

Project Design Phase-II

Solution Requirements (Functional & Non-functional)

Date	
Team ID	PNT2025TMID09483
Project Name	ShopEZ: E-commerce Application
Maximum Marks	4 Marks

**Project Description:** ShopEZ is your one-stop destination for effortless online shopping. With a user-friendly interface and a comprehensive product catalog, finding the perfect items has never been easier. Seamlessly navigate through detailed product descriptions, customer reviews, and available discounts to make informed decisions. Enjoy a secure checkout process and receive instant order confirmation. For sellers, our robust dashboard provides efficient order management and insightful analytics to drive business growth. Experience the future of online shopping with ShopEZ today.

Functional Requirements:

Following are the functional requirements of the proposed solution.

Functional Requirements -- E-commerce Application

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Authentication & Management	User registration and login
		Password reset functionality
		OAuth login using Google / Facebook
		User profile management
FR-2	Product Discovery & Catalog	Browse products by categories
		Advanced search and filtering
		Product details with descriptions and images
		Customer reviews and ratings
FR-3	Personalized Shopping Experience	Personalized product recommendations
		Wishlist management
		Recently viewed products
		Discount and offer notifications
FR-4	Shopping Cart & Checkout	Add/remove items from cart
		Seamless checkout process
		Multiple payment options
		Order confirmation and tracking
FR-5	Seller Dashboard & Management	Seller registration and verification
		Product listing and inventory management
		Order processing and fulfillment
		Sales analytics and reporting
FR-6	Order Management System	Order tracking for customers
		Order status updates
		Return and refund processing
		Customer support integration

### Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

NFR No.	Non-Functional Requirement	Description
NFR-1	Usability	The platform should offer an intuitive and user-friendly interface that enables effortless product discovery and seamless navigation for users of all technical skill levels.
NFR-2	Security	All data transfers must be encrypted using HTTPS/TLS protocols. Implement secure payment processing with PCI DSS compliance. Role-based access control for customers, sellers, and administrators.
NFR-3	Reliability	Ensure product catalog, checkout process, payment processing, and order management work reliably under all conditions with minimal downtime.
NFR-4	Performance	Product pages should load within 2 seconds. Checkout process should complete within 3 seconds. Search results should appear instantly with auto-suggestions.
NFR-5	Availability	The system should maintain 99.9% uptime across all services including product catalog, payment gateway, and seller dashboard.
NFR-6	Scalability	Should support high traffic during peak shopping periods and rapid business growth through microservices architecture and cloud-based infrastructure.
NFR-7	Compatibility	Cross-platform compatibility across web browsers, mobile devices (iOS/Android), and responsive design for various screen sizes.