📄 **Problem Statement – Poultry Disease Classifier**

📅 **Date**: 26 June 2025
🆔 **Team ID**: LTVIP2025TMID36880
📛 **Project Name**: Transfer Learning Based Classification of Poultry Diseases for Enhanced Health Management
🎯 **Maximum Marks**: 2 Marks

🐔 **Problem Statement:**

The poultry sector is one of the fastest-growing agricultural industries, especially in developing countries like India. Despite this growth, a major challenge that continues to plague poultry farmers is the effective and timely diagnosis of infectious diseases.

Diseases such as **Newcastle Disease**, **Coccidiosis**, and **Salmonella** are not only common but also highly contagious and deadly if not diagnosed early. These diseases can spread quickly through flocks, leading to massive economic losses for farmers and posing a threat to food safety and public health.

Currently, diagnosis typically involves physical inspections by trained veterinarians or laboratory-based tests, which are often **expensive**, **time-consuming**, and **unavailable** in rural regions. Moreover, due to limited veterinary infrastructure and low disease awareness among small-scale poultry farmers, diseases often go undetected until it's too late.

This results in **increased bird mortality**, **reduced egg and meat production**, and **heavy financial losses**. Farmers often rely on trial-and-error medication, which leads to misuse of antibiotics and further health complications.

Therefore, there is a **clear and urgent need** for a solution that empowers farmers with an easy-to-use, low-cost, and rapid disease detection system. The solution must require minimal technical knowledge and be operable on basic devices such as mobile phones.

An **AI-powered, image-based classification tool** that can be deployed via a web interface provides a promising approach to address this problem. It would enable farmers to upload poultry images and receive near-instant feedback on the likely disease condition, allowing for timely treatment and containment.