

# Functional Requirements Specification (FRS)

## E-commerce Platform (opencart.com)

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**Website Name:** opencart.com

### 1. Introduction

**Purpose:**

The purpose of this document is to define the functional and non-functional requirements of the opencart.com E-commerce Platform. This document acts as a reference for development, testing, and client approval.

**Scope:**

**In Scope:**

- User Account Management (Registration, Login, Password Reset)
- Product Browsing and Shopping Cart Management
- User Profile Management
- Payment Processing and Order Placement

**Out of Scope:**

- Mobile Native Applications
- Advanced Analytics and AI Recommendations
- Multi-Vendor Marketplace Features

**Definitions / Acronyms:**

FRS – Functional Requirements Specification

P0 – Critical Priority

P1 – High Priority

### 2. Overall Description

**User Roles:**

- Guest User – Can browse and search products
- Registered Customer – Can place orders and manage profile
- Administrator – Manages products and orders

**Operating Environment:**

Web-based application accessible via modern browsers (Chrome, Firefox, Edge).

**Assumptions & Dependencies:**

- Third-party payment gateway integration is available
- Email service configured for password reset notifications

### 3. Functional Requirements

#### 3.1 Module: User Account

FR01: The system shall allow users to register using name, email, and password. (P0)

Validation: Validate email format and password complexity.

FR02: The system shall allow registered users to log in securely. (P0)

Validation: Allow login only with valid credentials.

FR04: The system shall allow users to reset passwords via registered email. (P1)

Validation: A reset link or token must be sent to the user's email.

#### 3.2 Module: Shopping

FR05: Users shall be able to search products using keywords. (P1)

Validation: Display results based on title and description relevance.

FR06: Users shall be able to add products to cart and place orders. (P0)  
Validation: Ensure correct price calculation and checkout flow.

### 3.3 Module: Profile

Users shall be able to view and update personal details and addresses. (P1)

### 3.4 Module: Payments

The system shall integrate with a secure payment gateway. (P0)

## 4. Non-Functional Requirements

Security: All passwords must be encrypted using BCrypt or similar.

Performance: Product search results must load within 2 seconds.

Scalability: System must support up to 1,000 concurrent users.

## 5. System Interfaces

### User Interface:

Responsive web interface with Home, Product, Cart, Checkout, and Profile pages.

### External Interfaces:

- Payment Gateway APIs
- Email Services for notifications

## 6. Approval Sign-off

Project Manager | Lead Developer | Client | QA

**Status:** Approved / Approved with Comments / Rejected