Project Design Phase

Project Planning Template (Product backlog, Sprint planning, Stories, Story points)

Date	03 November 2025
Team ID	NM2025TMID01909
Project Name	Medical Inventory Management
Maximum Marks	5 Marks

Project: *Medical Inventory Management System (MIMS)*

Methodology: Agile Scrum
Sprint Duration: 2 weeks per sprint

Product Backlog

The **Product Backlog** is a prioritized list of all features and functionalities needed to deliver the full system.

ID	Feature / Epic	Description	Priority	Estimated Story Points
PB1	User Authentication	Secure login, registration, and role-based access	High	8
PB2	Dashboard & Reports	Display key data: stock status, usage, wastage, and alerts	High	13
PB3	Inventory Management	Add, update, delete stock items with batch, expiry, and quantity details	High	21
PB4	Barcode / RFID Integration	Enable scanning for automatic stock entry and tracking	Medium	13
PB5	Expiry & Low Stock Alerts	Notify users before medicines expire or stock runs low	High	8
PB6	Purchase Order Management	Auto-generate and track purchase orders	Medium	13
PB7	Supplier Management	Manage supplier details and past orders	Medium	8
PB8	Audit & Compliance Logs	Record every transaction for transparency	High	8

Sprint Planning

Sprint	Duration	Goals / Deliverables	Backlog Items Covered
Sprint 1	Week 1–2	Set up project environment, authentication system, and role-based access	PB1
Sprint 2	Week 3–4	Core inventory management (CRUD operations)	PB3
Sprint 3	Week 5–6	Implement expiry & low-stock alerts and dashboard	PB2, PB5
Sprint 4	Week 7–8	Add supplier and purchase order modules	PB6, PB7
Sprint 5	Week 9–10	Integrate barcode/RFID and audit logging	PB4, PB8
Sprint 6	Week 11–12	Implement analytics/forecasting and mobile app support	PB9, PB10
Sprint 7 (Review)	Week 13–14	Testing, bug fixing, performance optimization, and deployment	All completed items

User Stories

ID	User Story	Acceptance Criteria	Story Points
US1	As an *admin*, I want to create and manage user accounts with different roles so that I can control access securely.	Login and signup work with role permissions (Admin, Pharmacist, Nurse, Supplier).	8
US2	As a *pharmacist*, I want to add and update medicine details (name, quantity, expiry, batch number) so that I can maintain accurate records.	CRUD operations functional; data stored correctly in DB.	13
US3	As a *pharmacist*, I want to receive alerts when items are about to expire or are running low so that I can take timely action.	Alerts triggered when thresholds are met; email/SMS notifications sent.	8
US4	As an *admin*, I want to view a dashboard summarizing inventory statistics so that I can monitor overall performance.	Dashboard displays key metrics and visual graphs.	8

ID	User Story	Acceptance Criteria	Story Points
US5	As a *supplier*, I want to receive purchase orders automatically when stock runs low so that I can plan deliveries efficiently.	System generates and sends purchase requests automatically.	13
US6	As an *auditor*, I want to see detailed transaction logs so that I can verify all inventory activities.	All transactions are logged with timestamps and user details.	8
US7	As an *inventory manager*, I want to scan barcodes of medicines so that I can update stock faster.	Barcode scanning integrated and functional for stock entry.	13
US8	As a *hospital manager*, I want to forecast future medicine requirements based on past usage so that I can reduce waste.	System generates basic predictive analytics reports.	21

Story Points Definition

Story Point Value	Effort Description
1–3	Simple task (UI update, minor logic)
5–8	Medium complexity (1–2 modules, API integration)
13	High complexity (multi-module integration)
21	Very complex (requires data modeling, predictive logic)

Deliverable Plan Summary

Phase	Deliverables	Outcome
Phase 1 (Sprints 1–2)	Authentication + Inventory core	Functional base system
Phase 2 (Sprints 3–4)	Alerts + Supplier management	Full workflow automation
Phase 3 (Sprints 5–6)	RFID, Audit, Analytics	Intelligent and traceable system
Phase 4 (Sprint 7)	Testing, Deployment	Stable, production-ready product