

## Project Planning Phase

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

|               |  |
|---------------|--|
| Date          | 15 January 2026  |
| Team ID       | LTVIP2025TMIDS66117  |
| Project Name  | Hematovision: advanced blood cell classification using transfer 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 | Registration                  | USN-1             | As a user, I can register for the application by entering my email, password, and confirming my password. | 2            | High     | Madhu, Madhumitha, SriLakshmi, Nandini |
| Sprint-1 |                               | USN-2             | As a user, I will receive confirmation email once I have registered for the application                   | 1            | High     | Madhu, Madhumitha, SriLakshmi, Nandini |
| Sprint-2 |                               | USN-3             | As a user, I can register for the application through Facebook  | 2            | Low      | Madhu, Madhumitha, SriLakshmi, Nandini |
| Sprint-1 |                               | USN-4             | As a user, I can register for the application through Gmail   | 2            | Medium   | Madhu, Madhumitha, SriLakshmi,         |

|          |       |       |  |   |      |   |
|----------|-------|-------|--|---|------|---|
|          |       |       |  |   |      | Nandini   |
| Sprint-1 | Login | USN-5 | As a user, I can log into the application by entering email & password | 1 | High | Madhu,<br>Madhumitha,<br>SriLakshmi,<br>Nandini |

**Project Planning Phase**

This document outlines the comprehensive project plan for HematoVision, an advanced blood cell classification system. The planning process adheres to agile methodologies, focusing on iterative development through sprints, detailed user stories, and precise effort estimation. This structured approach ensures clarity, efficiency, and adaptability throughout the project lifecycle.

**Product Backlog, Sprint Schedule, and Estimation**

This section details the product backlog, organized into functional epics, with user stories, estimated story points, and assigned priorities. The sprint schedule will be defined to facilitate iterative development and continuous delivery.

**Product Backlog**

| Sprint | Functional Requirement (Epic ) | User Story Number | User Story / Task | Story Points | Priority | Team Members |
|--------|--------------------------------|-------------------|-------------------|--------------|----------|--------------|
|--------|--------------------------------|-------------------|-------------------|--------------|----------|--------------|

| Sprint-1 | Registration | USN-1 | As a user, I can register for the application by entering my email, password, and confirming my password. | 2 | High | |

| Sprint-1 | Registration | USN-2 | As a user, I will receive confirmation email once I have registered for the application | 1 | High | |

| Sprint-2 | Registration | USN-3 | As a user, I can register for the application through Facebook | 2 | Low | |

| Sprint-1 | Registration | USN-4 | As a user, I can register for the application through Gmail | 2 | Medium | |

| Sprint-1 | Login | USN-5 | As a user, I can log into the application by entering email & password | 1 | High | |

### **Sprint Schedule**

This section outlines the planned sprints for the HematoVision project, detailing the objectives, duration, and key deliverables for each sprint. Each sprint will typically last two weeks, allowing for focused development and regular feedback. **Sprint 1: Core Functionality & User Authentication**

**Duration:** [Start Date] - [End Date]

#### **Objectives:**

- Implement core user registration and login functionalities.

- Ensure secure user authentication and account management.
- Set up the basic web application structure.

#### **Key Deliverables:**

- Functional user registration via email.
- User login system.
- Email confirmation for new registrations.
- Basic Flask application with home.html and result.html templates.

#### **Sprint 2: Enhanced Authentication & Model Integration**

**Duration:** [Start Date] - [End Date]

#### **Objectives:**

- Integrate social media login options (Facebook, Gmail).
- Begin integration of the MobileNetV2 model for blood cell classification.
- Develop the image upload and prediction display interface.

#### **Key Deliverables:**

- Facebook and Gmail registration/login.
- Image upload functionality.
- Initial blood cell classification display on result.html .
- blood\_cell.h5 model integrated into app.py .

#### **Sprint 3: Model Refinement & Deployment Preparation**

**Duration:** [Start Date] - [End Date]

**Objectives:**

- Refine the classification model for improved accuracy.
- Optimize the application for performance and scalability.
- Prepare the application for deployment.

**Key Deliverables:**

- Optimized blood\_cell.h5 model.
- Performance improvements in app.py .
- Deployment readiness checklist and documentation.

**Estimation Methodology**

Story points are used to estimate the effort required for each user story, reflecting complexity, risk, and effort. The team will engage in planning poker or similar techniques to collectively estimate stories, fostering shared understanding and commitment.

- **1 Point:** Very small, simple task (e.g., minor text change).
- **2 Points:** Small, straightforward task (e.g., simple UI element, basic data retrieval).
- **3 Points:** Medium complexity, requires some logic (e.g., form validation, simple API integration).
- **5 Points:** Large, more complex task (e.g., significant feature development, complex algorithm).
- **8 Points:** Very large, highly complex task (e.g., major architectural change, integrating a new external system).