**Project Planning Phase**

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

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| --- | --- |
| Date | 27 June 2025 |
| Team ID | **LTVIP2025TMID35735** |
| Project Name | **Revolutionizing Liver Care : Predicting Liver Cirrhosis using Advanced Machine Learning Techniques** |
| 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 | USN-1 | As a data scientist, I want to gather and clean liver patient datasets for training the model. | 3 | High |  |
| Sprint-1 | Data Preprocessing | USN-2 | As a developer, I want to preprocess data by handling missing values, encoding, and normalization. | 3 | High |  |
| Sprint-1 | Model Development | USN-3 | As a data scientist, I will train ML models (Random Forest, XGBoost) and evaluate their performance. | 5 | High |  |
| Sprint-2 | Model Deployment | USN-4 | As a developer, I will deploy the best performing model using Flask API for predictions. | 4 | High |  |
| Sprint-2 | Frontend Interface | USN-5 | As a user, I want a simple web interface (Streamlit/HTML) to input data and receive prediction results. | 3 | Medium |  |
| Sprint-3 | Visualization Dashboard | USN-6 | As a user, I want to view model insights and prediction history in a dashboard format. | 3 | Medium |  |
| Sprint-3 | Risk Explanation | USN-7 | As a user, I want the app to explain liver disease risk level (Low/Moderate/High) based on model output. | 2 | Medium |  |
| Sprint-4 | Feedback & Monitoring System | USN-8 | As a user, I want to give feedback on predictions to help improve the model accuracy over time. | 2 | Low |  |
| Sprint-4 | Final Testing & Documentation | USN-9 | As a team, we will test the complete application and document all technical and user details. | 3 | High |  |

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

| **Sprint** | **Total Story Points** | **Duration** | **Sprint Start Date** | **Sprint End Date (Planned)** | **Story Points Completed** | **Sprint Release Date (Actual)** |
| --- | --- | --- | --- | --- | --- | --- |
| Sprint-1 | 11 | 6 Days | 28 June 2025 | 03 July 2025 | 11 | 03 July 2025 |
| Sprint-2 | 7 | 6 Days | 04 July 2025 | 09 July 2025 |  |  |
| Sprint-3 | 5 | 6 Days | 10 July 2025 | 15 July 2025 |  |  |
| Sprint-4 | 5 | 6 Days | 16 July 2025 | 21 July 2025 |  |  |

**Velocity:**

If each sprint duration is 6 days, and Sprint-1 was completed with 11 story points:

* **Velocity = 11 story points / 6 days = 1.83 story points/day**  
  Use this value to project effort in upcoming sprints.
* **Burndown Chart:**

You can plot this using tools like Excel or online generators.  
X-axis: Sprint Days (1 to 6),  
Y-axis: Story Points Remaining (starting from 11 → 0)