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

Date	26 June 2025
Team ID	LTVIP2025TMID44653
Project Name	Transfer Learning-Based Classification of Poultry Diseases for Enhanced Health Management
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	Image Upload & Preprocessing	Upload poultry image Validate image format (e.g., JPG/PNG) Resize and normalize image for model
FR-2	Disease Prediction (Model Inference)	Load pretrained ResNet-18 model Run prediction Show output with confidence score
FR-3	Result Logging & Storage	Save image and prediction locally (e.g., SQLite or CSV) Record timestamp and result
FR-4	User Interface	Provide a simple web interface using Flask Upload button and result display Show loading/processing state

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	UI should be clean, simple, and easy to understand by farmers or veterinarians.
NFR-2	**Security**	Only images should be accepted; handle exceptions and errors securely.
NFR-3	**Reliability**	The model should produce consistent and accurate results for known diseases.
NFR-4	**Performance**	Prediction should take <3 seconds per image; UI should remain responsive.
NFR-5	**Availability**	The app should be available during testing, offline or localhost-based.
NFR-6	**Scalability**	Should support easy upgrade to more models or a cloud-based version in future.