Project Design Phase
Proposed Solution Template

Date	15 February 2026
Team ID	LTVIP2026TMIDS52600
Project Name	Introduction to Smart Sorting – Transfer Learning for Identifying Rotten Fruits and Vegetables
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)	Manual sorting of fruits and vegetables is time-consuming and inaccurate. Rotten items may be mixed with fresh ones, causing financial loss and customer dissatisfaction.
2.	Idea / Solution description	We propose an AI-based smart sorting system using Transfer Learning. The system will analyse images of fruits and vegetables and automatically classify them as Fresh or Rotten. It reduces human effort and improves accuracy.
3.	Novelty / Uniqueness	Uses Transfer Learning for better accuracy. Fast image-based detection. Can be used in shops, markets, and warehouses. Reduces food wastage.
4.	Social Impact / Customer Satisfaction	Reduces food waste. Improves food quality for customers. Helps farmers and shop owners avoid losses. Increases trust and satisfaction.
5.	Business Model (Revenue Model)	Subscription model for shops and supermarkets. One-time installation cost for smart sorting system. Premium version with advanced analytics. Maintenance service charges.
6.	Scalability of the Solution	Can be expanded to identify multiple types of fruits and vegetables. Can be deployed in large supermarkets and warehouses. Can be integrated with automated conveyor belt systems.