Project Design Phase-II
Solution Requirements (Functional & Non-functional)

Date	19 February 2026
Team ID	LTVIP2026TMIDS78575
Project Name	shopsmart: your digital grocery store experience
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 through Form (Name, Email, Password) Password Encryption (bcrypt) Validation of Email & Password
FR-2	User Login & Authentication	Login using Email & Password JWT Token Generation Role-based Login (Admin/User)
FR-3	Admin Login	Predefined Admin Credentials (Backend Only) Admin Authentication via JWT
FR-4	Product Management (Admin)	Add New Product Edit Product Details Delete Product Manage Stock Quantity
FR-5	Product Browsing (User)	View Product List Search Products Filter by Category View Product Details
FR-6	Cart Management	Add Item to Cart Update Quantity Remove Item View Cart Summary
FR-7	Order Management	Place Order Calculate Total Amount Reduce Product Stock After Order Cancel Order View Order History
FR-8	Payment Handling	Select Payment Method (COD / Online) Payment Status Update
FR-9	Review & Rating	Add Product Review View Reviews

FR-10	Admin Dashboard	View All Users View All Orders Generate Sales Report

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	The application must have a clean, responsive UI for desktop and mobile devices.
NFR-2	**Security**	Passwords must be encrypted; JWT authentication must secure protected routes.
NFR-3	**Reliability**	System should correctly process orders without data loss.
NFR-4	**Performance**	API response time should be less than 2 seconds under normal load.
NFR-5	**Availability**	Application should be accessible 24/7 with minimal downtime.
NFR-6	**Scalability**	System should handle increasing number of users and products efficiently.