Medical Inventory Management

Project Planning Phase

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

Date	1 NOV 25
Team ID	NM2025TMID04716
Project Name	Medical Inventory Management System

Project Overview

The Medical Inventory Management System project follows an agile-based development approach, emphasizing collaboration, flexibility, and incremental progress. The main objective of this phase is to plan and organize the entire development cycle into manageable sprints, each addressing specific modules such as supplier management, product tracking, purchase orders, and reporting.

This planning phase outlines the product backlog, sprint schedule, user stories, and team assignments to ensure smooth execution and timely completion of the project. Each sprint focuses on delivering a functional component of the system while maintaining overall integration and performance.

Product Backlog and Sprint Schedule

The product backlog serves as the foundation for development. It includes all functional requirements categorized under user management, order processing, stock updates, and reporting. The team prioritized tasks based on their business importance and technical dependencies.

Each sprint is carefully planned to ensure that deliverables are achievable within the defined timeframe. The sprint schedule divides the project into multiple iterations, allowing continuous feedback and improvement.

Medical Inventory Management

Example Sprint Plan:

Sprint	Functional Requirement	Epic	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint 1	Supplier Management	Supplier Management	USN-1	As an admin, I can create and manage supplier details in the system.	2	High	M. Mathan
Sprint 1	Product Management	Product Management	USN-2	As a pharmacist, I can add and update product information such as quantity and expiry date.	3	High	V. Nithish
Sprint 2	Purchase Order	Purchase Order	USN-3	As a purchase	4	High	V. Rithish

Medical Inventory Management

Sprint	Functional Requirement	Epic	User Story Number	User Story / Task	Story Points	Priority	Team Members
	Management	Management		manager, I can create purchase orders linked to suppliers and products.			
Sprint 2	Inventory Update	Inventory Update	USN-4	As a system user, I can view updated stock levels after purchase orders are completed.	3	Medium	M. Bharath Surya
Sprint 3	Reporting and Dashboard	Reporting and Dashboard	USN-5	As an admin, I can generate reports and	3	Medium	M. Mathan

Medical Inventory Management

Sprint	Functional Requirement	Epic	User Story Number	User Story / Task	Story Points	Priority	Team Members
				dashboards for supplier performance and inventory.			
Sprint 3	Testing and Documentation	Testing and Documentation	USN-6	As a tester, I can verify functionality and document project deliverables.	2	Medium	V. Nithish

Sprint Tracking and Velocity

Each sprint runs for a duration of **six days**, and progress is monitored using a **burndown chart** and **velocity tracking** to evaluate team performance. The velocity metric measures the average number of story points completed per day, providing insights into team efficiency and project predictability.

Medical Inventory Management

Sprint	Total Story Points	Duration	Start Date	End Date (Planned)	Story Points Completed	Actual Release Date
Sprint 1	20	6 Days	31 May 2025	05 June 2025	20	05 June 2025
Sprint 2	20	6 Days	06 June 2025	11 June 2025	20	11 June 2025
Sprint 3	20	6 Days	12 June 2025	18 June 2025	19	18 June 2025
Sprint 4	20	6 Days	19 June 2025	25 June 2025	20	25 June 2025

Velocity Calculation:

Average velocity = Total Story Points Completed ÷ Total Duration = 79 ÷ 24 days = **3.29 story points/day**

This consistent velocity demonstrates steady progress and effective sprint planning, ensuring that the system development remains on schedule.

Burndown Chart Analysis

The **burndown chart** visually represents the amount of work remaining versus time across all sprints. It helps track progress and identify whether the team is ahead, on schedule, or falling behind. In this project, the chart shows a gradual decline in remaining story points, indicating that tasks were completed as planned.

By using burndown charts and sprint retrospectives, the team maintained high performance and managed risks effectively, ensuring timely delivery of all project modules.

Outcome of Project Planning

The **Project Planning Phase** ensured clear task allocation, measurable milestones, and efficient resource utilization. Each sprint was carefully defined with achievable goals, maintaining transparency in progress tracking and communication.

Through detailed planning, the team achieved:

- Better time management and predictable delivery timelines.
- Continuous improvement via sprint retrospectives.
- A clear understanding of project dependencies and priorities.
- Enhanced collaboration and productivity among team members.

This phase laid a strong foundation for the successful implementation and deployment of the **Medical Inventory Management System**, ensuring alignment with project objectives and customer requirements.