**Project Planning Phase**

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

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| --- | --- |
| Date | 16 June 2025 |
| Team ID | LTVIP2025TMID38618 |
| Project Name | Revolutionizing Liver Care : Predicting Liver Cirrhosis using Advanced Machine Learning Techniques |
| Maximum Marks | 5 Marks |

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)

