

A

Micro Project report on

**“E-Farming Portal”**

Submitted to the CMR Institute of Technology in partial fulfillment of the requirement for the  
award of the Laboratory of

**NODE JS/ANGULAR/REACT JS/DJANGO LAB**

Of

II B.Tech II Semester

In

Computer Science and Engineering(AI&ML)

Submitted by

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**CMR INSTITUTE OF TECHNOLOGY**

**(UGC AUTONOMOUS)**

(Approved by AICTE, Affiliated to JNTU, Kukatpally, Hyderabad)

Kandlakoya, Medchal Road, Hyderabad

2024-2025

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### **CERTIFICATE**

This is to certify that a Micro Project entitled with "E-Farming Portal" is being  
Submitted By

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In partial fulfillment of the requirement for award of the Nodejs/Angular/React Js/Django Laboratory of II B. Tech II Semester in CSE(AI&ML) to the CMRIT, Hyderabad is a record of a bonafide work carried out under our guidance and supervision.

Signature of the faculty

Ms. K.Rampriya  
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We express our thanks to all staff members and friends for all the help and coordination extended in bringing out this Project successfully in time.

Finally, we are very much thankful to our parents and relatives who guided directly or indirectly for successful completion of the project.

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## **ABSTRACT**

The e-farming portal is a comprehensive online platform designed to revolutionize the agricultural industry by connecting farmers directly with buyers in a streamlined and efficient manner. Through intuitive user registration and profile creation, farmers can showcase their products and services, while buyers can easily browse and purchase fresh produce and agricultural goods. The portal features a dynamic marketplace with robust search and filtering options, enabling buyers to find specific products tailored to their needs. Real-time communication tools facilitate seamless interaction between farmers and buyers, fostering transparency and trust in transactions. Secure payment integration ensures smooth and secure transactions, while educational resources empower farmers with knowledge on modern farming techniques and market trends. Weather forecast integration provides farmers with crucial insights for crop management and planning. A feedback and rating system promotes accountability and quality assurance within the community. With mobile compatibility and an analytics dashboard providing actionable insights, the e-farming portal serves as a catalyst for sustainable agriculture and economic empowerment in rural communities.

## **INTRODUCTION**

In the contemporary landscape of agriculture, the integration of technology has become imperative for modernizing farming practices and enhancing market accessibility. The advent of e-farming portals represents a paradigm shift, bridging the gap between farmers and buyers by leveraging digital platforms. This introduction outlines the conceptualization and development of an e-farming portal, aimed at revolutionizing the agricultural sector by facilitating direct and efficient interactions between producers and consumers. By harnessing the power of online connectivity, this platform endeavours to empower farmers with unprecedented market reach while offering buyers convenient access to a diverse range of fresh produce and agricultural products. Through intuitive user interfaces, real-time communication channels, and robust security measures, the e-farming portal seeks to redefine traditional supply chains, promoting transparency, sustainability, and economic inclusivity. As we delve into the intricacies of this transformative endeavour, we explore its potential to reshape agricultural dynamics, foster community resilience, and pave the way for a more resilient and equitable future in farming.

## **ARCHITECTURE DESIGN**

Designing the algorithm for your e-farming portal involves outlining the steps and processes involved in various functionalities. Here's an overview of the algorithm:

### **1. User Registration and Authentication:**

- Collect user information (name, email, password, etc.).
- Verify user email and activate account.
- Implement authentication mechanism (e.g., username/password, OTP, social login).

### **2. Profile Creation and Management:**

- Allow users to create and manage their profiles.
- Collect additional information such as farm location, crops grown, and products offered.

### **3. Product Listing and Management:**

- Farmers can list their products for sale.
- Include fields for product name, description, quantity, price, and images.
- Implement CRUD operations for managing products (Create, Read, Update, Delete).

### **4. Marketplace Functionality:**

- Implement search and filtering options for buyers to find products.
- Display products in categories and allow sorting by various parameters (price, location, etc.).

### **5. Communication Features:**

- Provide messaging/chat functionality for communication between farmers and buyers.
- Allow inquiries about products, negotiation of prices, and arrangement of deliveries.

### **6. Transaction Processing:**

- Integrate secure payment gateways for processing transactions.
- Handle order placement, payment confirmation, and invoice generation.

## **7.Educational Resources:**

- Curate educational content on farming techniques, market trends, and sustainability practices.
- Provide access to articles, videos, and webinars within the platform.

## **8.Weather Forecast Integration:**

- Integrate weather forecast APIs to fetch real-time weather data.
- Display weather forecasts relevant to the farmer's location to aid in crop management decisions.

## **9.Feedback and Rating System:**

- Allow buyers to leave feedback and ratings for products and sellers.
- Aggregate ratings and reviews to build trust and credibility.

## **10.Mobile Compatibility and Analytics:**

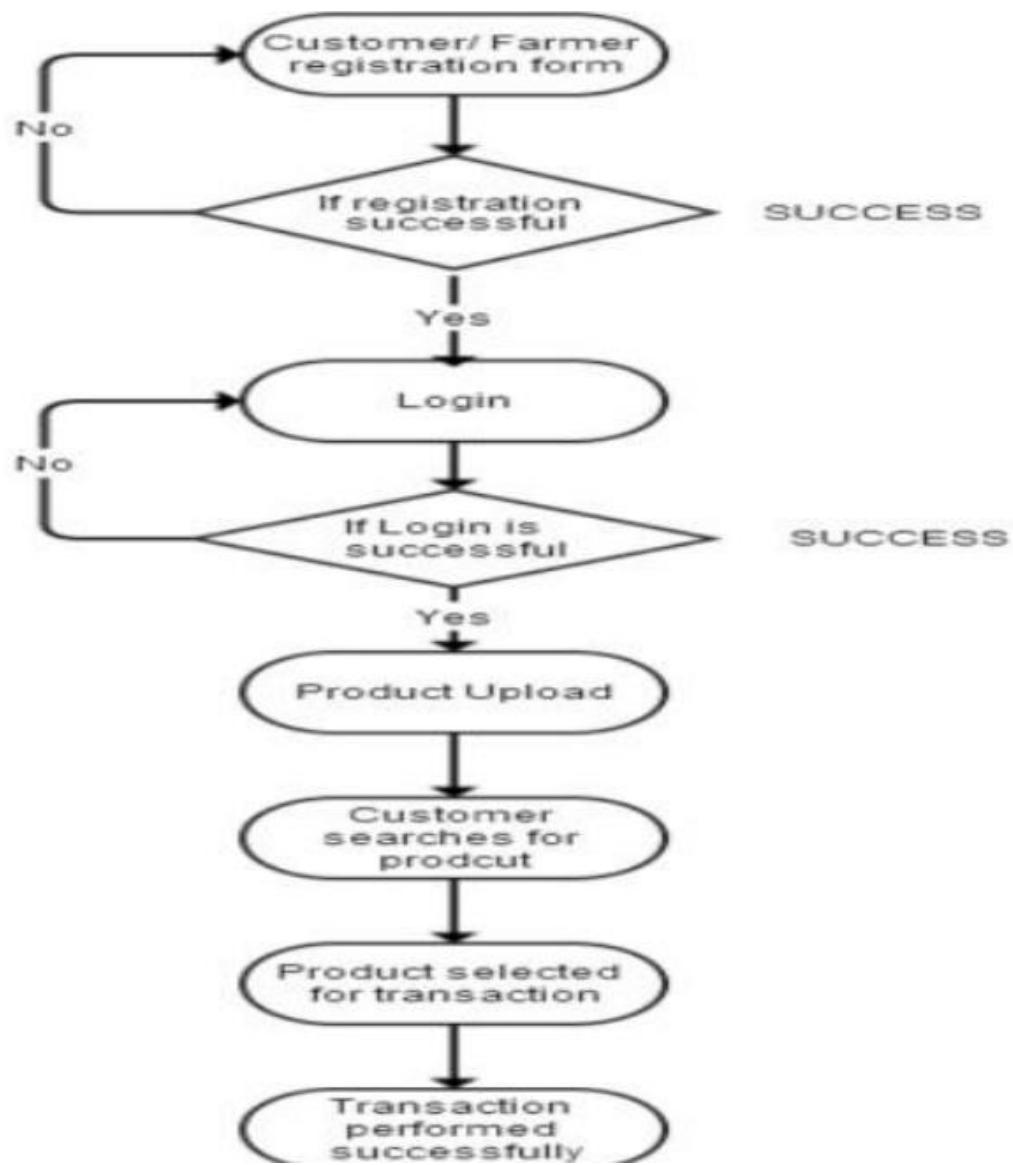
- Ensure the platform is mobile-responsive or develop dedicated mobile apps.
- Implement analytics dashboard to provide insights on sales performance, user behaviour, and market trends.

## **11.Security Measures:**

- Implement encryption for sensitive data.
- Use HTTPS protocol for secure communication.
- Implement measures to prevent fraud and unauthorized access.

## **12.Scaling and Optimization:**

- Design the system with scalability in mind to handle increased user load.
- Optimize database queries and server performance for efficiency.



## **IMPLEMENTATION (SOURCE CODE)**

### **Index.html:**

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>E-Farming Portal</title>
<style>
  * {
    box-sizing: border-box;
    font-family: 'Segoe UI', Tahoma, Geneva, Verdana, sans-serif;
  }
  body {
    margin: 0;
    padding: 0;
    background-color: #f5f5f5;
  }
  header {
    background-color: #4CAF50;
    color: white;
    padding: 1rem;
    display: flex;
    justify-content: space-between;
    align-items: center;
  }
  .logo {
    font-size: 1.5rem;
    font-weight: bold;
  }
  nav ul {
    display: flex;
    list-style: none;
    margin: 0;
    padding: 0;
  }
  nav ul li {
    margin-left: 1rem;
  }
</style>
```

```
nav ul li a {
    color: white;
    text-decoration: none;
}
.auth-buttons {
    display: flex;
    align-items: center;
    gap: 0.5rem;
}
.auth-buttons button {
    padding: 0.5rem 1rem;
    border: none;
    border-radius: 4px;
    cursor: pointer;
    font-weight: bold;
}
.login-btn {
    background-color: white;
    color: #4CAF50;
}
.register-btn {
    background-color: #2E7D32;
    color: white;
}
.logout-btn {
    background-color: #f44336;
    color: white;
    display: none;
}
.user-info {
    display: none;
    align-items: center;
    gap: 0.5rem;
    color: white;
}
.container {
    max-width: 1200px;
    margin: 2rem auto;
    padding: 0 1rem;
}
.hero {
    background-color: #E8F5E9;
    padding: 2rem;
    border-radius: 8px;
    text-align: center;
    margin-bottom: 2rem;
```

```
        }
.products {
    display: grid;
    grid-template-columns: repeat(auto-fill, minmax(250px, 1fr));
    gap: 1.5rem;
}
.product-card {
    background-color: white;
    border-radius: 8px;
    overflow: hidden;
    box-shadow: 0 2px 5px rgba(0,0,0,0.1);
    transition: transform 0.3s;
}
.product-card:hover {
    transform: translateY(-5px);
}
.product-img {
    width: 100%;
    height: 200px;
    object-fit: cover;
}
.product-info {
    padding: 1rem;
}
.product-title {
    font-weight: bold;
    margin-bottom: 0.5rem;
    font-size: 1.1rem;
}
.product-price {
    color: #4CAF50;
    font-weight: bold;
    margin-bottom: 0.5rem;
    font-size: 1.2rem;
}
.product-farmer {
    color: #666;
    font-size: 0.9rem;
    margin-bottom: 0.5rem;
}
.add-to-cart {
    background-color: #4CAF50;
    color: white;
    border: none;
    padding: 0.5rem;
    width: 100%;
```

```
border-radius: 4px;
cursor: pointer;
font-weight: bold;
transition: background-color 0.3s;
}
.add-to-cart:hover {
background-color: #3e8e41;
}
.search-filter {
display: flex;
margin-bottom: 1.5rem;
gap: 1rem;
flex-wrap: wrap;
}
.search-bar {
flex-grow: 1;
min-width: 200px;
padding: 0.5rem;
border: 1px solid #ddd;
border-radius: 4px;
font-size: 1rem;
}
.filter {
padding: 0.5rem;
border: 1px solid #ddd;
border-radius: 4px;
font-size: 1rem;
}
.modal {
display: none;
position: fixed;
top: 0;
left: 0;
width: 100%;
height: 100%;
background-color: rgba(0,0,0,0.5);
z-index: 100;
justify-content: center;
align-items: center;
}
.modal-content {
background-color: white;
padding: 2rem;
border-radius: 8px;
width: 90%;
max-width: 500px;
```

```
        max-height: 90vh;
        overflow-y: auto;
    }
.close-btn {
    float: right;
    font-size: 1.5rem;
    cursor: pointer;
    background: none;
    border: none;
    font-weight: bold;
}
form div {
    margin-bottom: 1rem;
}
form label {
    display: block;
    margin-bottom: 0.5rem;
    font-weight: bold;
}
form input, form select, form textarea {
    width: 100%;
    padding: 0.5rem;
    border: 1px solid #ddd;
    border-radius: 4px;
    font-size: 1rem;
}
.submit-btn {
    background-color: #4CAF50;
    color: white;
    border: none;
    padding: 0.75rem 1.5rem;
    border-radius: 4px;
    cursor: pointer;
    font-size: 1rem;
    font-weight: bold;
    transition: background-color 0.3s;
}
.submit-btn:hover {
    background-color: #3e8e41;
}
.cart-icon {
    position: relative;
    cursor: pointer;
    font-size: 1.5rem;
    margin-left: 1rem;
}
```

```
.cart-count {
    position: absolute;
    top: -10px;
    right: -10px;
    background-color: red;
    color: white;
    border-radius: 50%;
    width: 20px;
    height: 20px;
    display: flex;
    justify-content: center;
    align-items: center;
    font-size: 0.8rem;
}

.cart-modal {
    max-height: 80vh;
}

.cart-item {
    display: flex;
    justify-content: space-between;
    margin-bottom: 1rem;
    padding-bottom: 1rem;
    border-bottom: 1px solid #eee;
    align-items: center;
}

.cart-item-img {
    width: 60px;
    height: 60px;
    object-fit: cover;
    border-radius: 4px;
}

.cart-item-details {
    flex-grow: 1;
    padding: 0 1rem;
}

.cart-item-title {
    font-weight: bold;
}

.cart-item-price {
    color: #4CAF50;
    font-weight: bold;
}

.cart-item-quantity {
    display: flex;
    align-items: center;
    gap: 0.5rem;
}
```

```
        }
.quantity-btn {
    background-color: #f0f0f0;
    border: none;
    width: 25px;
    height: 25px;
    border-radius: 50%;
    cursor: pointer;
    font-weight: bold;
}
.remove-btn {
    background: none;
    border: none;
    color: #ff4444;
    cursor: pointer;
    font-size: 1.2rem;
    margin-left: 1rem;
}
.cart-total {
    font-weight: bold;
    font-size: 1.2rem;
    text-align: right;
    margin-top: 1rem;
    padding-top: 1rem;
    border-top: 2px solid #eee;
}
.checkout-btn {
    background-color: #4CAF50;
    color: white;
    border: none;
    padding: 0.75rem 1.5rem;
    border-radius: 4px;
    cursor: pointer;
    margin-top: 1rem;
    width: 100%;
    font-size: 1.1rem;
    font-weight: bold;
    transition: background-color 0.3s;
}
.checkout-btn:hover {
    background-color: #3e8e41;
}
.profile-section {
    display: none;
    background-color: white;
    padding: 2rem;
```

```
border-radius: 8px;
box-shadow: 0 2px 5px rgba(0,0,0,0.1);
}
.tabs {
  display: flex;
  border-bottom: 1px solid #ddd;
  margin-bottom: 1rem;
}
.tab {
  display: inline-block;
  padding: 0.75rem 1.5rem;
  cursor: pointer;
  border-bottom: 3px solid transparent;
  font-weight: bold;
  color: #666;
}
.tab.active {
  border-bottom: 3px solid #4CAF50;
  color: #4CAF50;
}
.tab-content {
  display: none;
  padding: 1rem 0;
}
.tab-content.active {
  display: block;
}
.order-item {
  background-color: #f9f9f9;
  padding: 1rem;
  margin-bottom: 1rem;
  border-radius: 8px;
  box-shadow: 0 1px 3px rgba(0,0,0,0.1);
}
.order-item h3 {
  margin-top: 0;
  color: #4CAF50;
}
.order-item p {
  margin: 0.5rem 0;
}
.order-products {
  margin-left: 1rem;
}
.rating {
  color: #FFD700;
```

```

        font-size: 1.2rem;
        margin-bottom: 0.5rem;
    }
.empty-cart {
    text-align: center;
    padding: 2rem;
    color: #666;
}
.empty-cart p {
    margin-bottom: 1rem;
}
.success-message {
    text-align: center;
    padding: 2rem;
    color: #4CAF50;
}
.success-message h2 {
    margin-top: 0;
}
@media (max-width: 768px) {
    header {
        flex-direction: column;
        text-align: center;
    }
    nav ul {
        margin-top: 1rem;
        justify-content: center;
    }
    .auth-buttons {
        margin-top: 1rem;
    }
    .search-filter {
        flex-direction: column;
    }
}
</style>
</head>
<body>
<header>
    <div class="logo">E-Farming Portal</div>
    <nav>
        <ul>
            <li><a href="#" class="home-link">Home</a></li>
            <li><a href="#" class="products-link">Products</a></li>
            <li><a href="#" class="profile-link">Profile</a></li>
            <li><a href="#" class="contact-link">Contact Farmers</a></li>
        
    


```

```

        </ul>
    </nav>
    <div class="auth-buttons">
        <button class="login-btn">Login</button>
        <button class="register-btn">Register</button>
        <button class="logout-btn">Logout</button>
        <div class="user-info">
            <span id="logged-in-user">User</span>
            <div class="cart-icon">
                
                <span class="cart-count">0</span>
            </div>
        </div>
    </div>
</header>

<div class="container">
    <div class="hero">
        <h1>Welcome to E-Farming Portal</h1>
        <p>Connecting farmers directly to buyers and retailers</p>
    </div>

    <div class="search-filter">
        <input type="text" class="search-bar" placeholder="Search for products...">
        <select class="filter">
            <option value="">All Categories</option>
            <option value="fruits">Fruits</option>
            <option value="vegetables">Vegetables</option>
        </select>
        <select class="filter">
            <option value="">Price Range</option>
            <option value="0-50">₹0 - ₹50</option>
            <option value="50-100">₹50 - ₹100</option>
            <option value="100-500">₹100 - ₹500</option>
        </select>
    </div>

    <div class="products">
        <!-- Product cards will be added here dynamically -->
    </div>

    <div class="profile-section">
        <div class="tabs">
            <div class="tab active" data-tab="orders">My Orders</div>
            <div class="tab" data-tab="details">Personal Details</div>
            <div class="tab" data-tab="reviews">My Reviews</div>
        </div>
    </div>

```

```

</div>

<div class="tab-content active" id="orders">
  <h2>My Orders</h2>
  <div class="order-list">
    <!-- Orders will be added here dynamically -->
  </div>
</div>

<div class="tab-content" id="details">
  <h2>Personal Details</h2>
  <form id="profile-form">
    <div>
      <label for="name">Full Name</label>
      <input type="text" id="name" value="John Doe">
    </div>
    <div>
      <label for="email">Email</label>
      <input type="email" id="email" value="john@example.com">
    </div>
    <div>
      <label for="phone">Phone</label>
      <input type="tel" id="phone" value="9876543210">
    </div>
    <div>
      <label for="address">Address</label>
      <textarea id="address" rows="3">123 Main St, City, State</textarea>
    </div>
    <button type="submit" class="submit-btn">Update Profile</button>
  </form>
</div>

<div class="tab-content" id="reviews">
  <h2>My Reviews</h2>
  <div class="reviews-list">
    <!-- Reviews will be added here dynamically -->
  </div>
</div>
</div>

<!-- Login Modal -->
<div class="modal" id="login-modal">
  <div class="modal-content">
    <button class="close-btn">&times;</button>
    <h2>Login</h2>
  </div>
</div>

```

```

<form id="login-form">
  <div>
    <label for="login-email">Email</label>
    <input type="email" id="login-email" required>
  </div>
  <div>
    <label for="login-password">Password</label>
    <input type="password" id="login-password" required>
  </div>
  <button type="submit" class="submit-btn">Login</button>
</form>
</div>
</div>

<!-- Registration Modal -->
<div class="modal" id="register-modal">
  <div class="modal-content">
    <button class="close-btn">&times;</button>
    <h2>Register</h2>
    <form id="register-form">
      <div>
        <label for="reg-name">Full Name</label>
        <input type="text" id="reg-name" required>
      </div>
      <div>
        <label for="reg-email">Email</label>
        <input type="email" id="reg-email" required>
      </div>
      <div>
        <label for="reg-phone">Phone</label>
        <input type="tel" id="reg-phone" required>
      </div>
      <div>
        <label for="reg-password">Password</label>
        <input type="password" id="reg-password" required>
      </div>
      <div>
        <label for="reg-role">Role</label>
        <select id="reg-role" required>
          <option value="">Select Role</option>
          <option value="farmer">Farmer</option>
          <option value="buyer">Buyer</option>
          <option value="retailer">Retailer</option>
        </select>
      </div>
      <button type="submit" class="submit-btn">Register</button>
    </form>
  </div>
</div>

```

```

        </form>
    </div>
</div>

<!-- Cart Modal -->
<div class="modal" id="cart-modal">
    <div class="modal-content cart-modal">
        <button class="close-btn">&times;</button>
        <h2>Your Cart</h2>
        <div class="cart-items">
            <!-- Cart items will be added here dynamically -->
        </div>
        <div class="cart-total">
            Total: ₹<span id="cart-total-amount">0</span>
        </div>
        <button class="checkout-btn">Proceed to Checkout</button>
    </div>
</div>

<!-- Checkout Success Modal -->
<div class="modal" id="success-modal">
    <div class="modal-content">
        <button class="close-btn">&times;</button>
        <div class="success-message">
            <h2>Order Placed Successfully!</h2>
            <p>Thank you for your purchase.</p>
            <p>Your order will be delivered soon.</p>
        </div>
    </div>
</div>

<!-- Contact Farmer Modal -->
<div class="modal" id="contact-modal">
    <div class="modal-content">
        <button class="close-btn">&times;</button>
        <h2>Contact Farmer</h2>
        <form id="contact-form">
            <div>
                <label for="contact-subject">Subject</label>
                <input type="text" id="contact-subject" required>
            </div>
            <div>
                <label for="contact-message">Message</label>
                <textarea id="contact-message" rows="5" required></textarea>
            </div>
            <button type="submit" class="submit-btn">Send Message</button>
        </form>
    </div>
</div>

```

```

        </form>
    </div>
</div>

<script>
// Real product data with guaranteed working images
const products = [
{
    id: 1,
    title: "Fresh Apples",
    category: "fruits",
    price: 120,
    image: "https://images.unsplash.com/photo-1568702846914-96b305d2aaeb?ixlib=rb-1.2.1&auto=format&fit=crop&w=500&q=80",
    farmer: "Rajesh Farms",
    rating: 4.5,
    description: "Fresh, crispy and juicy apples straight from the orchard."
},
{
    id: 3,
    title: "Bananas",
    category: "fruits",
    price: 60,
    image: "https://images.unsplash.com/photo-1571771894821-ce9b6c11b08e?ixlib=rb-1.2.1&auto=format&fit=crop&w=500&q=80",
    farmer: "Tropical Fruits Co.",
    rating: 4.0,
    description: "Sweet and nutritious bananas packed with energy."
},
{
    id: 4,
    title: "Potatoes",
    category: "vegetables",
    price: 30,
    image: "https://images.unsplash.com/photo-1518977676601-b53f82aba655?ixlib=rb-1.2.1&auto=format&fit=crop&w=500&q=80",
    farmer: "Root Vegetables Ltd.",
    rating: 3.8,
    description: "Freshly harvested potatoes perfect for any dish."
},
{
    id: 6,
    title: "Carrots",
    category: "vegetables",
    price: 40,

```

```
        image: "https://images.unsplash.com/photo-1447175008436-  
054170c2e979?ixlib=rb-1.2.1&auto=format&fit=crop&w=500&q=80",  
        farmer: "Organic Valley",  
        rating: 4.1,  
        description: "Crunchy and sweet carrots packed with nutrients."  
    },  
    {  
        id: 7,  
        title: "Grapes",  
        category: "fruits",  
        price: 90,  
        image: "https://images.unsplash.com/photo-1550258987-190a2d41a8ba?ixlib=rb-  
1.2.1&auto=format&fit=crop&w=500&q=80",  
        farmer: "Vineyard Fresh",  
        rating: 4.4,  
        description: "Sweet seedless grapes perfect for snacking."  
    },  
    {  
        id: 8,  
        title: "Spinach",  
        category: "vegetables",  
        price: 35,  
        image: "https://images.unsplash.com/photo-1576045057995-568f588f82fb?ixlib=rb-  
1.2.1&auto=format&fit=crop&w=500&q=80",  
        farmer: "Green Leaf Farms",  
        rating: 4.0,  
        description: "Fresh spinach leaves packed with iron and vitamins."  
    },  
    {  
        id: 9,  
        title: "Strawberries",  
        category: "fruits",  
        price: 150,  
        image: "https://images.unsplash.com/photo-1464965911861-  
746a04b4bca6?ixlib=rb-1.2.1&auto=format&fit=crop&w=500&q=80",  
        farmer: "Berry Good Farms",  
        rating: 4.6,  
        description: "Sweet and juicy strawberries, perfect for desserts."  
    },  
    {  
        id: 10,  
        title: "Broccoli",  
        category: "vegetables",  
        price: 50,  
        image: "https://images.unsplash.com/photo-1584270354949-  
c26b0d5b4a0c?ixlib=rb-1.2.1&auto=format&fit=crop&w=500&q=80",
```

```

        farmer: "Green Fields",
        rating: 4.0,
        description: "Fresh broccoli packed with nutrients and vitamins."
    }
];

// Sample order data
const orders = [
{
    id: 1001,
    date: "2023-05-15",
    items: [
        { product: "Fresh Apples", quantity: 2, price: 120 },
        { product: "Bananas", quantity: 3, price: 60 }
    ],
    total: 420,
    status: "Delivered"
},
{
    id: 1002,
    date: "2023-05-10",
    items: [
        { product: "Grapes", quantity: 2, price: 90 }
    ],
    total: 180,
    status: "Delivered"
}
];
;

// Sample review data
const reviews = [
{
    product: "Fresh Apples",
    rating: 5,
    comment: "Excellent quality, very fresh! Will order again.",
    date: "2023-05-16"
},
{
    product: "Bananas",
    rating: 4,
    comment: "Good quality and perfectly ripe when delivered",
    date: "2023-05-12"
}
];
;

// DOM elements

```

```

const productsContainer = document.querySelector('.products');
const orderList = document.querySelector('.order-list');
const reviewsList = document.querySelector('.reviews-list');
const cartItemsContainer = document.querySelector('.cart-items');
const cartTotalAmount = document.getElementById('cart-total-amount');
const cartCount = document.querySelector('.cart-count');
const searchBar = document.querySelector('.search-bar');
const categoryFilter = document.querySelectorAll('.filter')[0];
const priceFilter = document.querySelectorAll('.filter')[1];
const profileSection = document.querySelector('.profile-section');
const homeLink = document.querySelector('.home-link');
const productsLink = document.querySelector('.products-link');
const profileLink = document.querySelector('.profile-link');
const contactLink = document.querySelector('.contact-link');
const tabs = document.querySelectorAll('.tab');
const tabContents = document.querySelectorAll('.tab-content');

// Auth elements
const loginBtn = document.querySelector('.login-btn');
const registerBtn = document.querySelector('.register-btn');
const logoutBtn = document.querySelector('.logout-btn');
const userInfo = document.querySelector('.user-info');
const loggedInUser = document.getElementById('logged-in-user');

// Modals
const loginModal = document.getElementById('login-modal');
const registerModal = document.getElementById('register-modal');
const cartModal = document.getElementById('cart-modal');
const successModal = document.getElementById('success-modal');
const contactModal = document.getElementById('contact-modal');
const cartIcon = document.querySelector('.cart-icon');
const closeBns = document.querySelectorAll('.close-btn');
const checkoutBtn = document.querySelector('.checkout-btn');

// App state
let cart = [];
let currentUser = null;

// Initialize the app
function init() {
  renderProducts(products);
  renderOrders();
  renderReviews();
  setupEventListeners();
  updateCartCount();
  updateAuthUI();
}

```

```

        }

    // Update authentication UI
    function updateAuthUI() {
        if (currentUser) {
            loginBtn.style.display = 'none';
            registerBtn.style.display = 'none';
            logoutBtn.style.display = 'block';
            userInfo.style.display = 'flex';
            loggedInUser.textContent = currentUser.name;
            profileLink.style.display = 'block';
        } else {
            loginBtn.style.display = 'block';
            registerBtn.style.display = 'block';
            logoutBtn.style.display = 'none';
            userInfo.style.display = 'none';
            profileLink.style.display = 'none';
        }
    }

    // Render products
    function renderProducts(productsToRender) {
        productsContainer.innerHTML = "";

        if (productsToRender.length === 0) {
            productsContainer.innerHTML = '<p style="grid-column:1/-1;text-align:center;">No products found matching your criteria.</p>';
            return;
        }

        productsToRender.forEach(product => {
            const productCard = document.createElement('div');
            productCard.className = 'product-card';
            productCard.innerHTML = `
                
                <div class="product-info">
                    <div class="product-title">${product.title}</div>
                    <div class="product-price">₹${product.price}</div>
                    <div class="product-farmer">Farmer: ${product.farmer}</div>
                    <div class="rating">${renderStars(product.rating)}</div>
                    <button class="add-to-cart" data-id="${product.id}">Add to Cart</button>
                </div>
            `;
            productsContainer.appendChild(productCard);
        });
    }
}

```

```

}

// Render star ratings
function renderStars(rating) {
  const fullStars = Math.floor(rating);
  const hasHalfStar = rating % 1 >= 0.5;
  let stars = '★'.repeat(fullStars);
  if (hasHalfStar) stars += '½';
  stars += '☆'.repeat(5 - fullStars - (hasHalfStar ? 1 : 0));
  return stars;
}

// Render orders
function renderOrders() {
  orderList.innerHTML = "";

  if (orders.length === 0) {
    orderList.innerHTML = '<p>You have no orders yet.</p>';
    return;
  }

  orders.forEach(order => {
    const orderItem = document.createElement('div');
    orderItem.className = 'order-item';

    let itemsHtml = '<div class="order-products">';
    order.items.forEach(item => {
      itemsHtml += `<p>${item.quantity} x ${item.product} - ₹${item.price * item.quantity}</p>`;
    });
    itemsHtml += '</div>';

    orderItem.innerHTML = `
      <h3>Order #${order.id}</h3>
      <p><strong>Date:</strong> ${order.date}</p>
      ${itemsHtml}
      <p><strong>Total:</strong> ₹${order.total}</p>
      <p><strong>Status:</strong> ${order.status}</p>
    `;
    orderList.appendChild(orderItem);
  });
}

// Render reviews
function renderReviews() {
  reviewsList.innerHTML = "";

```

```

if (reviews.length === 0) {
  reviewsList.innerHTML = '<p>You have not reviewed any products yet.</p>';
  return;
}

reviews.forEach(review => {
  const reviewItem = document.createElement('div');
  reviewItem.className = 'order-item';
  reviewItem.innerHTML = `
    <h3>${review.product}</h3>
    <p><strong>Date:</strong> ${review.date}</p>
    <div class="rating">${renderStars(review.rating)}</div>
    <p>${review.comment}</p>
  `;
  reviewsList.appendChild(reviewItem);
});

// Render cart
function renderCart() {
  cartItemsContainer.innerHTML = "";
  let total = 0;

  if (cart.length === 0) {
    cartItemsContainer.innerHTML = `
      <div class="empty-cart">
        <p>Your cart is empty</p>
        <button class="submit-btn"
      onclick="cartModal.style.display='none'">Continue Shopping</button>
      </div>
    `;
    document.querySelector('.cart-total').style.display = 'none';
    document.querySelector('.checkout-btn').style.display = 'none';
    return;
  }

  document.querySelector('.cart-total').style.display = 'block';
  document.querySelector('.checkout-btn').style.display = 'block';

  cart.forEach(item => {
    const product = products.find(p => p.id === item.id);
    if (product) {
      const cartItem = document.createElement('div');
      cartItem.className = 'cart-item';
      cartItem.innerHTML = `
```

```

        
        <div class="cart-item-details">
            <div class="cart-item-title">${product.title}</div>
            <div class="cart-item-price">₹${product.price}</div>
            <div class="cart-item-quantity">
                <button class="quantity-btn minus" data-id="${product.id}">-</button>
                <span>${item.quantity}</span>
                <button class="quantity-btn plus" data-id="${product.id}">+</button>
            </div>
        </div>
        <button class="remove-btn" data-id="${product.id}">X</button>
    ;
    cartItemsContainer.appendChild(cartItem);
    total += product.price * item.quantity;
}
});

cartTotalAmount.textContent = total;
updateCartCount();
}

// Update cart count
function updateCartCount() {
    const count = cart.reduce((sum, item) => sum + item.quantity, 0);
    cartCount.textContent = count;
    cartCount.style.display = count > 0 ? 'flex' : 'none';
}

// Setup event listeners
function setupEventListeners() {
    // Login/Register buttons
    loginBtn.addEventListener('click', () => loginModal.style.display = 'flex');
    registerBtn.addEventListener('click', () => registerModal.style.display = 'flex');
    logoutBtn.addEventListener('click', logout);

    // Cart icon
    cartIcon.addEventListener('click', () => {
        renderCart();
        cartModal.style.display = 'flex';
    });

    // Contact link
    contactLink.addEventListener('click', (e) => {
        e.preventDefault();
        contactModal.style.display = 'flex';
    });
}

```

```

});

// Close modals
closeBtns.forEach(btn => {
    btn.addEventListener('click', function() {
        this.closest('.modal').style.display = 'none';
    });
});

// Close modal when clicking outside
window.addEventListener('click', (e) => {
    if (e.target.classList.contains('modal')) {
        e.target.style.display = 'none';
    }
});

// Add to cart buttons
productsContainer.addEventListener('click', (e) => {
    if (e.target.classList.contains('add-to-cart')) {
        const productId = parseInt(e.target.getAttribute('data-id'));
        addToCart(productId);
        alert('Product added to cart!');
    }
});

// Cart quantity and remove buttons
cartItemsContainer.addEventListener('click', (e) => {
    const productId = parseInt(e.target.getAttribute('data-id'));

    if (e.target.classList.contains('minus')) {
        updateCartItemQuantity(productId, -1);
    } else if (e.target.classList.contains('plus')) {
        updateCartItemQuantity(productId, 1);
    } else if (e.target.classList.contains('remove-btn')) {
        removeFromCart(productId);
    }
});

// Checkout button
if (checkoutBtn) {
    checkoutBtn.addEventListener('click', checkout);
}

// Search and filter
searchBar.addEventListener('input', filterProducts);
categoryFilter.addEventListener('change', filterProducts);

```

```

priceFilter.addEventListener('change', filterProducts);

// Navigation links
homeLink.addEventListener('click', (e) => {
    e.preventDefault();
    showHomePage();
});

productsLink.addEventListener('click', (e) => {
    e.preventDefault();
    showProductsPage();
});

profileLink.addEventListener('click', (e) => {
    e.preventDefault();
    showProfilePage();
});

// Tabs
tabs.forEach(tab => {
    tab.addEventListener('click', () => {
        tabs.forEach(t => t.classList.remove('active'));
        tabContents.forEach(c => c.classList.remove('active'));

        tab.classList.add('active');
        document.getElementById(tab.getAttribute('data-tab')).classList.add('active');
    });
});

// Form submissions
document.getElementById('login-form')?.addEventListener('submit', (e) => {
    e.preventDefault();
    const email = document.getElementById('login-email').value;
    const password = document.getElementById('login-password').value;
    login(email, password);
});

document.getElementById('register-form')?.addEventListener('submit', (e) => {
    e.preventDefault();
    const name = document.getElementById('reg-name').value;
    const email = document.getElementById('reg-email').value;
    const phone = document.getElementById('reg-phone').value;
    const password = document.getElementById('reg-password').value;
    const role = document.getElementById('reg-role').value;
    register(name, email, phone, password, role);
});

```

```

document.getElementById('contact-form')?.addEventListener('submit', (e) => {
  e.preventDefault();
  alert('Message sent to farmer!');
  contactModal.style.display = 'none';
});

document.getElementById('profile-form')?.addEventListener('submit', (e) => {
  e.preventDefault();
  alert('Profile updated successfully!');
});
}

// Login function
function login(email, password) {
  // In a real app, you would validate credentials with a server
  // For this demo, we'll just simulate a successful login
  currentUser = {
    name: email.split('@')[0],
    email: email,
    role: 'buyer' // Default role for demo
  };

  alert('Login successful!');
  loginModal.style.display = 'none';
  updateAuthUI();
}

// Register function
function register(name, email, phone, password, role) {
  // In a real app, you would send this data to a server
  // For this demo, we'll just simulate a successful registration
  currentUser = {
    name: name,
    email: email,
    role: role
  };

  alert('Registration successful! You are now logged in.');
  registerModal.style.display = 'none';
  updateAuthUI();
}

// Logout function
function logout() {
  currentUser = null;
}

```

```

        alert('You have been logged out.');
        updateAuthUI();
    }

// Show home page
function showHomePage() {
    profileSection.style.display = 'none';
    document.querySelector('.products').style.display = 'grid';
    document.querySelector('.hero').style.display = 'block';
    document.querySelector('.search-filter').style.display = 'flex';
}

// Show products page
function showProductsPage() {
    profileSection.style.display = 'none';
    document.querySelector('.products').style.display = 'grid';
    document.querySelector('.hero').style.display = 'none';
    document.querySelector('.search-filter').style.display = 'flex';
}

// Show profile page
function showProfilePage() {
    if (!currentUser) {
        alert('Please login to view your profile');
        return;
    }
    profileSection.style.display = 'block';
    document.querySelector('.products').style.display = 'none';
    document.querySelector('.hero').style.display = 'none';
    document.querySelector('.search-filter').style.display = 'none';
}

// Add to cart function
function addToCart(productId) {
    if (!currentUser) {
        alert('Please login to add items to cart');
        loginModal.style.display = 'flex';
        return;
    }

    const existingItem = cart.find(item => item.id === productId);
    if (existingItem) {
        existingItem.quantity += 1;
    } else {
        cart.push({ id: productId, quantity: 1 });
    }
}

```

```

        updateCartCount();
    }

// Update cart item quantity
function updateCartItemQuantity(productId, change) {
    const item = cart.find(item => item.id === productId);
    if (item) {
        item.quantity += change;

        if (item.quantity <= 0) {
            removeFromCart(productId);
        } else {
            renderCart();
        }
    }
}

// Remove from cart
function removeFromCart(productId) {
    cart = cart.filter(item => item.id !== productId);
    renderCart();
}

// Checkout function
function checkout() {
    if (!currentUser) {
        alert('Please login to checkout');
        loginModal.style.display = 'flex';
        return;
    }

    if (cart.length === 0) return;

    // In a real app, you would send the cart data to a server here
    // For this demo, we'll just show a success message
    cart = [];
    renderCart();
    cartModal.style.display = 'none';
    successModal.style.display = 'flex';
}

// Filter products
function filterProducts() {
    const searchTerm = searchBar.value.toLowerCase();
    const category = categoryFilter.value;
    const priceRange = priceFilter.value;
}

```

```

let filtered = products.filter(product => {
  const matchesSearch = product.title.toLowerCase().includes(searchTerm) ||
    product.farmer.toLowerCase().includes(searchTerm) ||
    product.description.toLowerCase().includes(searchTerm);
  const matchesCategory = !category || product.category === category;

  let matchesPrice = true;
  if (priceRange) {
    const [min, max] = priceRange.split('-').map(Number);
    matchesPrice = product.price >= min && (!max || product.price <= max);
  }

  return matchesSearch && matchesCategory && matchesPrice;
});

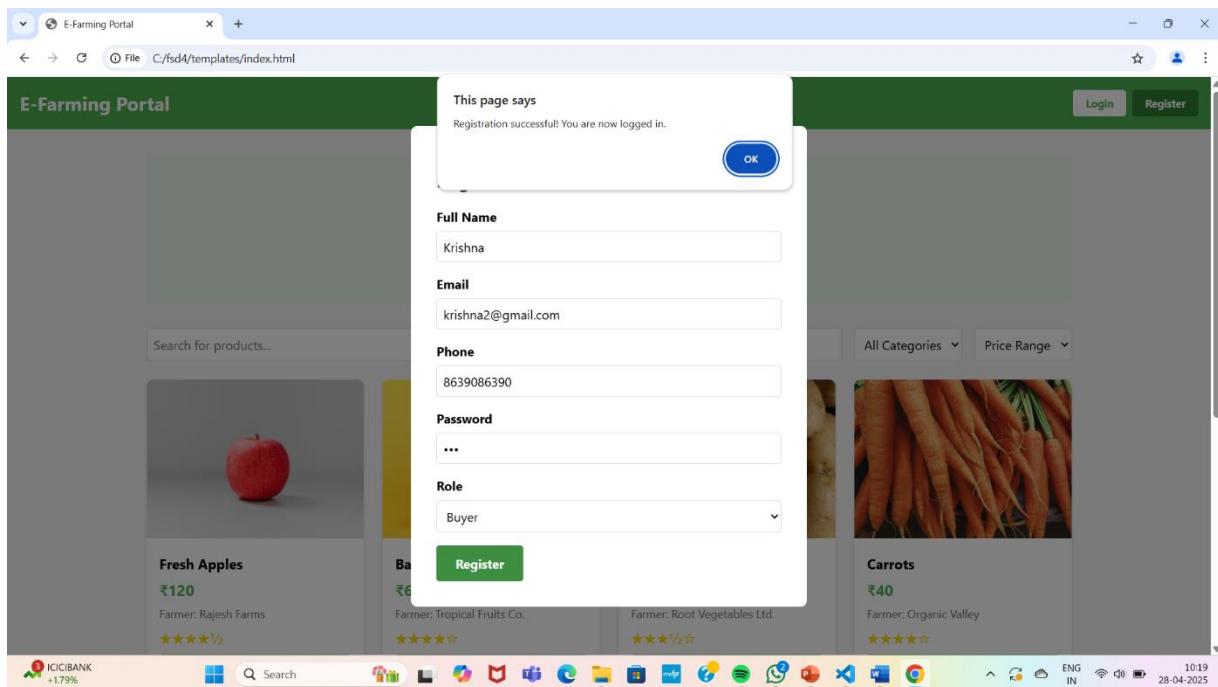
renderProducts(filtered);
}

// Initialize the app
init();
</script>
</body>
</html>

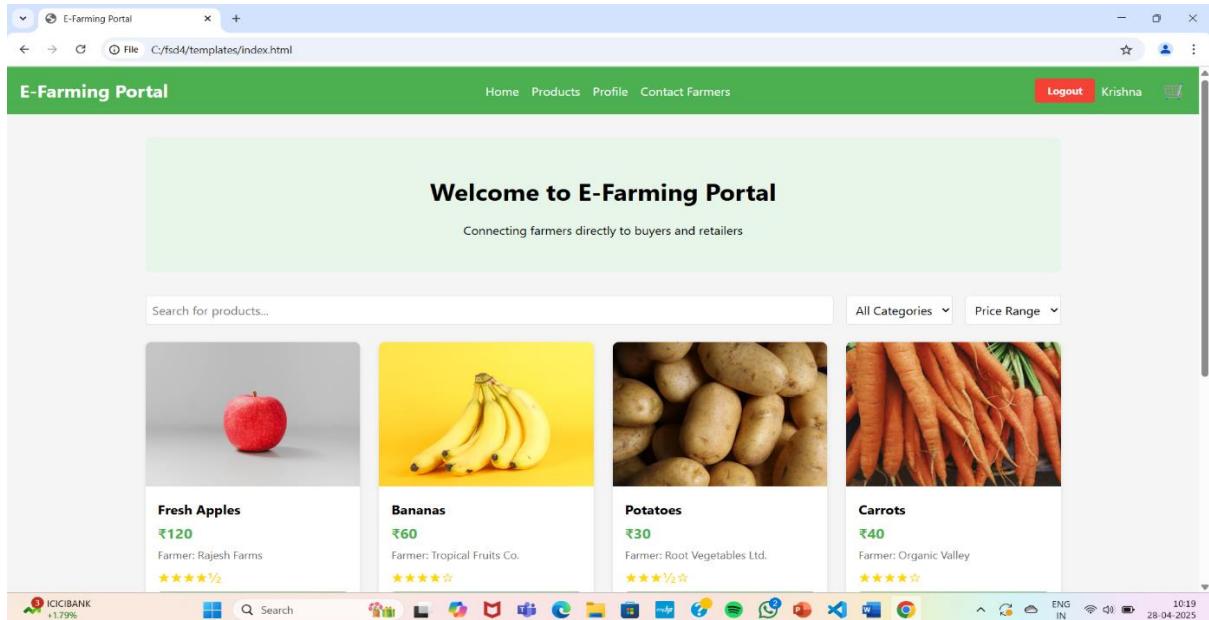
```

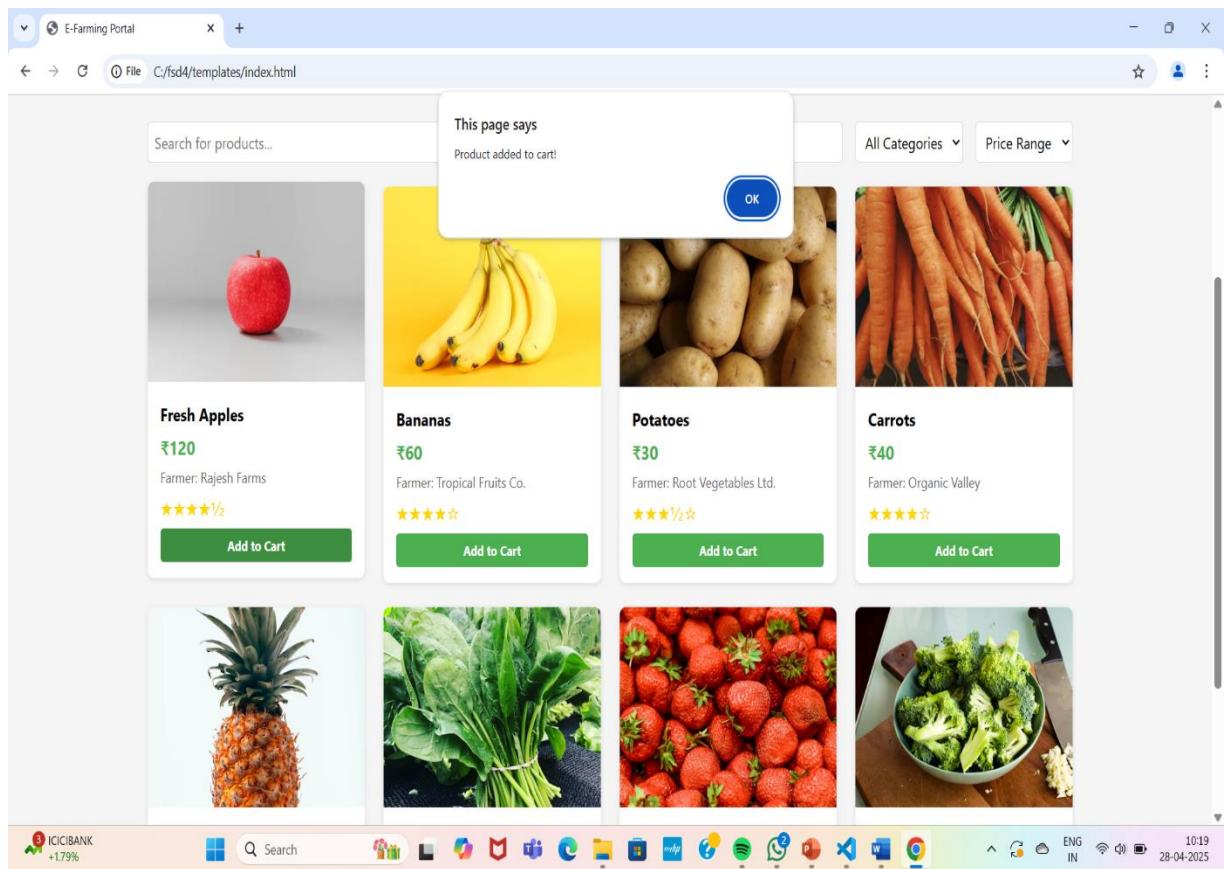
# RESULT

## REGISTRATION PAGE:



## HOME PAGE:





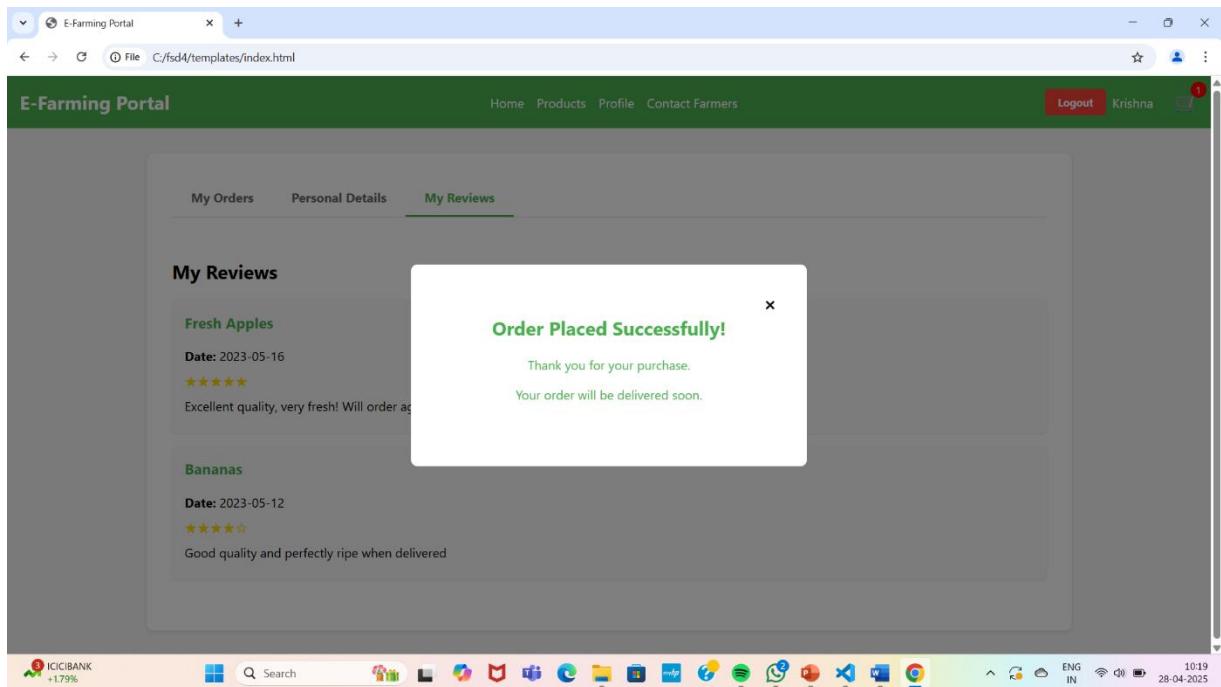
## CART:

The screenshot shows the E-Farming Portal user profile page. The top navigation bar includes links for Home, Products, Profile, Contact Farmers, Logout, and the user's name "Krishna" with a notification badge. The main content area has tabs for My Orders, Personal Details, and My Reviews, with "My Reviews" currently selected.

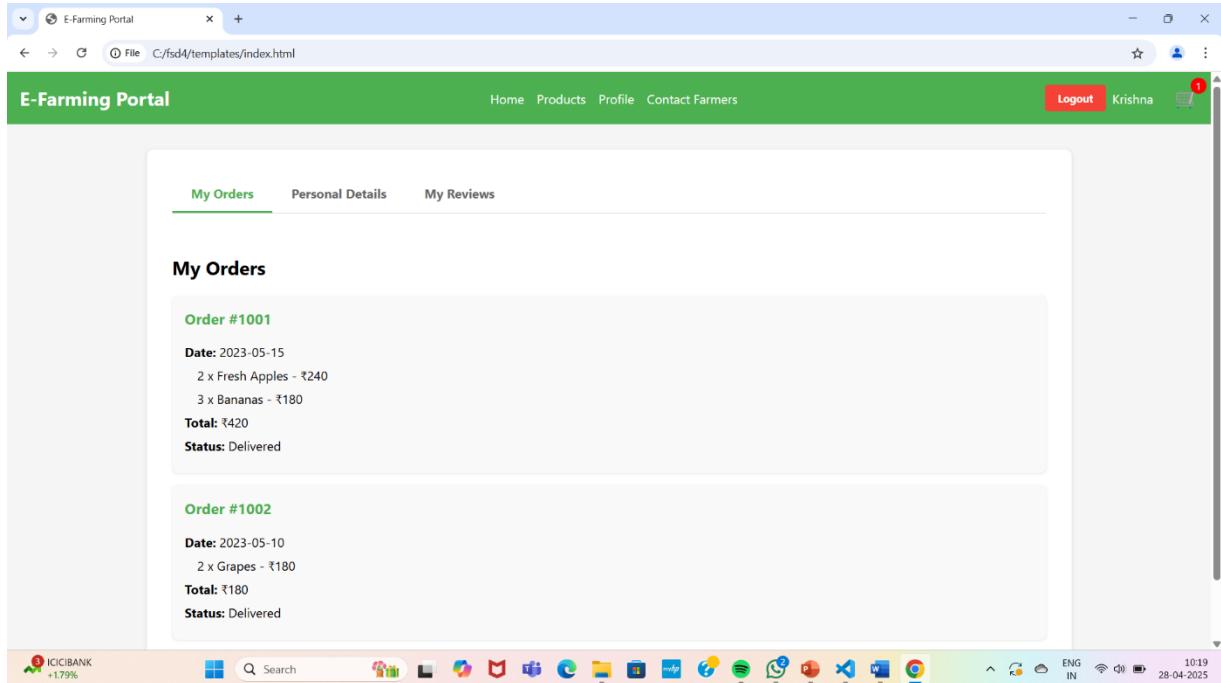
The "My Reviews" section displays two reviews:

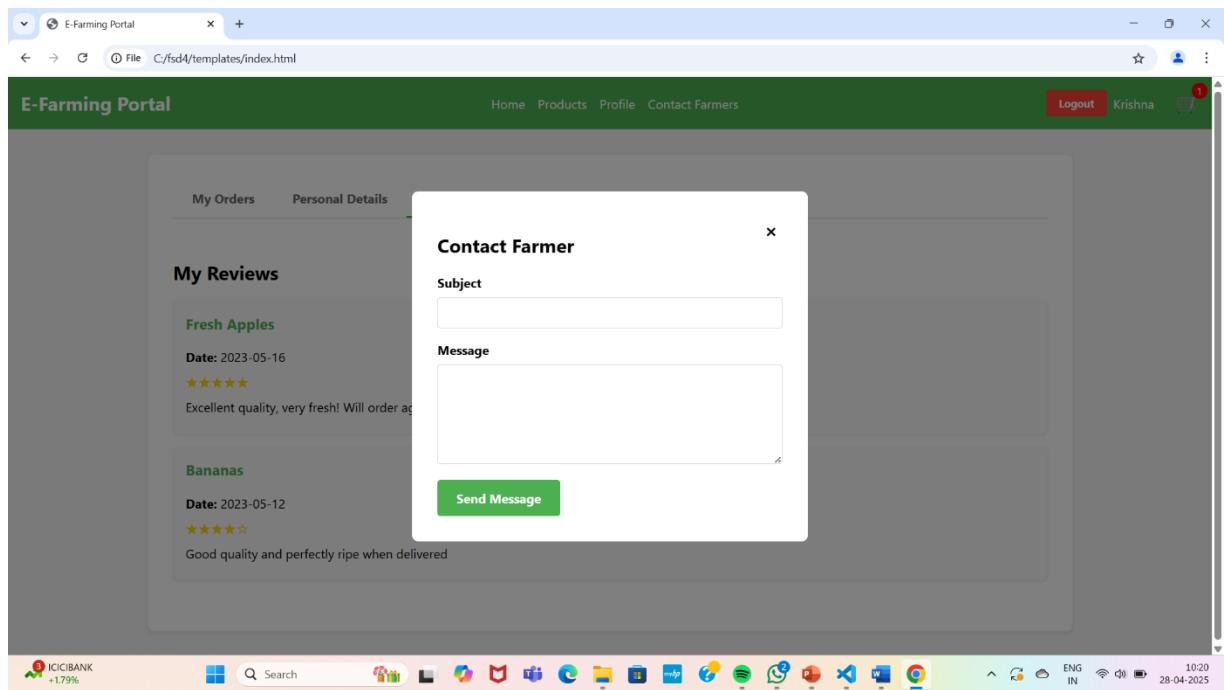
- Fresh Apples**: Date: 2023-05-16, Rating: ★★★★☆, Review: Excellent quality, very fresh! Will order again.
- Bananas**: Date: 2023-05-12, Rating: ★★★★☆, Review: Good quality and perfectly ripe when delivered.

A modal window titled "Your Cart" is open, showing a single item: "Fresh Apples" at ₹120, quantity 1. The total is listed as "Total: ₹120" and a "Proceed to Checkout" button is visible. The bottom of the screen shows a Windows taskbar with various icons and the date/time: 28-04-2025, 10:19.



## PROFILE:





## **CONCLUSION**

In conclusion, the development of the e-farming portal represents a pivotal milestone in modernizing the agricultural landscape and fostering greater connectivity between farmers and buyers. By seamlessly integrating technology into traditional farming practices, this platform has the potential to revolutionize the way agricultural products are marketed, sold, and distributed. Through its user-friendly interface, robust communication features, and secure transaction processing, the e-farming portal empowers farmers with unprecedented market access while providing buyers with a convenient and transparent purchasing experience. Furthermore, by offering educational resources and weather forecast integration, it equips farmers with the knowledge and tools needed to optimize their crop management strategies and adapt to changing environmental conditions. As we look towards the future, the e-farming portal holds immense promise for further innovation and expansion. Potential enhancements may include the integration of emerging technologies such as artificial intelligence and blockchain to streamline supply chain processes and enhance traceability. Additionally, partnerships with agricultural organizations, government agencies, and rural communities could amplify the platform's impact, fostering economic growth and sustainability across diverse farming landscapes.

## **REFERENCES**

### **WEBLINKS:**

- [1] <https://www.geeksforgeeks.org/design-a-grocery-store-template-using-html-and-css/>
- [2] [https://www.researchgate.net/figure/E-farming-Process-Flowchart-4-CONCLUSION-This-Project-will-thus-pave-the-way-for-an\\_fig3\\_274480387](https://www.researchgate.net/figure/E-farming-Process-Flowchart-4-CONCLUSION-This-Project-will-thus-pave-the-way-for-an_fig3_274480387)