

Deliverable 1

Introduction

This product is designed to simplify task management and improve team collaboration by bringing everything into one place. It allows users to create, assign, and track tasks, set deadlines, and monitor progress in real time. With built-in communication features, teams can discuss projects, share updates, and stay aligned without switching between multiple tools.

The product also offers smart notifications, file sharing, and real-time synchronization. Whether for remote teams or in-office collaboration, it ensures that projects stay organized, deadlines are met, and teamwork becomes more efficient.

Project Vision

Our vision is to create a smart, intuitive, and all-in-one task management and team collaboration platform that helps teams work more efficiently, stay organized, and communicate seamlessly. The goal is to eliminate workflow bottlenecks, reduce miscommunication, and ensure that every team member knows their responsibilities and deadlines.

By integrating task tracking, real-time collaboration, and smart automation, the app will empower teams to focus on what truly matters—delivering great results. Whether for startups, enterprises, or remote teams, this tool will be a central hub for productivity, ensuring that projects run smoothly and teams stay in sync.

Use of the System

This task management and team collaboration system is designed to streamline workflows, enhance productivity, and improve communication. It will be used by teams, managers, and organizations to manage tasks, track progress, and collaborate efficiently.

Stakeholders and Their Needs

Teams & Employees

- **Who?** Developers, designers, marketers, HR, and other professionals working in teams.
- **Needs:**
 - Easy task assignment and tracking.
 - Clear deadlines and priorities.
 - Real-time communication and updates.
 - File sharing and document collaboration.

Project Managers & Team Leads

- **Who?** Leaders responsible for managing teams and project timelines.
- **Needs:**
 - Overview of project progress and team workload.
 - Ability to assign, monitor, and modify tasks.
 - Performance tracking and reporting.
 - Deadline reminders and automated workflows.

Business Owners & Executives

- **Who?** Company owners, executives, and decision-makers.
- **Needs:**
 - Insights into project timelines and team efficiency.
 - High-level reports on productivity and task completion rates.
 - Seamless integration with existing business tools.

Features/Overall functionality

- **Task Management(Kanban board)**
 - Create, edit, assign, and delete tasks
 - Set due dates and priorities
 - Task status (To-Do, In Progress, Done)
- **Team Collaboration**
 - Team creation & member management
 - Task comments and discussion threads
 - Real-time Synchronization between members
- **Project Management**
 - Create and manage multiple projects
 - File-sharing
 - Task dependencies (e.g., blocking tasks)
 - Project deadlines and milestones
- **Notifications**
 - Task deadline reminders

User stories

Module/Sprint 1: User authentication, Task CRUD operations

Following is the list of user stories:

User Story 1: User Authentication

As a user, I want to sign up and log in securely so that I can access my personal tasks.

Sub-stories:

- As a user, I want to register using my email and password so that I can create an account.
- As a user, I want to log in using my email and password so that I can access my tasks.
- As a user, I want to reset my password so that I can regain access to my account if I forget it.

User Story 2: Task Creation & Management

As a user, I want to create, edit, and delete tasks so that I can manage my work efficiently.

Sub User Stories:

- As a user, I want to create a new task so that I can track my work.
- As a user, I want to edit my tasks so that I can update my progress.
- As a user, I want to delete tasks so that I can remove unnecessary work items.

User Stories Structured Specification

Title: As a user, I want to register using my email and password so that I can create an account.

Function	User Registration
Description	Allows a new user to create an account using their email and password.
Inputs	<ul style="list-style-type: none"> - Email - Password - (Optional) Name
Source	User
Outputs	<ul style="list-style-type: none"> - Successful registration → Account created, confirmation message displayed - Failed registration → Error message displayed (e.g., invalid email format, weak password, email already exists)
Destination	- Dashboard
Action	<ul style="list-style-type: none"> - The user provides email and password. - The system checks if the email is already registered. - If unique, the password is securely hashed and stored. - If successful, a confirmation message is displayed.
Requirements	<ul style="list-style-type: none"> - The email must be valid and unique. - The password must meet security criteria (e.g., minimum length, special characters). - Data must be securely stored and encrypted.
Pre-Condition	<ul style="list-style-type: none"> - The user is not already registered with the provided email. - The system has an active user database.
Post-Condition	If successful, the user has an active account.
Side Effects	None

Title: As a user, I want to reset my password so that I can regain access to my account if I forget it.

Function	Password Reset
Description	Allows a user to reset their password if they forget it.
Inputs	<ul style="list-style-type: none"> - Registered email address - New password - Confirmation of new password
Source	User
Outputs	<ul style="list-style-type: none"> - Success → Password updated, confirmation message displayed - Failure → Error message displayed (e.g., invalid email, incorrect verification code, weak password)

Destination	- Login page (to log in with new password)
Action	<ul style="list-style-type: none"> - The user provides their registered email. - The system checks if the email exists. - The user sets a new password. - The system verifies password strength and updates the database. - A confirmation message is sent to the user.
Requirements	<ul style="list-style-type: none"> - The email must be registered in the system. - The new password must meet security criteria.
Pre-Condition	<ul style="list-style-type: none"> - The user has a registered account. - The system has an email service configured.
Post-Condition	<ul style="list-style-type: none"> - If successful, the user can log in with the new password. - If verification fails, the old password remains unchanged.
Side Effects	<ul style="list-style-type: none"> - Multiple failed reset attempts may trigger security measures. - A successful reset logs out the user from all active sessions for security reasons.

Title: As a user, I want to create a new task so that I can track my work.

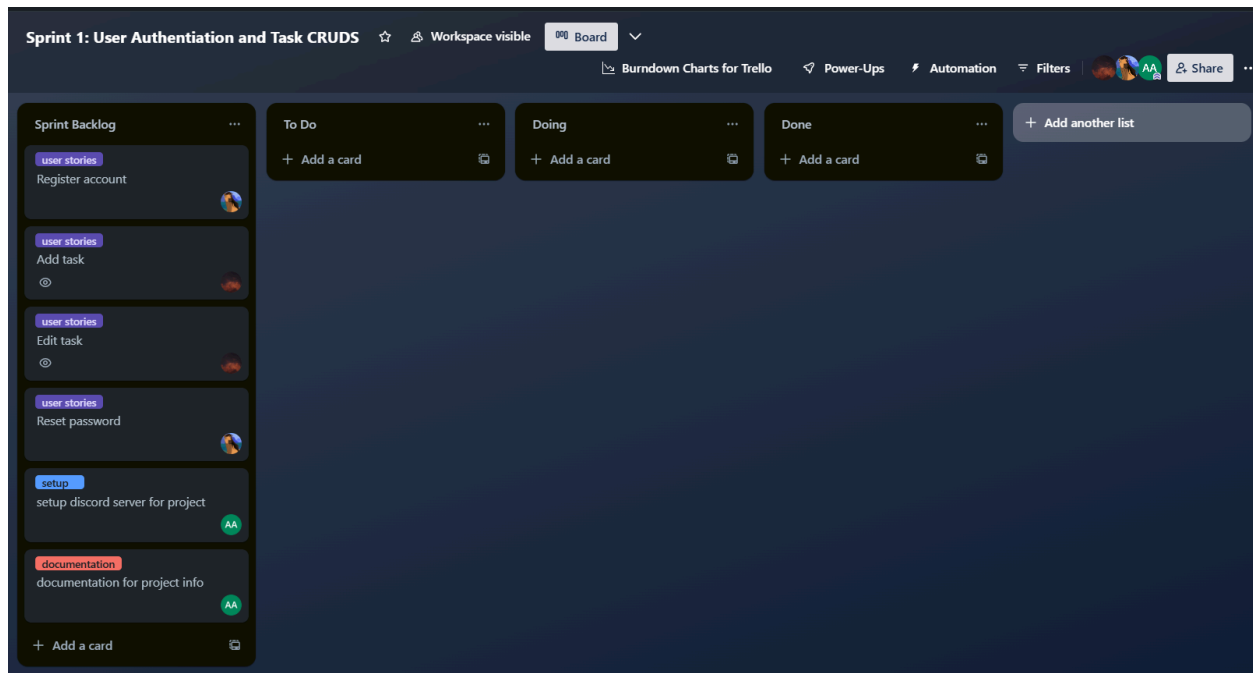
Function	Allows a user to create a new task to track work.
Description	Users can enter a task title and an optional description and deadline. The system will store the task and display it in the task list.
Inputs	<ul style="list-style-type: none"> -Title (String, required) -Description (String, optional) -Deadline(Date, optional)
Source	User interface
Outputs	A new task entry stored in the database
Destination	<ul style="list-style-type: none"> -Task list (UI) -Database (for persistent storage)
Action	<ul style="list-style-type: none"> -Validates the input (title is required) -Stores the task in the database -Displays the new task in the task list
Requirements	<ul style="list-style-type: none"> -A database to store tasks -A UI with a form for task creation -Backend logic to handle task creation requests -Input validation for missing or invalid data
Pre-Condition	The user is logged in

Post-Condition	-A new task is successfully saved and displayed -Task will have “to-do” status by default
Side Effects	None

Title: As a user, I want to edit my tasks so that I can update my progress.

Function	Allows a user to edit an existing task to update its details and progress.
Description	Users can modify the title, description, and deadline. The system will update the task and reflect the changes in the task list.
Inputs	-Task ID (Unique identifier, required) -Updated Title (String, optional) -Updated Description (String, optional) -Updated Deadline (String, optional) -Updated Status (Optional, e.g., "To-Do," "In Progress," "Completed")
Source	User interface
Outputs	Updated task stored in the database
Destination	Task list (UI) Database (to persist changes)
Action	-Retrieve the existing task from the database -Validate user input (ensure title is not empty) -Apply updates to the task -Save changes to the database -Refresh UI to show the updated task
Requirements	-A database to store and modify tasks -A UI with an "Edit Task" option -Backend logic to handle update requests -Input validation to prevent empty titles
Pre-Condition	The task must exist in the system
Post-Condition	-The task is updated and saved in the database -The UI reflects the modified task
Side Effects	None

Scrum Board/Sprint Backlog

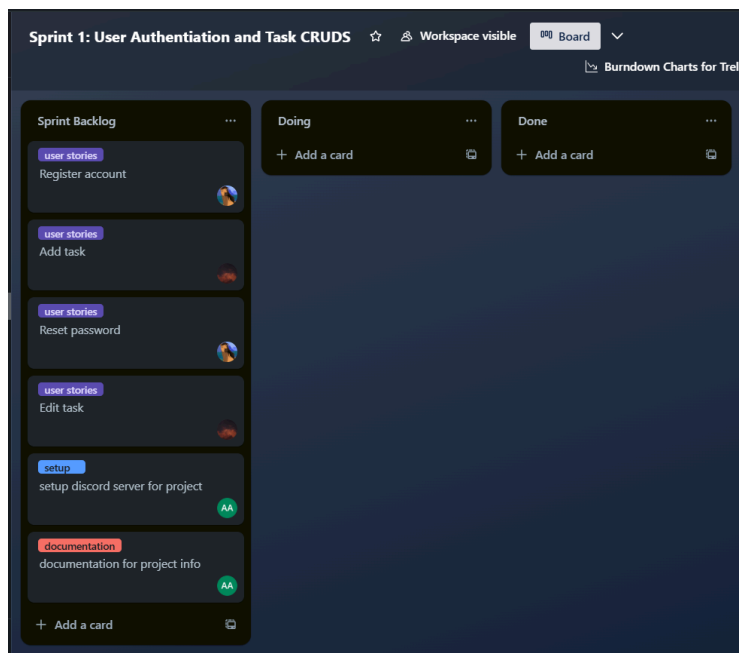


NFR Specification using natural language specification

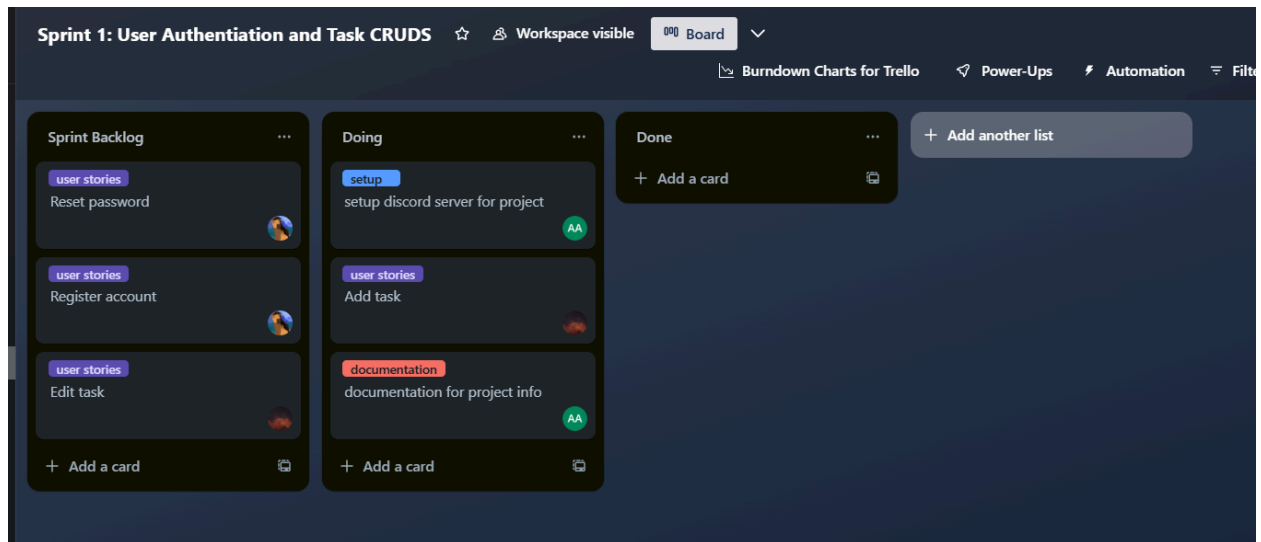
- The design should follow a consistent theme across all pages
- Dark/Light model
- Access restrictions on collaborators

Iteration 1 implementation screenshots

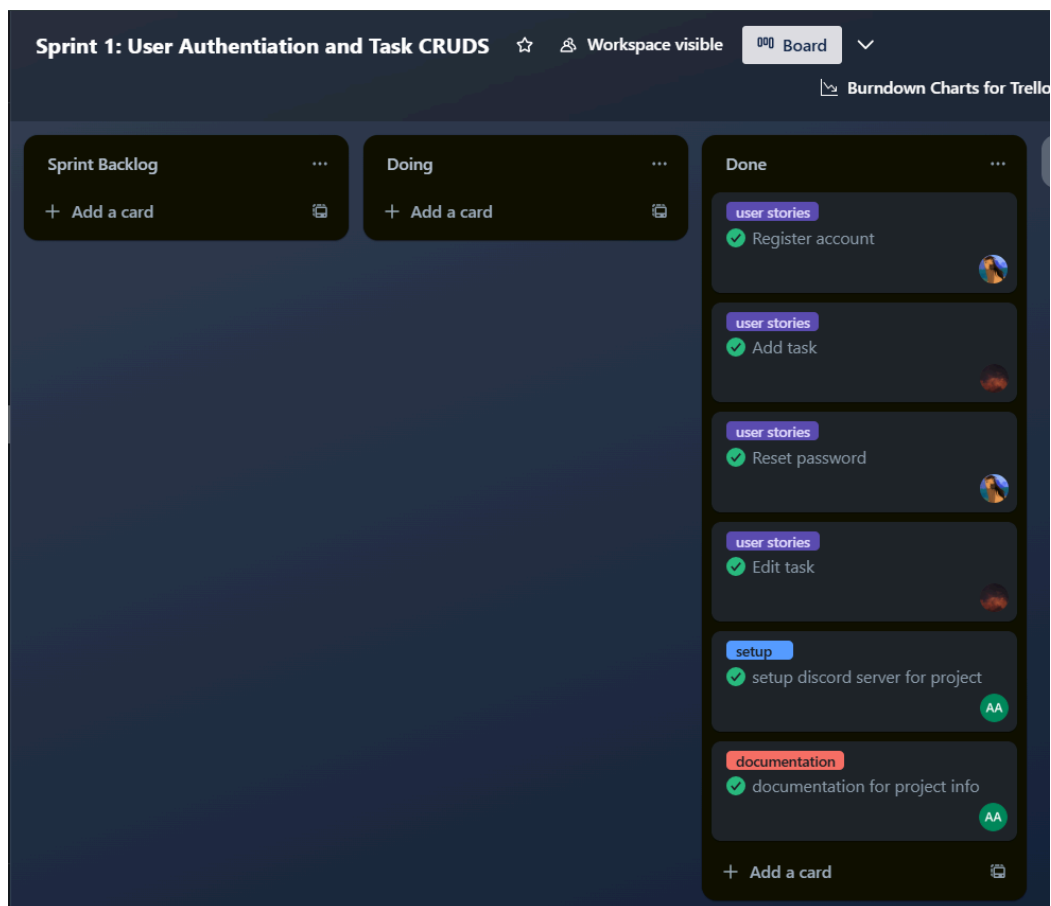
Start of Sprint



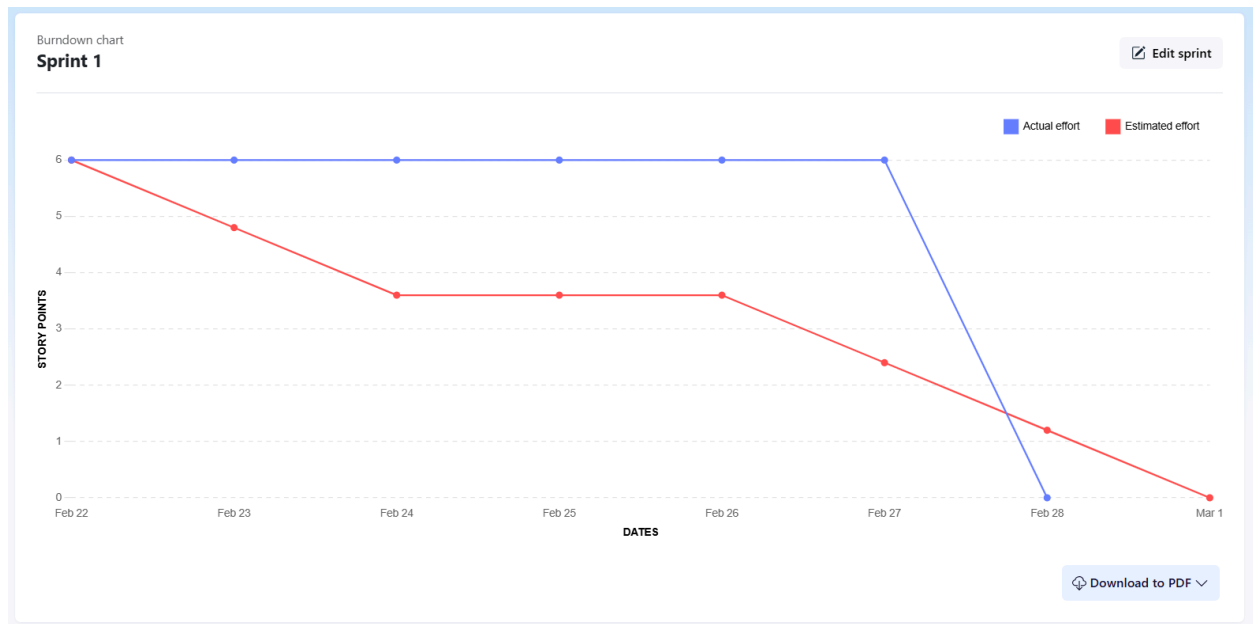
Middle of sprint



Finished Tasks



Burndown



Work division

Documentation and setup: Anoosha Ali

User stories for authentication: Afsah Areeb

User stories for task management: Saleha Irum