Project Planning Phase

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

Date	19 February 2025
Team ID	LTVIP2026TMIDS89552
Project Name	Smart Sorting: Transfer Learning for Identifying Rotten Fruits and Vegetables
Maximum Marks	5 Marks

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

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Data Collection & Organization	USN-1	As a developer, I will collect and organize fruit & vegetable images into class-wise folders.	3	High	Team
Sprint-1	Data Preprocessing	USN-2	As a developer, I will resize images and apply normalization.	3	High	Team
Sprint-1	Data Augmentation	USN-3	As a developer, I will apply rotation, flipping and zoom for better generalization.	2	Medium	Team
Sprint-2	Model Selection	USN-4	As a developer, I will use pre-trained VGG16 for transfer learning.	2	High	Team
Sprint-2	Model Training	USN-5	As a developer, I will freeze base layers and train the classification head.	5	High	Team
Sprint-3	Model Evaluation	USN-6	As a developer, I will evaluate model using accuracy and validation loss.	3	High	Team
Sprint-3	Confusion Matrix	USN-7	As a developer, I will generate confusion matrix and performance graphs.	3	Medium	Team
Sprint-4	Web Integration	USN-8	As a user, I can upload an image using Flask web interface.	5	High	Team
Sprint-4	Prediction Display	USN-9	As a user, I can view predicted class.	3	High	Team
Sprint-4	UI Enhancement	USN-10	As a user, I can interact with a clean responsive interface.	2	Medium	Team

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	8	4 Days	05 Feb 2026	08 Feb 2026	8	08 Feb 2026
Sprint-2	9	4 Days	09 Feb 2026	12 Feb 2026	9	12 Feb 2026
Sprint-3	7	4 Days	13 Feb 2026	16 Feb 2026	7	16 Feb 2026
Sprint-4	8	4 Days	17 Feb 2026	20 Feb 2026	8	20 Feb 2026

Total Story Points:

8 + 9 + 7 + 8 = **32 Story Points**

Velocity Calculation:

Velocity = Total Story Points / Number of Sprints=$32/4 = 8$

Velocity = 8 Story Points per Sprint

Average Velocity Per Day:

Each sprint duration = 4 days=$8/4 = 2$

Team completes approximately **2 Story Points per Day**

Burndown Chart: