Project Design Phase
Proposed Solution Template

Date	15 July 2025
Team ID	LTVIP2025TMID42682
Project Name	Transfer-learning-based-poultry-disease-classification-system
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 diseases spread quickly, causing major losses and threatening farmers' livelihoods. Limited veterinary access, especially in rural areas, makes timely and accurate diagnosis difficult. Manual methods are slow and error-prone, leading to poor disease control and higher mortality.
2.	Idea / Solution description	This project introduces an automated poultry disease detection system using transfer learning in deep learning. A fine-tuned CNN model analyzes poultry images to identify diseases accurately in real time. Accessible via a web or mobile app, it enables farmers and vets to upload images and get instant diagnostic results for early intervention.
3.	Novelty / Uniqueness	Transfer learning improves accuracy by leveraging large public datasets, even with limited poultry-specific data. Enables fast, automated diagnosis without expert veterinary input. Combines AI image analysis with user-friendly interfaces for easy use by farmers. Supports multiple diseases and can adapt to new ones as more data is added.
4.	Social Impact / Customer Satisfaction	The system enables early detection of poultry diseases, safeguarding farmer livelihoods and food supply chains. It reduces reliance on limited veterinary resources, offers fast and reliable results through an easy-to-use interface, and helps prevent zoonotic disease transmission, improving overall animal and public health.
5.	Business Model (Revenue Model)	The project adopts a freemium model—offering free basic diagnosis to farmers, with premium features like advanced analytics and bulk processing for clinics and enterprises. Revenue is generated through subscriptions,

		partnerships with agencies and NGOs, and monetizing data insights for research and commercial use.
6.	Scalability of the Solution	The AI model is scalable, supporting more users and diseases through retraining with new data. Cloud deployment ensures global access with minimal infrastructure. Its modular design enables integration with farm platforms and expansion to other livestock, while multi-language support allows regional localization.