

Functional Requirements Specification (FRS)

ECommerce Platform (opencart.com)

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1. Introduction

Purpose:

The purpose of this document is to define the functional and non-functional requirements of the opencart.com ECommerce 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

FR■01: The system shall allow users to register using name, email, and password. (P0)

Validation: Validate email format and password complexity.

FR■02: The system shall allow registered users to log in securely. (P0)

Validation: Allow login only with valid credentials.

FR■04: 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

FR■05: Users shall be able to search products using keywords. (P1)

Validation: Display results based on title and description relevance.

FR■06: 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