# Planning Phase – SDLC for Inventory Management System

Goal: Define purpose, scope, and feasibility before starting development.

Outcome: Clear direction, defined objectives, and an organized workflow setup.

## 1. Create Project Charter

Purpose: Formally start the project by documenting its core information.

* Sub-tasks:
* Define Project Title: Inventory Management System for Local General Stores
* Write Project Overview: Short description of what the system does and why it matters.
* Define Objectives: Automate billing, track stock, reduce errors, and generate reports.
* Identify Expected Outcomes: Faster checkout, inventory accuracy, and efficient sales tracking.
* Define Timeline Estimate: Rough schedule (e.g., 8–10 weeks).
* Mention Team Members: Developer(s), tester, supervisor (if any).
* Write Approval Section: Include confirmation or signature placeholders.

Deliverable: Project Charter Document (Word/PDF).

## 2. Define System Goals

Purpose: Clarify what the system should achieve.

* Sub-tasks:
* List Functional Goals: Manage product stock, generate invoices, handle user roles, view reports.
* List Non-Functional Goals: Secure authentication, reliable, fast, easy UI, scalable.
* Prioritize goals as High, Medium, or Low priority.

Deliverable: System Goals Document (included in SRS later).

## 3. Identify Stakeholders

Purpose: Identify people involved or affected by the system.

* Identify Primary Stakeholders: Store Owner (Admin), Cashier (User), Customer (Indirect User).
* Identify Secondary Stakeholders: Developer (You), Project Supervisor or Instructor.
* Define each stakeholder’s Responsibilities & Expectations.
* Create a Stakeholder Map or Table.

Deliverable: Stakeholder List with Roles & Responsibilities.

## 4. Write Scope Document

Purpose: Define project boundaries — what’s included and excluded.

* Write Scope Statement: A summary of system capabilities.
* List In-Scope Features: Product Management, Billing System, Inventory Tracking, Reports Dashboard.
* List Out-of-Scope Features: Online payments, delivery tracking, multi-store management (future).
* Define Constraints: Limited hardware or budget.
* Define Assumptions: Users have basic computer knowledge.

Deliverable: Scope Document (included in SRS Appendix).

## 5. Prepare Feasibility Report

Purpose: Check if the project is viable technically, economically, and operationally.

* Technical Feasibility: Select tech stack (React, Node.js, Express, MongoDB/MySQL).
* Economic Feasibility: Estimate hosting, database, and maintenance costs.
* Operational Feasibility: Evaluate staff training and usability requirements.
* Schedule Feasibility: Create tentative SDLC timeline.
* Summarize risks and mitigation plan.

Deliverable: Feasibility Report Document.

## 6. Set Up Git Repository & Project Board

Purpose: Organize workflow and enable tracking.

* Create a GitHub Repository: inventory-management-system.
* Add README with project overview and setup instructions.
* Set up .gitignore and basic folder structure.
* Create a Project Board (Kanban) with columns: Backlog → In Progress → Testing → Done.
* Add issues/tasks for all SDLC phases.
* Invite collaborators (if any).
* Push initial commit to main branch.

Deliverable: GitHub Repository Link and Project Board Screenshot.

## Final Deliverables of Planning Phase

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| # | Deliverable | Format |
| 1 | Project Charter | Word/PDF |
| 2 | System Goals Document | Word |
| 3 | Stakeholder List | Table |
| 4 | Scope Document | Word |
| 5 | Feasibility Report | Word/PDF |
| 6 | GitHub Repo & Project Board | Online |