Product Requirements Document (PRD): E-Commerce Platform

# Overview

## Purpose

To develop a scalable, secure, and user-friendly e-commerce platform that enables customers to browse products, make purchases, manage orders, and perform related actions.

## Target Users

- Consumers (Guest & Registered Users)  
- Sellers / Merchants  
- Admin (Platform Manager)

# Features & Requirements

## User Registration & Authentication

* Email/password and social login (Google, Facebook)
* Forgot password flow
* Profile management
* Test Cases:  
  - Register with valid/invalid data  
  - Login/logout flow  
  - Password reset scenarios

## Product Catalog

* Product categories and subcategories
* Product details page
* Search & filters
* Test Cases:  
  - View list/details  
  - Search  
  - Apply filters

## Shopping Cart

* Add/remove/update items
* Subtotal calculation
* Cart persistence
* Test Cases:  
  - Add/remove/update item  
  - Quantity check  
  - Cart persistence

## Checkout & Payments

* Shipping address input
* Payment gateway integration
* Order summary and confirmation
* Test Cases:  
  - Checkout scenarios  
  - Payment success/failure  
  - Email confirmation

## Order Management

* View order history
* Track delivery status
* Cancel and return items
* Test Cases:  
  - View/track/cancel/return orders

## Wishlist

* Add/remove products
* View wishlist
* Test Cases:  
  - Wishlist add/remove  
  - Persistence

## Product Reviews & Ratings

* Add/edit/delete reviews
* Average ratings
* Test Cases:  
  - Submit/edit/delete review  
  - View reviews

## Admin Dashboard

* Manage users, products, orders
* View analytics
* Test Cases:  
  - Admin login  
  - CRUD operations  
  - Unauthorized access

## Seller Panel

* Seller registration
* Manage products
* View order status
* Test Cases:  
  - Register/add/edit/delete  
  - Order notifications

## Promotions & Discounts

* Apply discount codes
* Show active deals and flash sales
* Test Cases:  
  - Promo code scenarios  
  - Discount display

# Non-Functional Requirements

- Performance: Page load < 2s  
- Scalability: Support 1M+ users  
- Security: HTTPS, encrypted passwords, secure payments  
- Accessibility: WCAG 2.1 AA compliance  
- Responsiveness: Mobile and desktop compatibility

# Test Scenarios Summary

|  |  |  |
| --- | --- | --- |
| Area | Positive Scenarios | Negative Scenarios |
| User Auth | ✅ Login/Register | ❌ Invalid login |
| Product Catalog | ✅ Search/Filters | ❌ No match |
| Cart & Checkout | ✅ Add/Pay | ❌ Empty cart |
| Order Management | ✅ Cancel/Track | ❌ Invalid status |
| Reviews | ✅ Submit/Edit | ❌ No purchase |
| Admin | ✅ CRUD operations | ❌ Unauthorized |

# Timeline & Milestones

* Requirement Finalization: May 5, 2025
* Design Completion: May 25, 2025
* MVP Development Start: June 1, 2025
* Internal Testing: July 15, 2025
* Beta Launch: Aug 1, 2025
* Public Launch: Sept 15, 2025

# Dependencies

- Payment Gateway (Stripe, Razorpay)  
- Email & Notification Services  
- Hosting (AWS/GCP)  
- CI/CD Pipeline for automated deployments

# KPIs

- Conversion Rate  
- Cart Abandonment Rate  
- Average Order Value (AOV)  
- Customer Satisfaction (CSAT)  
- Return Rate