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

Date	18 February 2026
Team ID	LTVIP2026TMIDS24412
Project Name	Smart Sorting: Transfer learning for identifying rotten fruits and vegetables
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 Registration through Gmail Registration through LinkedIN
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	Image Upload	Upload fruit/vegetable images via camera or file picker Support for batch upload
FR-4	Image classification	Use Transfer Learning model to classify input as fresh or rotten Display classification results with confidence score
Fr-5	Dataset Management	Admin panel for managing training images Option to retrain the model with updated dataset
Fr-6	Results Dashboard	View recent predictions Filter results by date, category, and freshness status
Fr-7	FeedBack System	Users can provide feedback on classification accuracy
Fr-8	Report Generation	Generate downloadable reports (CSV or PDF) of analysis results

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	The interface should be user-friendly and intuitive for both tech-savvy and technical users such as farmers or shopkeepers
NFR-2	**Security**	User data and uploaded images should be securely stored. Access to dataset management must be role-based.
NFR-3	**Reliability**	the system should perform consistently, ensuring accurate predictions under normal usage.
NFR-4	**Performance**	The model should return classification results within 2 seconds for a single image.

NFR-5	**Availability**	The system should be available 24/7 with minimum downtime, especially during peak usage hours.
NFR-6	**Scalability**	The system should support scaling for increased user load or larger datasets in the future.