Project Planning Phase

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

Date	27 June 2025
Team ID	LTVIP2025TMID38995
Project Name	Revolutionizing Liver Care : Predicting Liver Cirrhosis Using Adavanced Machine Learning
Maximum Marks	5 Marks

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

Use the below template to create product backlog and sprint schedule

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Data Collection & Preprocessing	USN-1	As a data analyst, I can collect and load the liver patient dataset into the project.	2	High	Data Analyst
Sprint-1	Data Collection & Preprocessing	USN-2	As a data engineer, I can handle missing and categorical values to clean the dataset.	3	High	Data Engineer
Sprint-2	Model Building	USN-3	As a machine learning engineer, I can train a Random Forest model and evaluate it with accuracy metrics.	5	High	ML Engineer
Sprint-2	Model Testing	USN-4	As a tester, I can test the model with new data and improve performance if needed.	3	Medium	ML Tester
Sprint-3	Web Interface	USN-5	As a frontend developer, I can design a web form to accept clinical test inputs.	3	High	Frontend Developer
Sprint-3	Backend & Integration	USN-6	As a backend developer, I can integrate the form with Flask and connect it to the prediction model.	3	High	Backend Developer
Sprint-3	Testing & Finalization	USN-7	As a QA engineer, I can verify form inputs, outputs, and add a disclaimer for safe use.	2	Medium	**QA Engineer**

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	20	6 Days	29 May 20225	4 June 2025	20	5 June 2025
Sprint-2	20	6 Days	6 June 2025	12 June 2025	18	13 June 2025
Sprint-3	20	6 Days	14 June 2025	20 June 2025	16	21 June 2025
Sprint-4	20	6 Days	22 June 2025	28 June 2025	20	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)

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

Burndown Chart:

A burn down chart is a graphical representation of work left to do versus time. It is often used in agile software development methodologies such as Scrum. However, burn down charts can be applied to any project containing measurable progress over time.