sales Management System for an SME that produces or sources their items locally, featuring customer browsing/ordering and manager inventory/order management interfaces.

## 1.2 Technologies Used

- **Frontend:** HTML5, CSS3, JavaScript ES6
- **Backend:** PHP 8+
- **Database:** MySQL
- **Environment:** XAMPP

# 2. System Design

## 2.1 Architecture Overview

Three-tier architecture:

Presentation Layer (HTML/CSS/JS) → Application Layer (PHP) → Data Layer (MySQL)

## 2.2 Database Design

Entity Relationship Diagram

Products (1) ↔ (Many) Order\_Items (Many) ↔ (1) Orders

Table Structures

Products Table:

```
CREATE TABLE products (  
  product_id INT AUTO_INCREMENT PRIMARY KEY,  
  name VARCHAR(50) NOT NULL,  
  category VARCHAR(30) NOT NULL,  
  price_per_unit INT NOT NULL,  
  stock_quantity INT NOT NULL  
);
```

Orders Table:

```
CREATE TABLE orders (  
  order_id INT AUTO_INCREMENT PRIMARY KEY,  
  customer_name VARCHAR(50) NOT NULL,  
  customer_phone VARCHAR(20),  
  customer_address TEXT,  
  customer_email VARCHAR(50),  
  total_amount INT NOT NULL,  
  status VARCHAR(20) DEFAULT 'Pending',  
  order_date TIMESTAMP DEFAULT CURRENT_TIMESTAMP  
);
```

Order Items Table:

```
CREATE TABLE order_items (  
  item_id INT AUTO_INCREMENT PRIMARY KEY,  
  order_id INT,  
  product_id INT,  
  quantity INT NOT NULL,  
  price INT NOT NULL,  
  FOREIGN KEY (order_id) REFERENCES orders(order_id) ON DELETE CASCADE,  
  FOREIGN KEY (product_id) REFERENCES products(product_id) ON DELETE CASCADE  
);
```

## 2.3 Data Flow

Frontend ↔ AJAX ↔ PHP Backend ↔ MySQL Database

# 3. Implementation Details

## 3.1 Key Features

- **Customer Module:** Product browsing, cart management, order placement
- **Manager Module:** Product CRUD operations, order status management
- **Visual Design:** Emoji-based product identification, glassmorphism UI

## 3.2 Technical Implementation

Frontend Components

- Tab-based navigation between customer/manager views
- Responsive product grid with category organization

- Shopping cart with real-time total calculation
- Custom notification system

## Backend Architecture

Single db.php file handling all operations:

- Action routing via URL parameters
- Prepared statements for security
- JSON responses for frontend communication
- Transaction-safe order processing

## Core Functions

1. get\_products: Category-sorted product retrieval
2. place\_order: Multi-table transaction with stock updates
3. update\_product: Product information modification
4. delete\_product: Dependency-checked removal

# 4. Technical Challenges & Solutions

## 4.1 Product Visualization

**Challenge:** No image management system

**Solution:** Category-based emoji mapping ( 🥛 Dairy, 🥚 Eggs, etc.)

## 4.2 Data Integrity

**Challenge:** Preventing overselling and orphaned records

**Solution:** Real-time stock validation and foreign key constraints

# 5. Testing & Results

## 5.1 Testing Approach

Manual functional testing of all CRUD operations and user workflows

## 5.2 Key Test Cases

- Product browsing and cart operations
- Order placement with validation
- Manager product management
- Order status updates

### 5.3 Results

- Successful implementation of all core features
- Responsive interface across device sizes
- Consistent performance under normal usage

## 6. Conclusion

### 6.1 Achievements

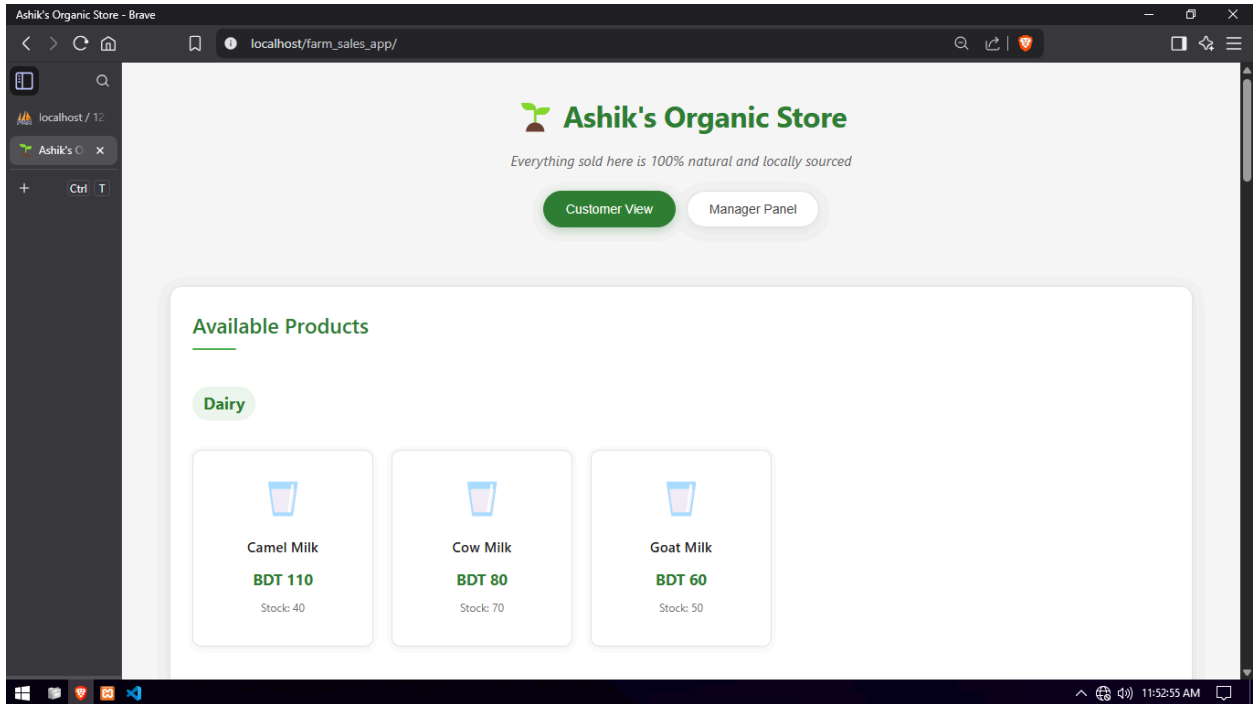
- Complete CRUD web application using core technologies
- Modern UI with glassmorphism design
- Efficient database relationships and transactions

### 6.2 Limitations

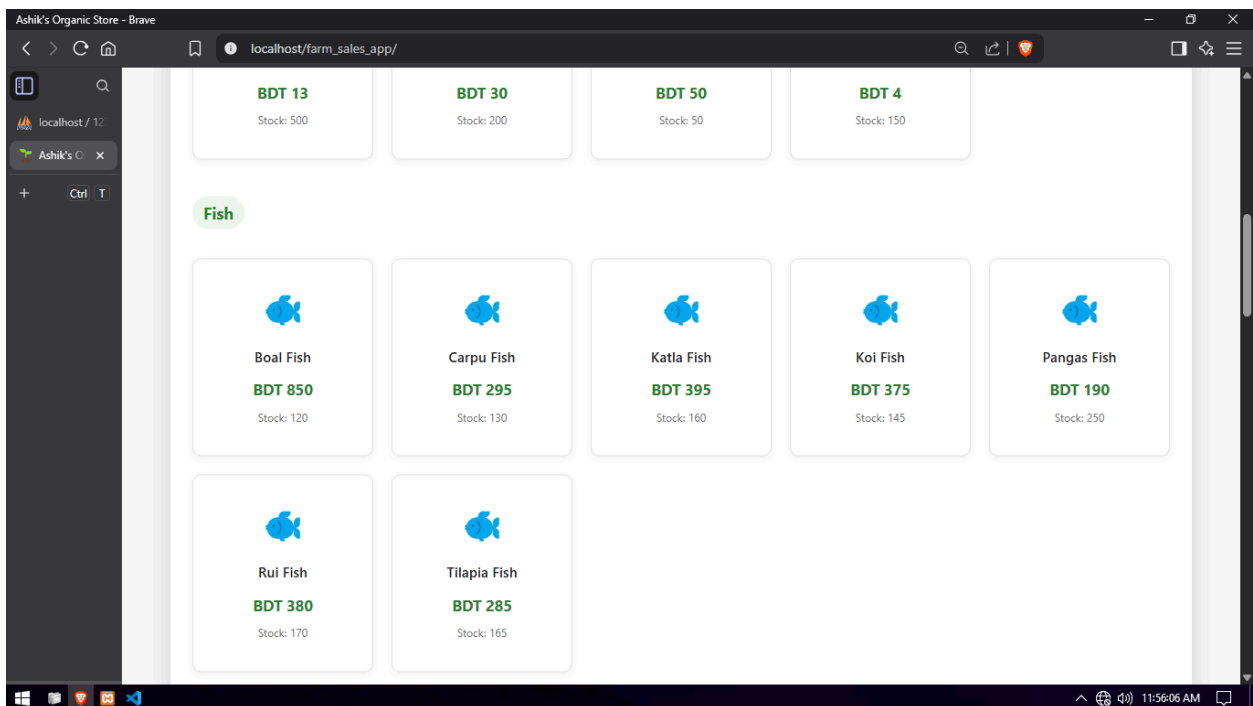
- Single-user system (no authentication)
- No advanced reporting features
- Limited to core functionality

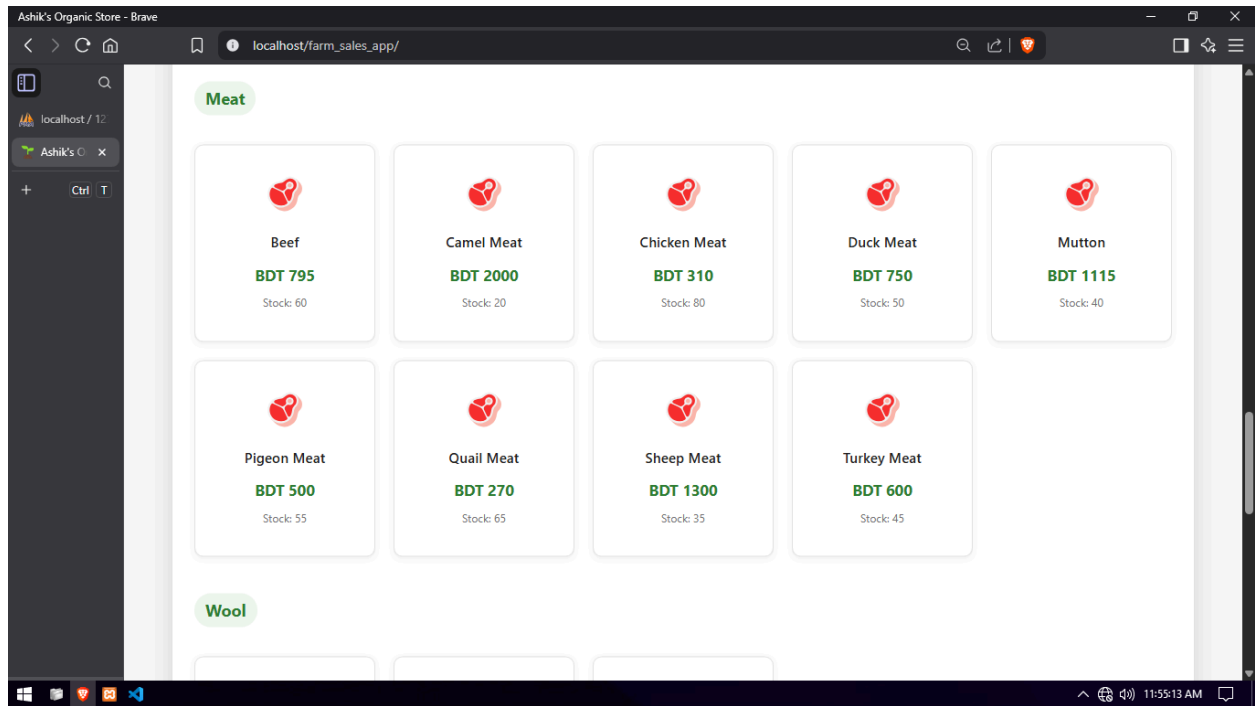
# Screenshots

Customer View, the default view when the page is loaded:



Different Products to choose from:





Order placement section:

The screenshot shows the 'Place Your Order' section of the Ashik's Organic Store. The form is titled 'Place Your Order' in a green tab. It includes the following fields and sections:

- Full Name:** A text input field with the placeholder 'Enter your name'.
- Phone Number:** A text input field with the placeholder '01XXXXXXXXXX'.
- Email (Optional):** A text input field with the placeholder 'your@email.com'.
- Delivery Address:** A text input field with the placeholder 'Enter your full address'.
- Selected Items:** A section showing 'No items selected yet'.
- Total:** A summary line showing 'Total: BDT 0'.
- Place Order:** A green button to submit the order.

Orders being placed:

Ashik's Organic Store - Brave  
localhost/farm\_sales\_app/

Full Name  
Karim Miah

Phone Number  
01745678910

Email (Optional)  
karim-miah@chiti.com

Delivery Address  
xy/z, B-Block, Bashundhara, Dhaka.

Selected Items

Rui Fish × 3	BDT 1140
Beef × 4	BDT 3180

Total: **BDT 4320**

Place Order

The manager's panel allows the manager to add new items:

Ashik's Organic Store - Brave  
localhost/farm\_sales\_app/

Ashik's Organic Store  
Everything sold here is 100% natural and locally sourced

Customer View Manager Panel

Add New Product

Product Name  
e.g., Cow Milk

Category  
Select Category

Price per Unit (BDT)  
0

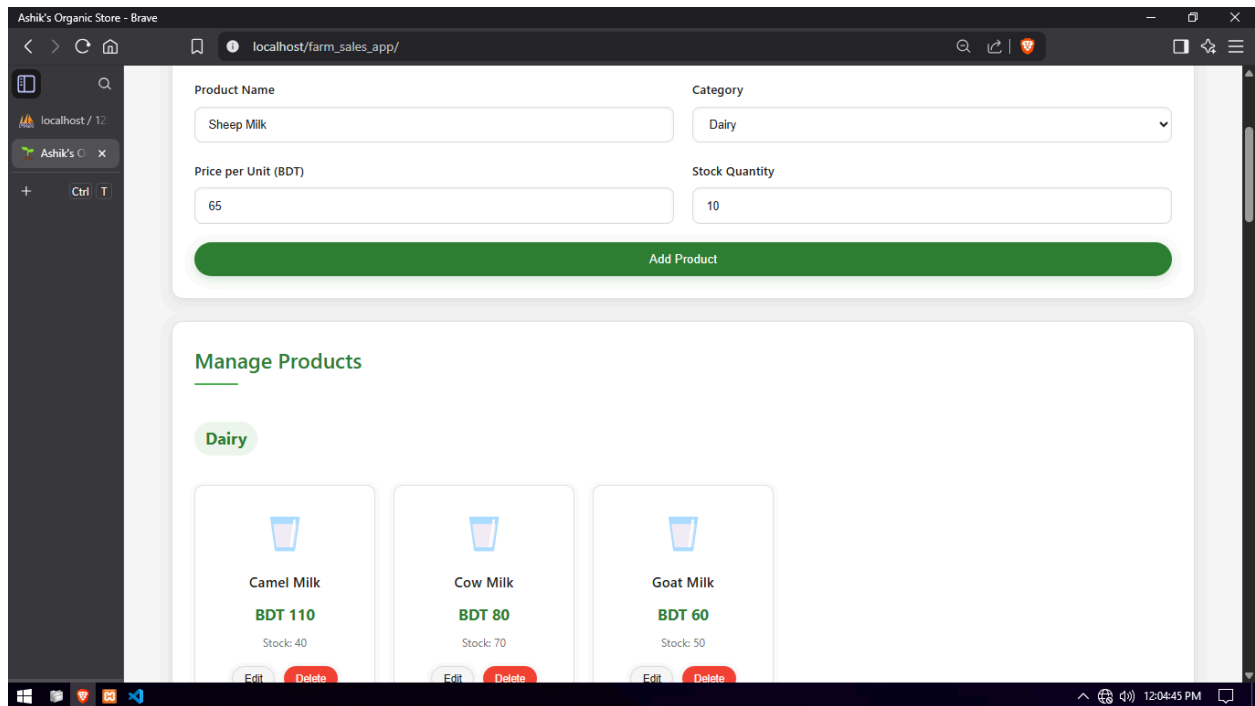
Stock Quantity  
0

Add Product

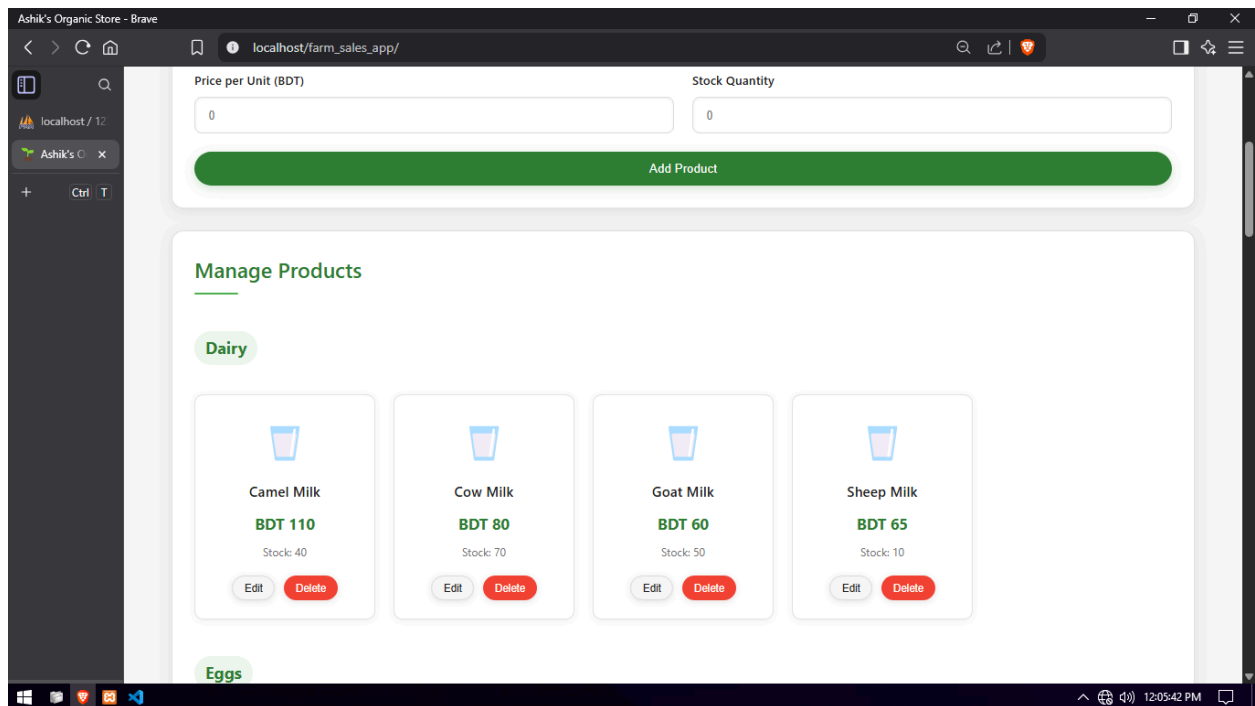
Manage Products



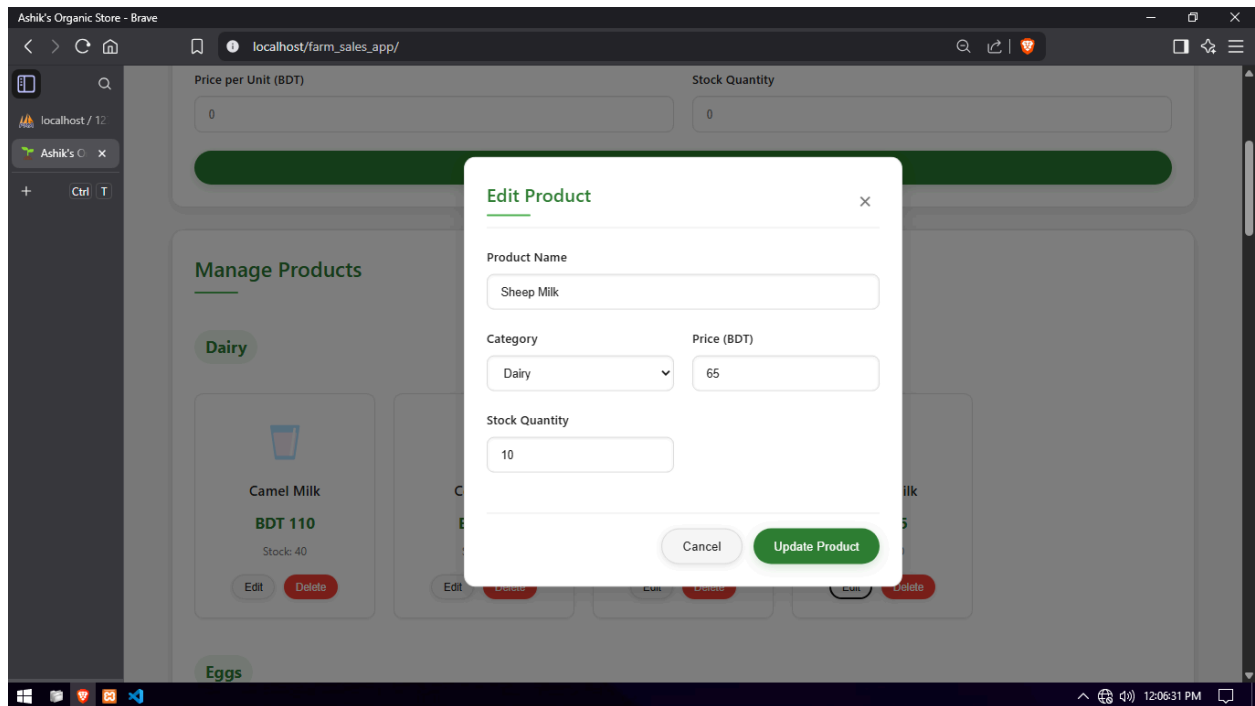
New product being added:



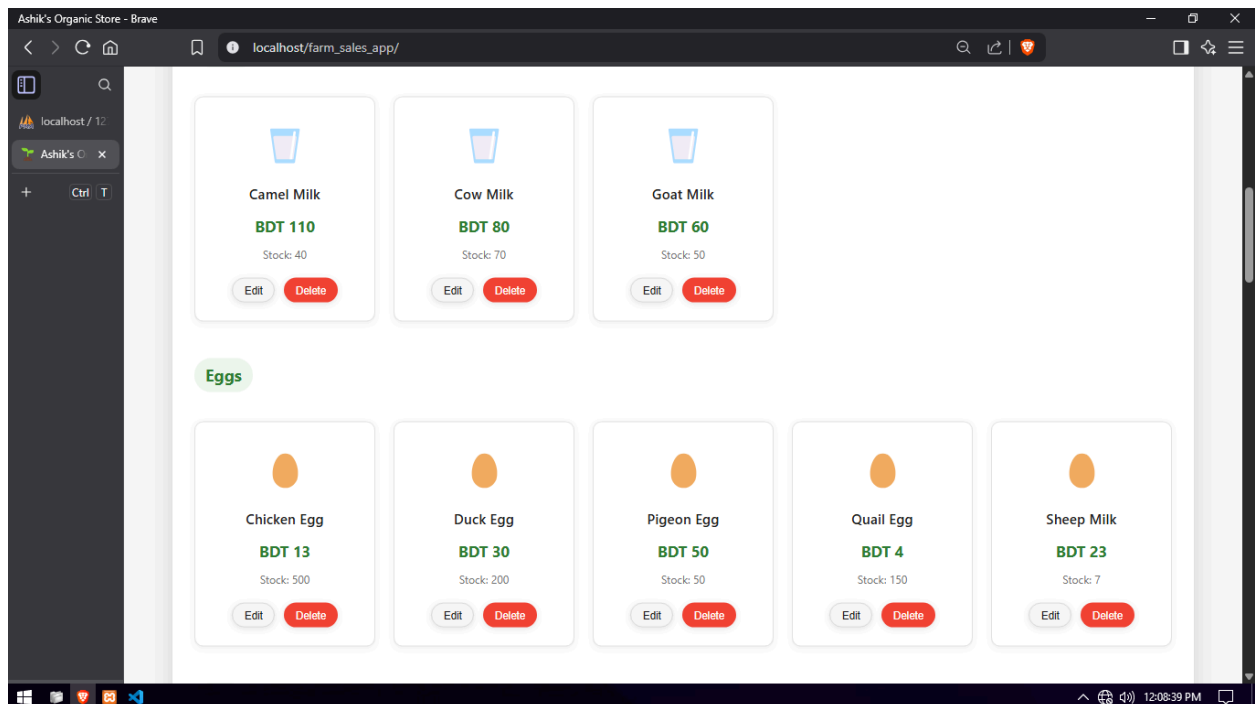
Added:



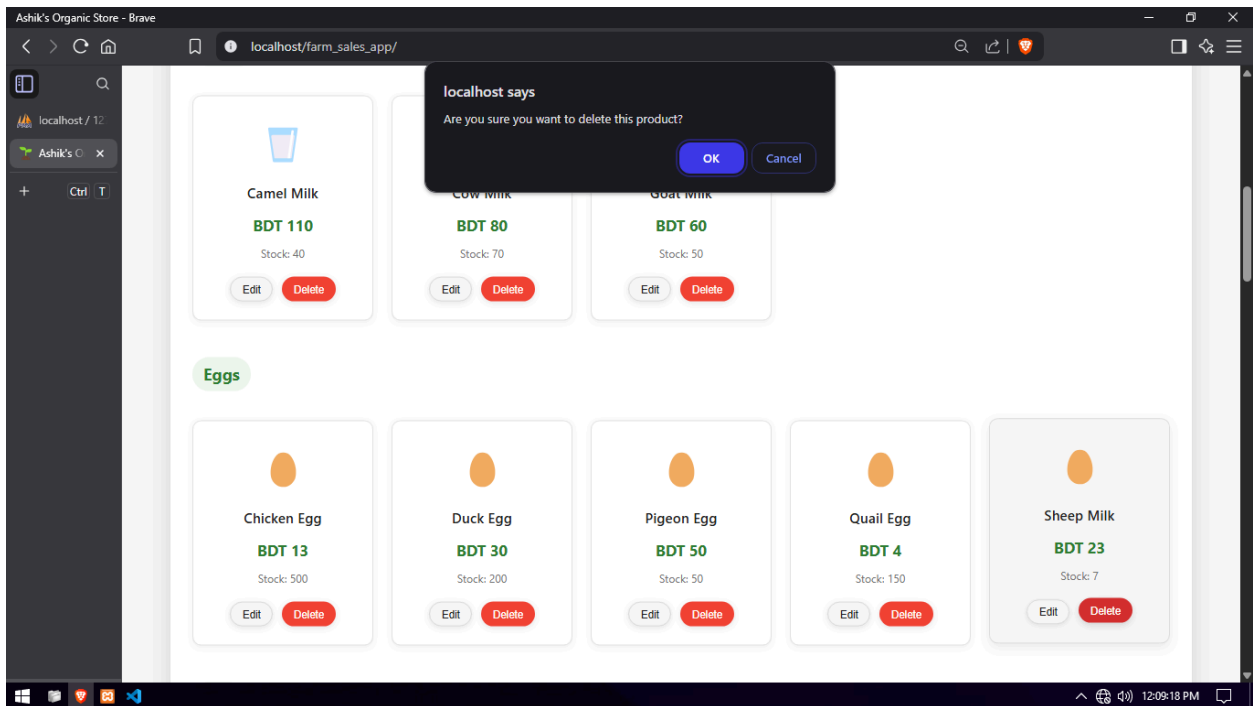
Product modifying feature:



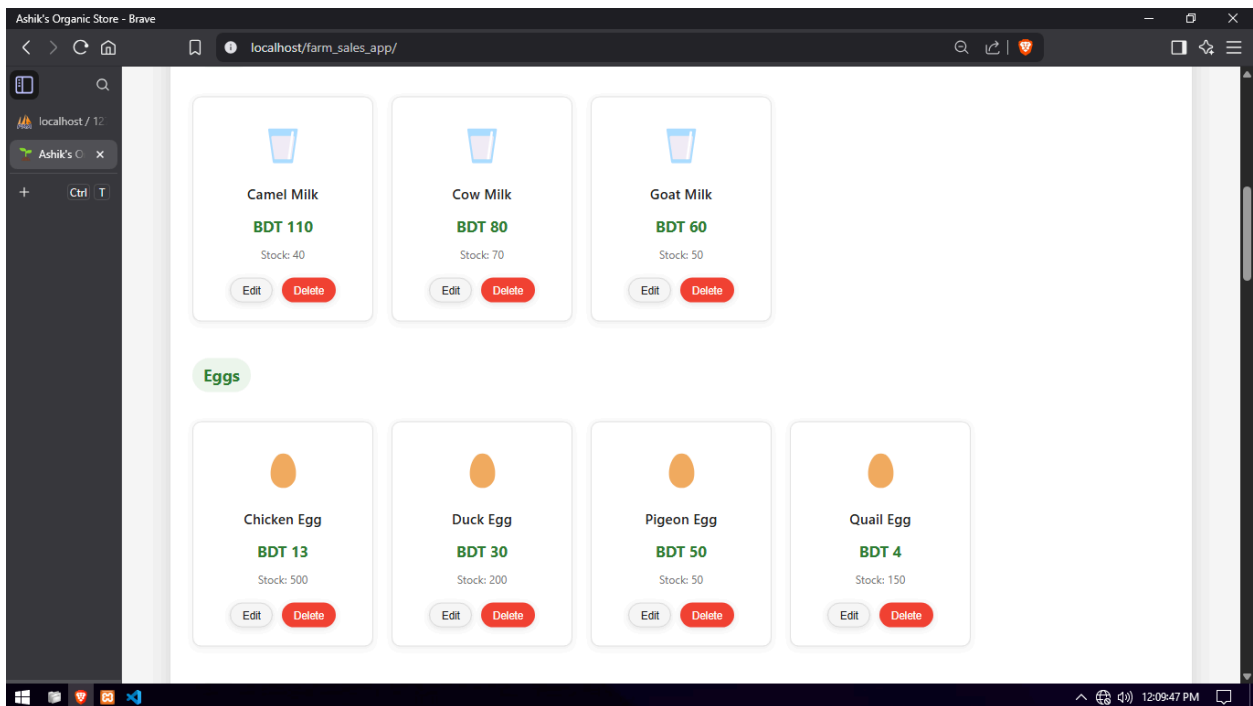
Modified:



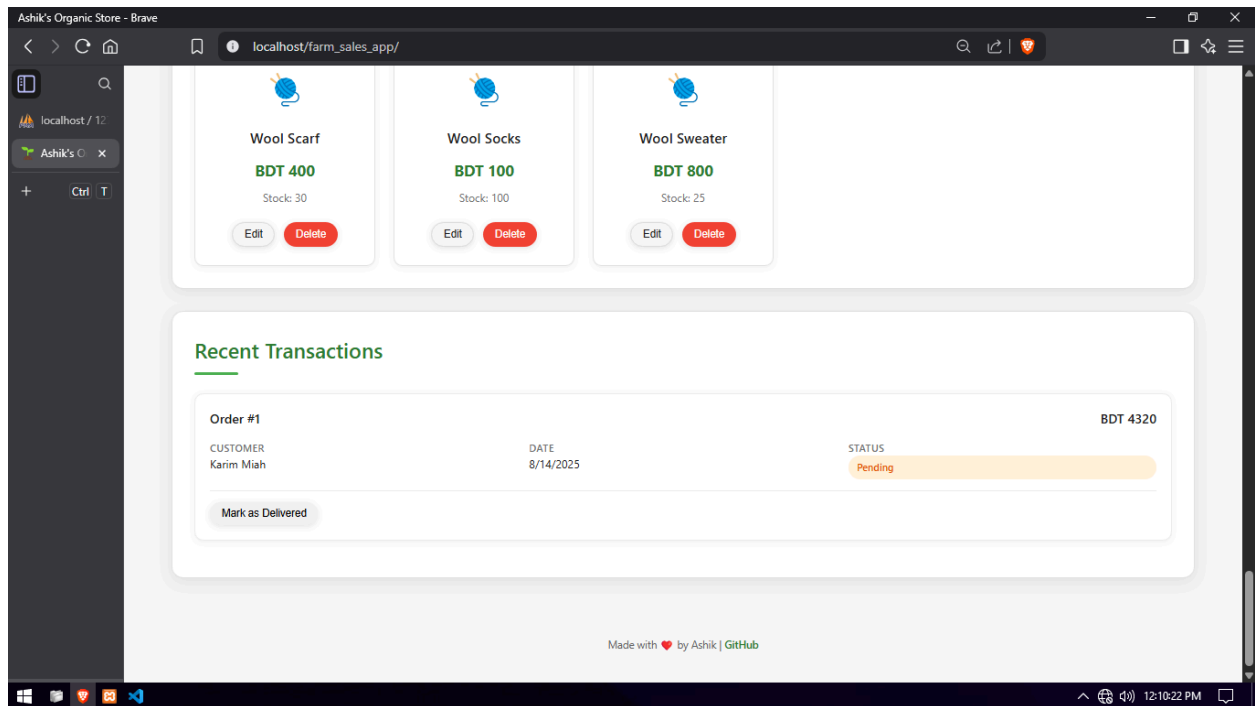
Deleting a product:



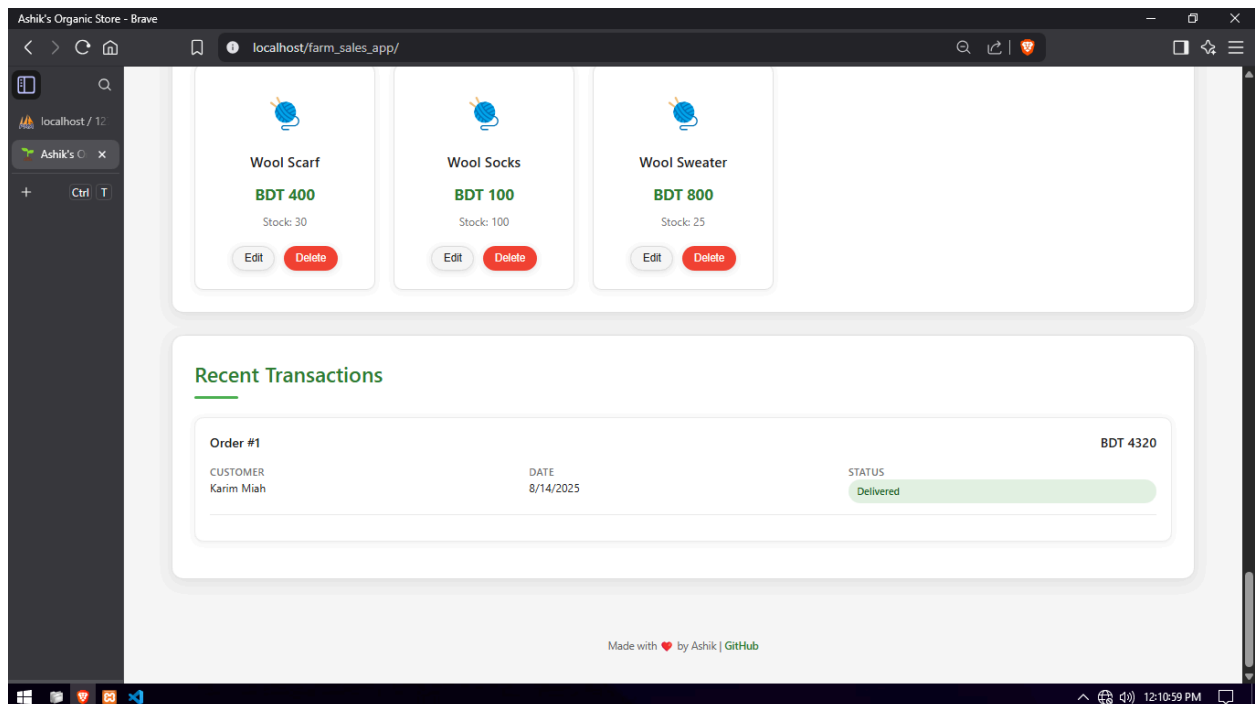
Deleted:



Delivery tracking segment:



Order delivered:



# What the database looks like;

## Orders table:

The screenshot shows the phpMyAdmin interface for the 'organic\_farm' database. The 'orders' table is selected, and its structure is displayed. The table has the following columns: order\_id, customer\_name, customer\_phone, customer\_address, customer\_email, total\_amount, status, and order\_date. The table is currently empty, showing 0 rows.

order_id	customer_name	customer_phone	customer_address	customer_email	total_amount	status	order_date
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## Order\_items table:

The screenshot shows the phpMyAdmin interface for the 'organic\_farm' database. The 'order\_items' table is selected, and its structure is displayed. The table has the following columns: item\_id, order\_id, product\_id, quantity, and price. The table contains 2 rows of data.

item_id	order_id	product_id	quantity	price
1	1	8	3	380
2	1	15	4	795

## Products table:

localhost / 127.0.0.1 / organic\_farm / order\_items | phpMyAdmin 5.2.1 - Brave

localhost/phpmyadmin/index.php?route=/sql&pos=0&db=organic\_farm&table=order\_items

Showing rows 0 - 1 (2 total, Query took 0.0003 seconds.)

```
SELECT * FROM `order_items`
```

☐ Profiling [\[ Edit inline \]](#) [\[ Edit \]](#) [\[ Explain SQL \]](#) [\[ Create PHP code \]](#) [\[ Refresh \]](#)

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

Extra options

	item_id	order_id	product_id	quantity	price
<input type="checkbox"/> <a href="#">Edit</a> <a href="#">Copy</a> <a href="#">Delete</a>	1	1	8	3	380
<input type="checkbox"/> <a href="#">Edit</a> <a href="#">Copy</a> <a href="#">Delete</a>	2	1	15	4	795

☐ Check all | With selected: [Edit](#) [Copy](#) [Delete](#) [Export](#)

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

Query results operations

[Print](#) [Copy to clipboard](#) [Export](#) [Display chart](#) [Create view](#)

[Bookmark this SQL query](#)

Label:  ☐ Let every user access this bookmark

[Bookmark this SQL query](#)

Console

12:13:56 PM