# Functional Requirement

2. Functional Requirements  
2.1 User Account Management  
Requirement ID Description  
FR-001 Users can create an account by providing a valid email address, password, and personal information.  
FR-002 Users can securely log in using their registered email and password.  
FR-003 Users can log out of their session at any time.  
FR-004 The system stores user account details, including contact information, payment preferences, and purchase history.  
Inputs:  
Email, password, first name, last name, phone number, billing/shipping address  
Outputs:  
Confirmation messages, error messages, updated account data  
2.2 Product Catalog and Inventory Management  
Requirement ID Description  
FR-005 Products are displayed with title, price, description, category, image, and availability status.  
FR-006 Administrators can add, edit, or remove products from the inventory.  
FR-007 Products are categorized into predefined categories.  
FR-008 Inventory levels are tracked and automatically updated when items are added/removed from the cart or ordered.  
Inputs:  
Product name, price, description, image, category, quantity  
Outputs:  
Updated product listings, inventory reports, error messages  
2.3 Shopping Cart Functionality  
Requirement ID Description  
FR-009 Users can add items to their shopping cart.  
FR-010 Users can view the contents of their cart, including item quantity, price, and total cost.  
FR-011 Users can modify quantities or remove items from the cart.  
FR-012 Cart contents are saved between sessions for authenticated users.  
Inputs:  
Product ID, quantity, modification commands  
Outputs:  
Updated cart display, error messages, confirmation messages  
2.4 Order Processing and Checkout  
Requirement ID Description  
FR-013 Users can proceed to checkout after adding items to the cart.  
FR-014 Users must select a shipping address and payment method before completing the order.  
FR-015 The system generates a unique order ID and confirms the order via email.  
FR-016 After payment is processed, the system updates inventory and records the transaction.  
Inputs:  
Shipping address, payment method, payment confirmation  
Outputs:  
Order confirmation, receipt, email notification  
2.5 Plugin Extensibility  
Requirement ID Description  
FR-017 The system provides an API for developers to extend its functionality through plugins.  
FR-018 Plugin documentation and specifications are provided for third-party development.  
FR-019 Plugins can be installed, configured, and managed by administrators.  
Inputs:  
Plugin files, configuration settings  
Outputs:  
Extended features, logs, error messages