项目文档

# Functional Requirement

4.1 User Authentication and Management  
FR-001: Customer Registration  
  
Input: Full name, email, password  
Output: Account creation success message or error  
Description: Allow new customers to register an account with valid email and password.  
FR-002: Login / Logout  
  
Input: Email and password  
Output: Session initiation or error message  
Description: Enable authenticated access to user-specific data and functionalities.  
FR-003: Password Recovery  
  
Input: Registered email  
Output: Reset link sent via email  
Description: Provide a method for recovering lost passwords via email.  
4.2 Product Catalog and Browsing  
FR-004: Product Listing  
  
Input: None  
Output: List of available products with images, prices, and descriptions  
Description: Display all products in a categorized format.  
FR-005: Product Search  
  
Input: Search term  
Output: Filtered list of matching products  
Description: Allow customers to search for products by keyword.  
FR-006: Product Detail View  
  
Input: Product ID or slug  
Output: Detailed product information including price, description, and reviews  
Description: Display detailed view of a selected product.  
4.3 Shopping Cart and Checkout  
FR-007: Add to Cart  
  
Input: Product ID, quantity  
Output: Updated cart summary  
Description: Allow customers to add items to their shopping cart.  
FR-008: Update Cart  
  
Input: Product ID, updated quantity  
Output: Modified cart contents  
Description: Enable customers to update the quantity of items in the cart.  
FR-009: Remove from Cart  
  
Input: Product ID  
Output: Updated cart without removed item  
Description: Allow removal of items from the shopping cart.  
FR-010: Checkout Process  
  
Input: Shipping address, billing address, payment method  
Output: Order confirmation page  
Description: Facilitate the completion of a purchase with secure payment processing.  
FR-011: Order Confirmation Email  
  
Input: Order details  
Output: Email sent to customer  
Description: Send a confirmation email with order summary after successful checkout.  
4.4 Inventory and Product Management (Admin)  
FR-012: Product Creation  
  
Input: Name, description, price, category, image  
Output: New product added to database  
Description: Allow administrators to add new products to the catalog.  
FR-013: Product Update  
  
Input: Product ID and updated fields  
Output: Updated product details  
Description: Allow modification of existing product information.  
FR-014: Product Deletion  
  
Input: Product ID  
Output: Product removed from catalog  
Description: Allow deletion of obsolete or incorrect products.  
FR-015: Category Management  
  
Input: Category name, parent category (optional)  
Output: Category created, edited, or deleted  
Description: Manage product categories and subcategories.  
FR-016: Inventory Adjustment  
  
Input: Product ID, new stock quantity  
Output: Updated inventory level  
Description: Adjust the available stock for each product.  
4.5 Plugin Development Support  
FR-017: Plugin Installation  
  
Input: Plugin package file  
Output: Installed plugin with activation option  
Description: Allow administrators to install plugins via upload.  
FR-018: Plugin Activation/Deactivation  
  
Input: Plugin name  
Output: Plugin state changed  
Description: Toggle plugin status on or off.  
FR-019: Plugin Documentation Access  
  
Input: Plugin name  
Output: Developer documentation displayed  
Description: Provide access to plugin API documentation and usage instructions.

# External Description

3.1 User Interfaces  
Web-based UI for customers and administrators  
Admin Dashboard with CRUD operations for products and categories  
Responsive design for desktop and mobile access  
3.2 Hardware Interfaces  
None specific beyond standard web server and client hardware  
3.3 Software Interfaces  
Payment Gateway API (e.g., Stripe, PayPal)  
Email Service Provider API (e.g., SendGrid, Amazon SES)  
Plugin Management API (internal)  
3.4 Communication Interfaces  
HTTPS for all external communications  
RESTful APIs for internal and external service integrations