Project Design Phase-II
Technology Stack (Architecture & Stack)

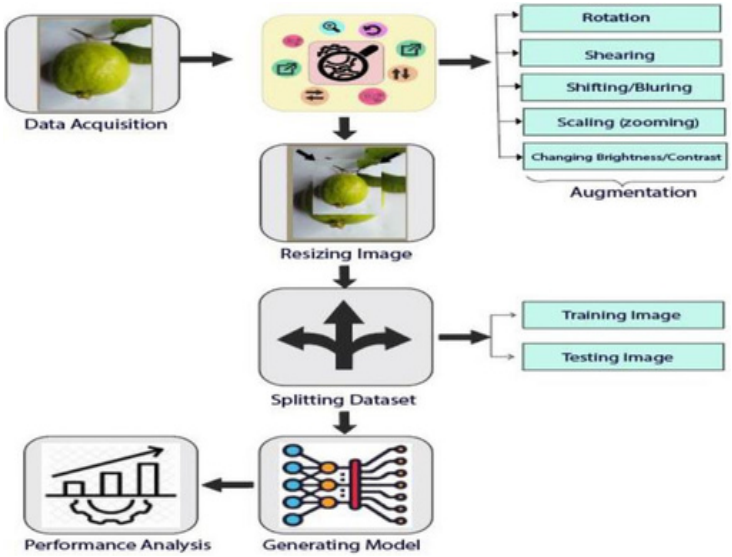
Date	16 February 2026
Team ID	LTVIP2026TMIDS91602
Project Name	Smart sorting
Maximum Marks	4 Marks

Technical Architecture:

The deliverable includes the architectural diagram (to be attached separately or drawn using tools like draw.io or Lucidchart) and the information filled in Table 1 and Table 2 below.

Example Scenario:

AI-based fruit and vegetable quality detection system deployed on a lightweight web app accessible to local vendors, using a trained transfer learning model for rotten/fresh classification.



Guidelines:

Include all the processes (As an application logic / Technology Block)
Provide infrastructural demarcation (Local / Cloud)
Indicate external interfaces (third party API's etc.)
Indicate Data Storage components / services
Indicate interface to machine learning models (if applicable)

Table-1 : Components & Technologies:

S.No	***Component***	***Description***	***Technology*** . HTML, CSS, JavaScript
1.	User Interface	Web interface for image upload and result view	Python, Flask
2.	Application Logic-1	Image handling and routing	TensorFlow, Keras, VGG16 (Transfer Learning)
3.	Application Logic-2	Fruit classification logic	Local File System
4.	File Storage	To temporarily store uploaded images	Object Recognition Model, etc.
5.	Machine Learning Model	Classify fresh vs. rotten fruits/vegetables	Pretrained VGG16 model (.h5)
6.	Infrastructure (Server / Cloud)	Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	

Table-2: Application Characteristics:

S.No	***Characteristics***	***Description***	***Technology***
1.	Open-Source Frameworks	Frameworks used for ML and web backend	Flask, TensorFlow, Keras
2.	Scalable Architecture	Clear separation of model, logic, and UI	3-tier (UI, App Logic, Model
3.	Availability	Runs locally on student system	Localhost (127.0.0.1)
4.	Performance	Lightweight model and fast response	MobileNetV2 or optimized VGG16