Project Design Phase
Proposed Solution Template

Date	28 June 2025
Team ID	LTVIP2025TMID41159
Project Name	**Transfer Learning-Based Classification of Poultry Diseases for Enhanced Health Management**
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in the proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Poultry farmers, especially in rural and remote areas, lack timely access to veterinary support and disease diagnostics. This leads to delayed treatment, increased bird mortality, reduced productivity, and significant economic losses.
2.	Idea / Solution description	The solution is a mobile-based AI application powered by a **Transfer Learning model** (e.g., MobileNetV2) to classify poultry diseases—Salmonella, New Castle Disease, Coccidiosis, or Healthy. The user (farmer) inputs symptoms and conditions, and receives instant diagnosis and treatment suggestions.
3.	Novelty / Uniqueness	The solution combines **mobile accessibility**, **real-time ML inference**, and **cloud-based data handling** to create an affordable diagnostic system. Unlike traditional veterinary services, it works **offline (with cached models)** and is tailored to rural needs.
4.	Social Impact / Customer Satisfaction	Helps small and marginal poultry farmers by reducing dependency on veterinarians, improving livestock health, and increasing income. It also enhances veterinary education by offering real-world simulation tools.
5.	Business Model (Revenue Model)	- **Freemium model**: Basic diagnosis is free; advanced analytics or vet consultations can be paid. - **B2B partnerships** with poultry farms, co-operatives, and agri-tech platforms. - **Sponsored content** or disease prevention kits linked within the app.
6.	Scalability of the Solution	The app and backend are designed using scalable technologies (Firebase, TensorFlow Lite). The model can be extended to more diseases or animal species, integrated into other agri-health systems, or localized into

		multiple languages to reach a broader audience.