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

The structured development of the Liver Cirrhosis Prediction System using agile methodology. The work was divided into sprints, with each sprint focusing on specific tasks like data preprocessing, model training, and evaluation. Story points were assigned to each task to estimate effort, and velocity was calculated to track team progress. This planning helped ensure timely, organized, and efficient project execution.

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 & Preprocessing	USN-1	As a developer, I want to clean and prepare the dataset for model training	6	High	
Sprint-1	Model Training	USN-2	As a developer, I want to train ML models (Naive Bayes, SVM, RF, etc.)	8	High	
Sprint-1	Exploratory Data Analysis (EDA)	USN-3	As a developer, I want to visualize distributions and correlations in the data	6	Medium	
Sprint-2	Model Evaluation	USN-4	As a developer, I want to evaluate models using accuracy, precision, recall	6	High	
Sprint-2	Result Display	USN-5	As a user, I want to view prediction results and confidence scores	4	Medium	
Sprint-2	Report Generation	USN-6	As a user, I want to download a formatted report (PDF/DOCX) of the results	5	Medium	
Sprint-3	GitHub Hosting & Documentation	USN-7	As a team, we want to upload code and create GitHub documentation	4	High	

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	10 Days	19 May 2025	28 May 2025	20	28 May 2025
Sprint-2	15	10 Days	29 May 2025	7 June 2025	14	7 June 2025
Sprint-3	11	10 Days	9 June 2025	18 June 2025	11	18 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)

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