Project Design Phase
Proposed Solution Template

Date	19 February 2026
Team ID	LTVIP2026TMIDS83873
Project Name	**Smart-Sorting-Transfer-Learning-forIdentifying-Rotten-Fruits-and-Vegetables**
Maximum Marks	2 Marks

Proposed Solution for smartsor tingApp

S. No.	Parameter	Description
1	**Problem Statement** (Problem to be solved)	Manual sorting of fruits and vegetables is labor-intensive, inaccurate, and leads to increased food waste and labor costs. There's no simple tech-based tool for real-time freshness detection.
2	**Idea / Solution Description**	Smart Sorting is a deep learning-based web app that allows users to upload an image and get a classification — Fresh or Rotten — using a VGG16 model. It is built using Flask and designed for ease of use in supermarkets, warehouses, or homes.
3	**Novelty / Uniqueness**	- Uses pre-trained AI model (VGG16) - Live prediction from uploaded images - Lightweight Flask web backend - Real-time usability with minimal resources
4	**Social Impact / Customer Satisfaction**	Reduces food waste through early detection - Improves efficiency in supermarkets and industries - Supports consumer awareness in smart homes
5	**Business Model (Revenue Model)**	- - Open-source educational tool - Future scope: License to supermarkets, agritech companies - Could be integrated with hardware (smart fridge)
6	**Scalability of the Solution**	Can be deployed on cloud (Render) - Extendable to camera integration, mobile apps - Works across retail, warehouse, and home environments