

Requirement Gathering and Analysis Phase

Solution Requirements (Functional & Non-functional)

Date	20 July 2025
Team ID	PNT2025TMID09656
Project Name	ShopEZ: E-commerce Application
Maximum Marks	4 marks

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration via Form, Google, or Facebook
FR-2	User Authentication	Login, Logout, Session Handling
FR-3	Product Discovery	Browse Categories, Search, Filter, Sort
FR-4	Personalized Recommendations	View Recommended Products Based on History & Preferences
FR-5	Shopping Cart	Add/Remove Items, Quantity Update
FR-6	Seamless Checkout	Address Input, Payment Gateway Integration, Order Placement
FR-7	Order Confirmation	Instant Confirmation via Email & Dashboard
FR-8	Seller Dashboard	Product Listings, Order Management, Inventory Updates
FR-9	Business Analytics	Sales Trends, Top Products, Customer Insights

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	Clean and user-friendly interface for buyers and sellers, intuitive navigation, mobile responsive
NFR-2	Security	Secure transactions with HTTPS, OAuth2, JWT, and encrypted payment processes
NFR-3	Reliability	Order and payment processes must complete without error, implement error recovery mechanisms
NFR-4	Performance	Pages should load under 2 seconds, use caching (Redis), and optimized queries
NFR-5	Availability	99.9% uptime guaranteed using cloud-based infrastructure with auto-scaling and failover systems
NFR-6	Scalability	Able to handle increasing traffic and user load through microservices and horizontal scaling