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

Date	18 February 2026
Team ID	LTVIP2026TMIDS62006
Project Name	Smart Sorting: Transfer learning for identifying rotten fruits and vegetables
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

Example: Order processing during pandemics for offline mode

Reference: https://developer.ibm.com/patterns/ai-powered-backend-system-for-order-processing-during-pandemics/
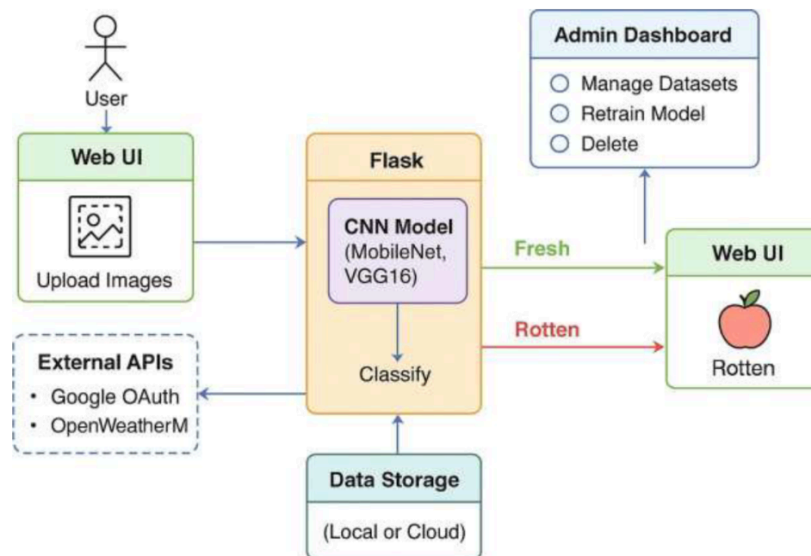
Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	Programming Language	Core development and model implementation	Python
2.	Deep Learning Framework	Model building and training	Tensorflow/Keras
3.	Pre-trained Model	Transfer learning for image classification	MobileNetV2
4.	Data Processing	Image array handling and numerical operations	Numpy
5.	Model Evaluation	Confusion matrix and classification report	Scikit-learn
6.	Visualization	Performance visualization	Matplotlib, Seaborn
7.	Backend Framework	Web application backend	Flask
8.	Frontend	User interface	HTML, CSS
9.	Development Friendly	Project development and execution	Anaconda, VS Code

Table-2: Application Characteristics:

S.No	Characteristics	Description
1.	Accuracy	High classification accuracy using transfer learning
2.	Automation	Automatically detects fresh vs rotten fruits
3.	User-Friendly	Simple image upload interface
4.	Scalability	Can be extended to more fruit categories
5.	Efficiency	Reduces manual sorting effort

S.No	Characteristics	Description
6.	Real-Time Capability	Provides instant prediction results
7.	Reliability	Consistent output without human error

References:

https://c4model.com/

https://developer.ibm.com/patterns/online-order-processing-system-during-pandemic/

https://www.ibm.com/cloud/architecture

https://aws.amazon.com/architecture

https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d