# RIMSS E-Commerce Platform - Functional Specification

## 1. Product Overview

RIMSS is a comprehensive e-commerce platform designed to provide a seamless shopping experience for users while offering robust management capabilities for administrators.

## 2. User Roles

### 2.1 Customer

* Browse products
* Manage shopping cart
* Place orders
* Track order status
* Manage profile
* View order history

### 2.2 Administrator

* Manage products
* Process orders
* Manage users
* View analytics
* Handle returns
* Manage promotions

## 3. Feature Specifications

### 3.1 User Authentication

#### Registration

* Fields:
  + First Name
  + Last Name
  + Email
  + Password
  + Confirm Password
* Validation:
  + Email format
  + Password strength
  + Unique email check
* Success:
  + Account creation
  + Welcome email
  + Automatic login

#### Login

* Fields:
  + Email
  + Password
* Features:
  + Remember me
  + Forgot password
  + Social login (planned)
* Security:
  + Rate limiting
  + Account lockout

### 3.2 Product Management

#### Product Listing

* Display:
  + Grid/List view
  + Product image
  + Name
  + Price
  + Rating
  + Stock status
* Filtering:
  + Category
  + Price range
  + Rating
  + Availability
* Sorting:
  + Price
  + Popularity
  + Latest
  + Rating

#### Product Details

* Information:
  + Multiple images
  + Detailed description
  + Specifications
  + Price
  + Stock status
* Features:
  + Image zoom
  + Color selection
  + Size selection
  + Quantity selection
* Actions:
  + Add to cart
  + Buy now
  + Add to wishlist

### 3.3 Shopping Cart

#### Cart Management

* Features:
  + Add/Remove items
  + Update quantities
  + Save for later
  + Clear cart
* Display:
  + Product details
  + Unit price
  + Subtotal
  + Total items
* Calculations:
  + Subtotal
  + Tax
  + Shipping
  + Total

#### Checkout Process

1. Cart Review
   * Item list
   * Quantities
   * Prices
   * Total
2. Shipping Information
   * Address details
   * Shipping method
   * Delivery options
3. Payment
   * Multiple methods
   * Secure processing
   * Order summary
4. Confirmation
   * Order number
   * Email confirmation
   * Tracking info

### 3.4 Order Management

#### Customer View

* Order List:
  + Order number
  + Date
  + Status
  + Total
* Order Details:
  + Items
  + Shipping info
  + Payment info
  + Status updates

#### Admin View

* Order Processing:
  + View orders
  + Update status
  + Process refunds
  + Generate invoices
* Order Analytics:
  + Sales reports
  + Product performance
  + Customer insights

### 3.5 User Profile

#### Personal Information

* View/Edit:
  + Name
  + Email
  + Phone
  + Password
* Address Book:
  + Multiple addresses
  + Default address
  + Address types

#### Order History

* View:
  + Past orders
  + Order status
  + Reorder option
* Track:
  + Current orders
  + Shipping status
  + Delivery updates

## 4. User Interface Specifications

### 4.1 Layout Components

#### Header

* Logo
* Search bar
* Navigation menu
* Cart icon
* User menu

#### Footer

* Company info
* Quick links
* Social media
* Newsletter signup

#### Navigation

* Categories menu
* User account
* Help/Support
* Special offers

### 4.2 Page Templates

#### Home Page

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#### Product List Page

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#### Product Detail Page

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## 5. Business Rules

### 5.1 Pricing Rules

* Regular pricing
* Discount pricing
* Bulk pricing
* Special offers
* Coupon codes

### 5.2 Inventory Rules

* Stock management
* Low stock alerts
* Out of stock handling
* Backorder rules

### 5.3 Shipping Rules

* Shipping methods
* Shipping zones
* Free shipping rules
* Handling fees

### 5.4 Tax Rules

* Tax calculation
* Tax zones
* Tax exemptions
* Digital goods

## 6. Error Handling

### 6.1 User Errors

* Invalid input
* Missing fields
* Incorrect format
* Duplicate entries

### 6.2 System Errors

* Network issues
* Server errors
* Database errors
* Integration errors

## 7. Performance Requirements

### 7.1 Response Times

* Page load: < 2s
* Search: < 1s
* Cart update: < 500ms
* Checkout: < 3s

### 7.2 Concurrent Users

* Peak load: 1000 users
* Average load: 200 users
* Response time degradation: < 20%

## 8. Security Requirements

### 8.1 Data Protection

* Personal data encryption
* Payment data security
* Session management
* Access control

### 8.2 Transaction Security

* Secure checkout
* Payment verification
* Fraud detection
* Order validation

## 9. Integration Requirements

### 9.1 Payment Gateway

* Credit/Debit cards
* Digital wallets
* Bank transfers
* COD

### 9.2 Shipping Integration

* Multiple carriers
* Rate calculation
* Tracking integration
* Label generation

## 10. Reporting Requirements

### 10.1 Sales Reports

* Daily sales
* Product performance
* Category analysis
* Revenue metrics

### 10.2 Customer Reports

* Purchase history
* Customer behavior
* Demographics
* Satisfaction metrics

## 11. Compliance Requirements

### 11.1 Legal Compliance

* Terms of service
* Privacy policy
* Return policy
* Shipping policy

### 11.2 Industry Standards

* PCI compliance
* Data protection
* Accessibility
* Security standards