Project Planning Phase
Project Planning Template (Product Backlog, Sprint Planning, Stories, Story points)

Date	27 June 2025
Team ID	LTVIP2025TMID41045
Project Name	Smart Sorting:Transfer Learning for Identifying rotten fruits and vegetables
Maximum Marks	5 Marks

Product Backlog, Sprint Schedule, and Estimation (4 Marks)

product backlog and sprint schedule

	Functional Requirement (Epic)	**User Story Number**	**User Story / Task**	**Story Points**	**Priority**	**Team Members**
Sprint-1	Data Collection & Preprocessing	USN-1	As a developer, I want to collect images of fresh and rotten fruits and vegetables.	2	High	M.Mohan Kumar
Sprint-1		USN-2	As a developer, I want to preprocess the dataset for training (resize, normalize, augment).	1	High	M.Mohan Kumar
Sprint-1		USN-3	As a developer, I want to resize and normalize the images.	2	High	M.Mohan Kumar
Sprint-1		USN-4	As a developer, I want to split images into training and test sets.	1	High	K. Yashwanth Kumar
Sprint-1		USN-5	As a developer, I want to apply data augmentation (flip, rotate, etc.).	2	High	K. Yashwanth Kumar

Sprint-1		USN-6	As a developer, I want to perform label encoding for classification.	2	High	K. Yashwanth Kumar
Sprint-2	Model Training & Evaluation	USN-7	As a developer, I want to load the pretrained VGG16 model.	2	High	G.Kethana Reddy
Sprint-2		USN-8	As a developer, I want to modify the final layers for classification.	2	Medium	G.Kethana Reddy
Sprint-2		USN-9	As a developer, I want to train the model on the dataset.	3	High	G.Kethana Reddy
Sprint-2		USN-10	As a developer, I want to save the trained model.	1	Medium	M.Soujanya
Sprint-2		USN-11	As a developer, I want to test the model on unseen data.	2	High	M.Soujanya
Sprint-2		USN-12	As a developer, I want to generate accuracy, precision, and recall metrics.	2	Medium	M.Soujanya
Sprint-3	Deployment & Application Interface	USN-13	As a developer, I want to create an HTML page for image upload.	2	Medium	T. V. Kavya
Sprint-3		USN-14	As a developer, I want to display prediction results.	2	Medium	T. V. Kavya

Sprint-3		USN-15	As a developer, I want to develop a Flask backend.	3	High	T. V. Kavya
Sprint-3		USN-16	As a developer, I want to connect the frontend to the backend.	2	Medium	T. V. Kavya
Sprint-3		USN-17	As a developer, I want to setup and test the final application.	2	High	T. V. Kavya

Project Tracker, Velocity & Burndown Chart: (4 Marks)

Sprint	**Total Story Points**	**Duration**	**Sprint Start Date**	**Sprint End Date (Planned)**	**Story Points Completed (as on Planned End Date)**	**Sprint Release Date (Actual)**
Sprint-1	10	5 Days	6 June 2025	11 June 2025	10	11 June 2025
Sprint-2	12	5 Days	13 June 2025	18 June 2025	12	18 June 2025
Sprint-3	13	5 Days	21 June 2025	27 June 2025	13	27 June 2025

Velocity:

Imagine we have a 10-day sprint duration, and the velocity of the team is 20 (points per sprint). Let's calculate the team's average velocity (AV) per iteration unit (story points per day)

$$AV = \frac{sprint\ duration}{velocity} = \frac{20}{10} = 2$$

Velocity

- Velocity = Total Story Points Completed / Number of Sprints
- Total Story Points = 10 + 12 + 13 = **35**
- Number of Sprints = 3
- **Velocity = 35 / 3 = 11.67 ≈ 12 (Story Points per Sprint)**