项目文档

# Functional Requirement

2.1 User Account Management  
Requirement ID Description  
FR-001 Users can register an account by providing a valid email address, username, and password.  
FR-002 Users can log in using their registered credentials.  
FR-003 Users can securely log out from their session.  
FR-004 Passwords must be stored securely using hashing algorithms.  
Inputs:  
  
Email, Username, Password  
Outputs:  
  
Registration success/failure message  
Login success/failure message  
2.2 Product Management  
Requirement ID Description  
FR-005 Administrators can add new products with title, description, price, category, and image.  
FR-006 Administrators can update or delete existing products.  
FR-007 Products are categorized into multiple groups for easy navigation.  
Inputs:  
  
Product details (title, description, price, category, image)  
Outputs:  
  
Updated product list  
Confirmation message for deletion or update  
2.3 Shopping Cart and Checkout  
Requirement ID Description  
FR-008 Users can add/remove items from the shopping cart.  
FR-009 Users can view the total cost of items in the cart.  
FR-010 Users can proceed to checkout and enter shipping and billing information.  
FR-011 The system supports secure payment integration (e.g., Stripe, PayPal).  
Inputs:  
  
Item selection, quantity, shipping info, payment method  
Outputs:  
  
Order confirmation page  
Order summary with transaction details  
2.4 Order Processing and Notification  
Requirement ID Description  
FR-012 After successful checkout, users receive an order confirmation email.  
FR-013 The system logs all completed orders with timestamps and user IDs.  
Inputs:  
  
Order data (items, price, user info)  
Outputs:  
  
Email notification  
Order record in database  
2.5 Plugin Architecture  
Requirement ID Description  
FR-014 The system provides an API for third-party developers to create plugins.  
FR-015 Plugin documentation includes usage examples, endpoints, and security guidelines.  
Inputs:  
  
Plugin code and metadata  
Outputs:  
  
Installed plugin functionality  
Error messages for invalid plugins

# External Description

3.1 Hardware Interfaces  
None specified at this time; the system is web-based and runs on standard servers.  
3.2 Software Interfaces  
Payment Gateways: Integration with Stripe, PayPal  
Email Service Provider: SMTP server for sending order confirmation emails  
Database System: MySQL or PostgreSQL  
Web Server: Apache or Nginx  
3.3 Communication Interfaces  
RESTful APIs for internal and plugin communication  
HTTPS protocol for secure data transmission