Introduction to Software Engineering

Software Design

The student team is required to complete the ***Design Document*** *for the assigned course project, following the attached template.*

Software Engineering Department
Faculty of Information and Technology
University of Science

Table of Contents

Software Design

Objectives

This document focus on the following topics:

- ✓ Complete the Software Design Document with the following contents:
    - Conceptual Model
    - Architectural Design
    - Data Design
    - User Interface Design
- ✓ Understanding the Software Design Document.

1 Member Contribution Assessment

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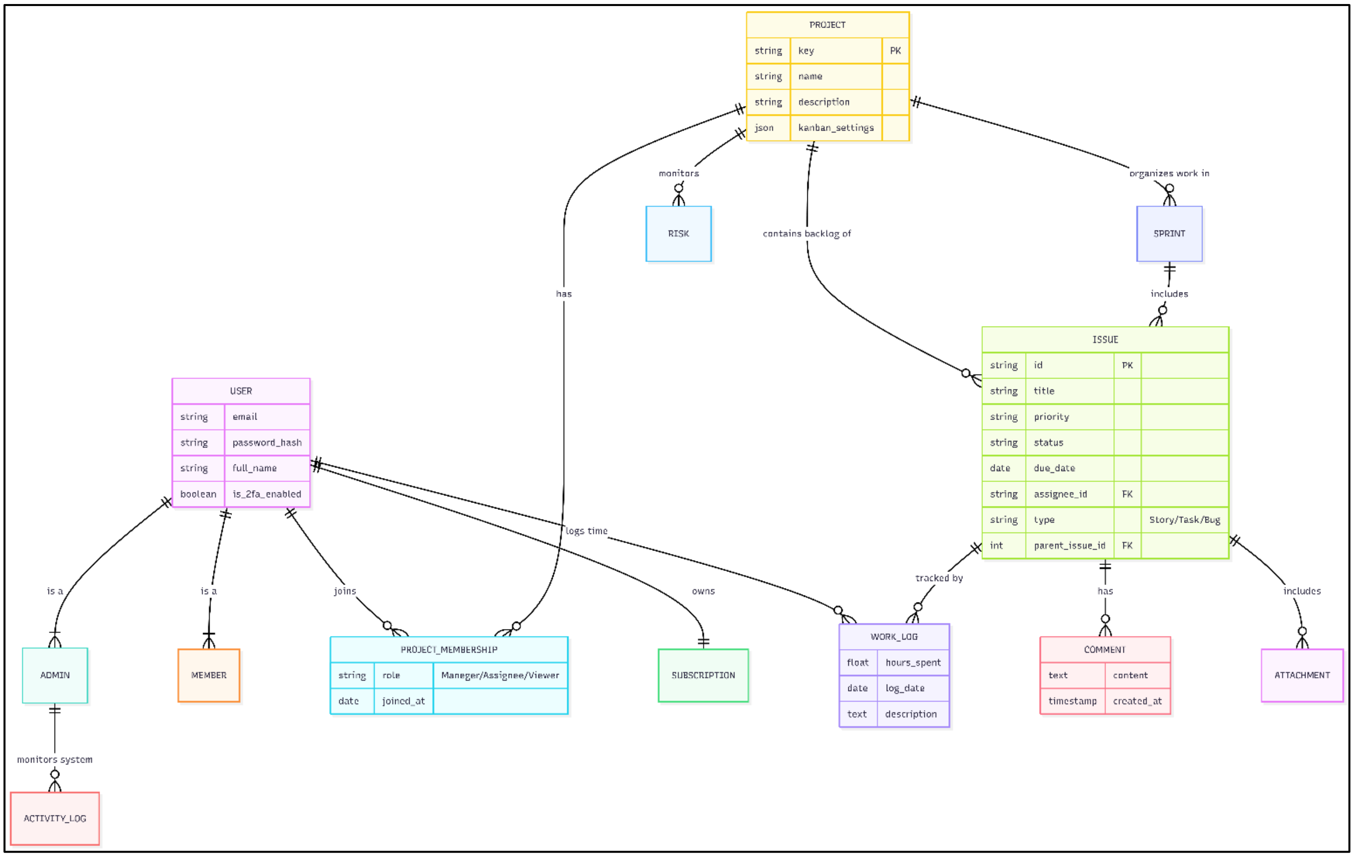
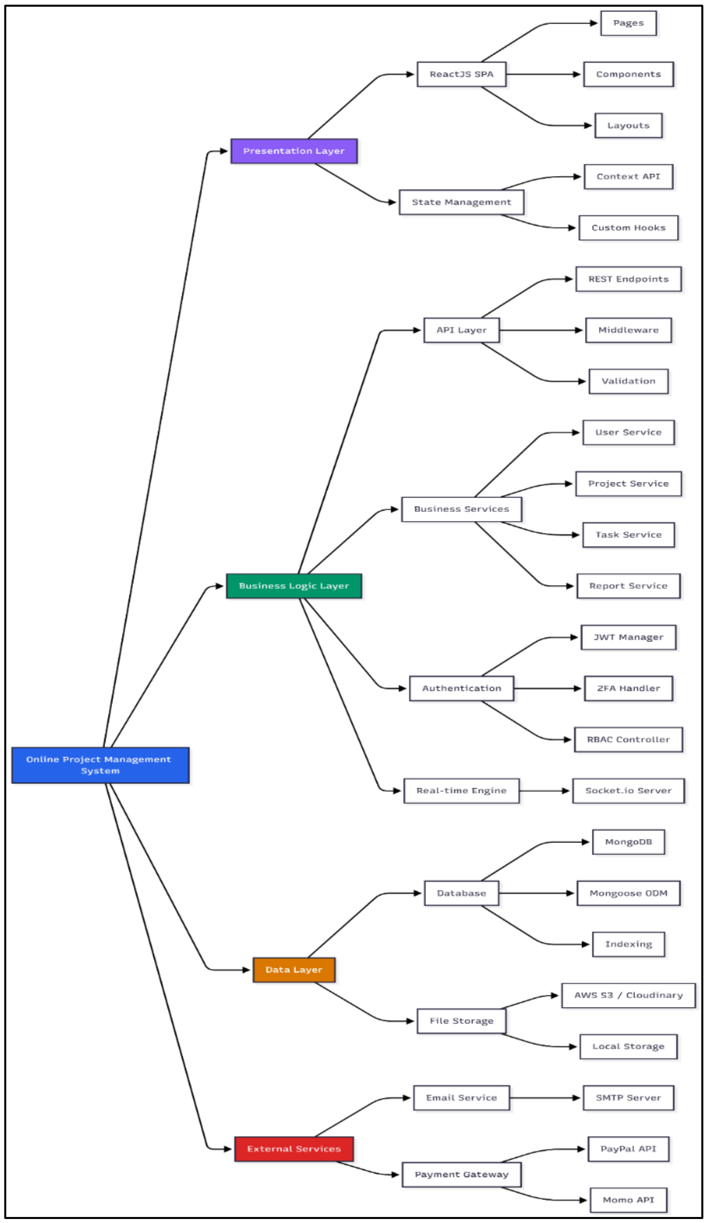
2 Conceptual Model



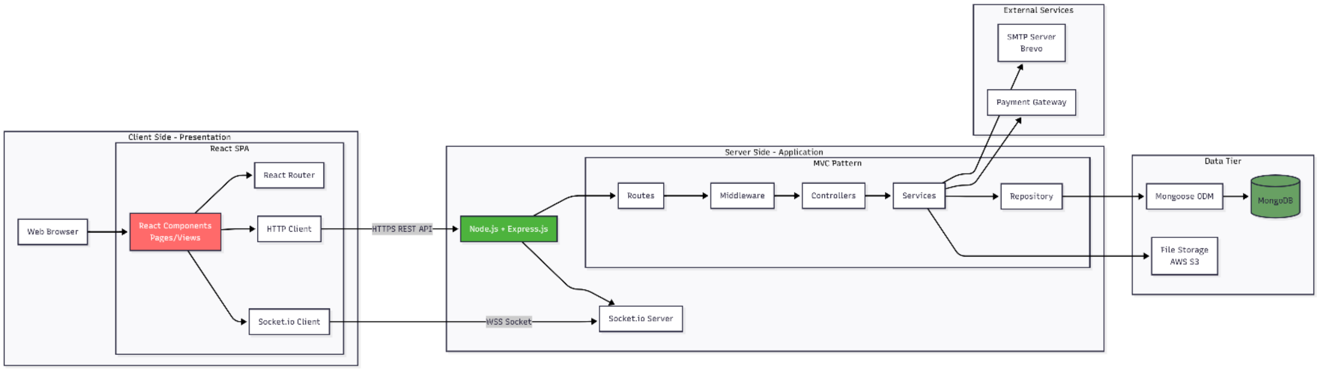
Picture: Extended Entity Relationship

3 Architectural Design

3.1 Architecture Diagram



Picture: System decomposition tree diagram



Picture: MAIN components

3.1.1 Three-Tier Architecture

The system follows a strict three-tier architecture with clear separation of concerns:

- **Presentation Tier:** ReactJS Single Page Application (SPA) with Vite + TailwindCSS. Handles UI rendering, user interactions, and client-side state via React Context and custom hooks.
- **Business Logic Tier:** Node.js + Express.js server. Processes requests, enforces business rules, manages authentication/authorization, and orchestrates data operations.
- **Data Tier:** MongoDB database (Replica Set) with Mongoose ODM for schema validation and query abstraction. AWS S3/Cloudinary for file storage.

Communication occurs via RESTful HTTPS APIs between tiers, with WebSocket (Socket.io) for real-time features.

3.1.2 MVC Pattern

The Business Logic Tier implements Model-View-Controller (MVC):

- **Routes:** Map HTTP endpoints to controllers.
- **Controllers:** Handle requests, extract parameters, format responses.
- **Services:** Implement business logic and workflow orchestration.
- **Models:** Define MongoDB schemas using Mongoose.

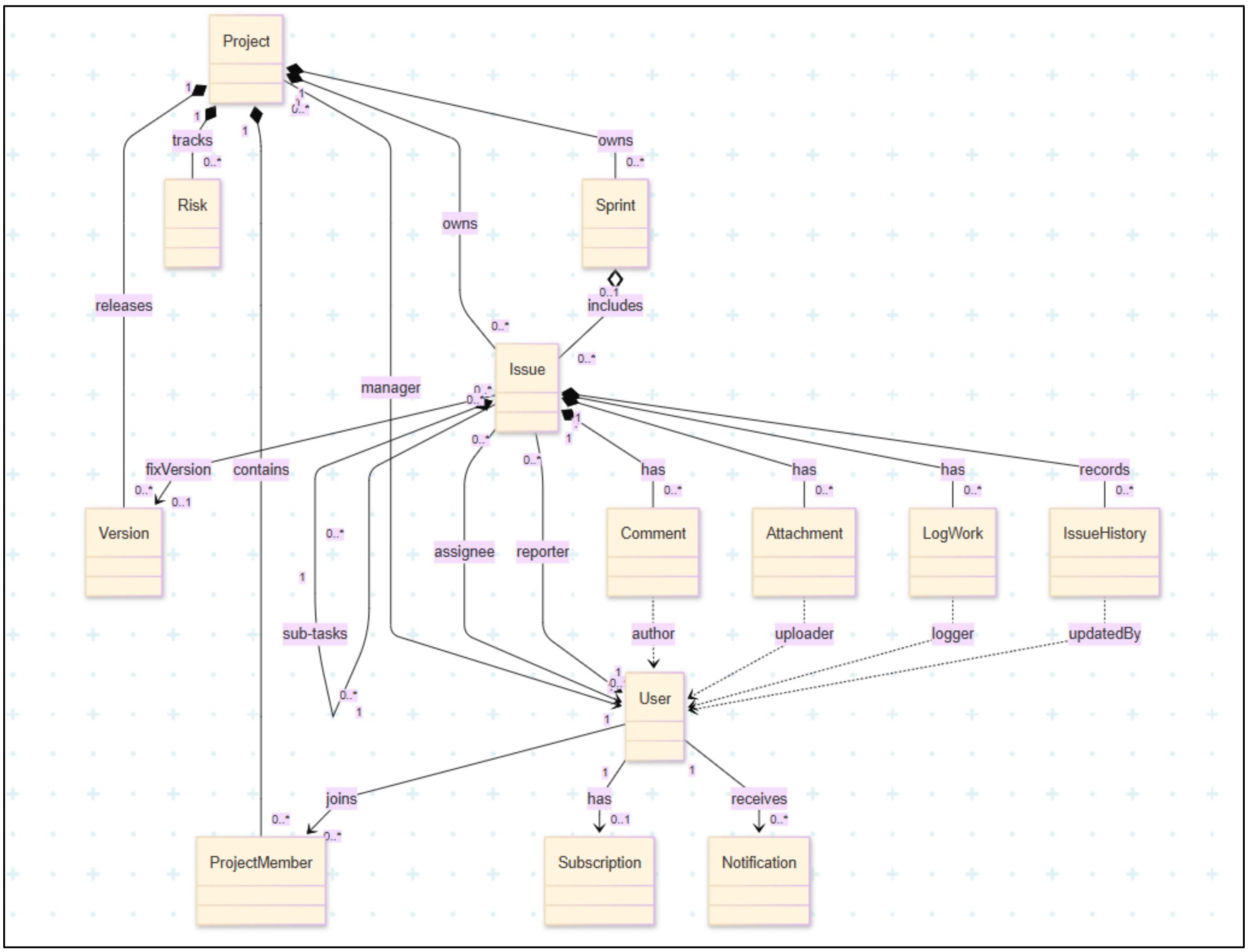
This separation ensures business logic is decoupled from HTTP concerns, making code testable and maintainable.

3.1.3 Repository Pattern

Purpose: Abstracts data access logic from business logic, providing a clean separation between the service layer and database operations.

- Business logic doesn't depend on MongoDB-specific syntax.
- Easier to write unit tests by mocking repositories.
- Database implementation can be changed without affecting services.
- Centralizes query logic (population, filtering).

3.2 Class Diagram



Picture: Class diagram

3.3 Class Specifications

3.3.1 Class User

Inherits from: None (Abstract Base Class)

List of attributes:

Seq	Property	Modifier	Constraint	Description
1	id	Private	String (PK)	Unique identifier for the user.
2	username	Private	String	Unique login username.
3	fullName	Private	String	User's legal or display name.
4	email	Private	String	Contact email address.
5	status	Private	String	Account status (Active, Locked, etc.).
6	createdAt	Private	Date	Account creation timestamp.
7	lastLogin	Private	Date	Timestamp of last successful login.

List of main methods/operations:

Seq	Operation	Modifier	Constraint	Description
1	updateProfile(data: User)	Public	void	Updates user profile information.
2	changePassword(oldPwd, newPwd)	Public	void	Validates old and sets new password.
3	resetPassword(email: String)	Public	void	Triggers email password recovery.
4	signOut()	Public	void	Terminates the current session.
5	signIn(userName, password)	Public	String	Authenticates and returns session token.
6	subscribe(planName: PlanType)	Public	void	Initiates a new subscription plan.
7	cancelSubscription()	Public	void	Cancels the recurring subscription.

3.3.2 Class Admin

Inherits from: User

List of attributes:

Seq	Property	Modifier	Constraint	Description
1	(Inherited Attributes)	Private	See User	id, username, fullName, email, status...

List of main methods/operations:

Seq	Operation	Modifier	Constraint	Description
1	getAllUsers(page: int)	Public	List	Retrieves paginated list of users.
2	createUser(data: RegisterDTO)	Public	void	Manually registers a new user.
3	lockUser(userId: String)	Public	void	Suspends user access.
4	unlockUser(userId: String)	Public	void	Restores user access.
5	changeUserRole(userId, newRole)	Public	void	Promotes or demotes a user.
6	deleteUser(userId: String)	Public	void	Permanently deletes a user.

7	manageSystemSettings()	Public	void	Configures global system variables.
8	generateSystemReport()	Public	Report	Generates system usage analytics.

3.3.3 Class ProjectManeger

Inherits from: User

List of attributes:

Seq	Property	Modifier	Constraint	Description
1	(Inherited Attributes)	Private	See User	id, username, fullName, email, status...

List of main methods/operations:

Seq	Operation	Modifier	Constraint	Description
1	createProject(data: Project)	Public	void	Initializes a new project.
2	deleteProject(projectId)	Public	void	Removes a project and its data.
3	assignMember(userId, projectId)	Public	void	Adds a user to a project team.

4	startSprint(sprintId)	Public	void	Activates a planned sprint.
5	manageBacklog()	Public	void	Prioritizes backlog items.

3.3.4 Class TeamMember

Inherits from: User

List of attributes:

Seq	Property	Modifier	Constraint	Description
1	(Inherited Attributes)	Private	See User	id, username, fullName, email, status...

List of main methods/operations:

Seq	Operation	Modifier	Constraint	Description
1	createIssue(data: Issue)	Public	void	Creates a bug, task, or story.
2	logWork(issueId, hours)	Public	void	Records time spent on an issue.
3	uploadAttachment(file)	Public	void	Uploads documents to an issue.
4	refineBacklog()	Public	void	Updates details

				on backlog items.

3.3.5 Class Viewer

Inherits from: User

List of attributes:

Seq	Property	Modifier	Constraint	Description
1	(Inherited Attributes)	Private	See User	id, username, fullName, email, status...

List of main methods/operations:

Seq	Operation	Modifier	Constraint	Description
1	viewProjectDashboard()	Public	void	View read-only project analytics.
2	exportReports()	Public	File	Download project reports (PDF/CSV).

3.3.6 Class Project

Inherits from: None

List of attributes:

Seq	Property	Modifier	Constraint	Description
1	id	Private	String (PK)	Unique project ID.
2	name	Private	String	Project display name.
3	description	Private	String	Scope and details.
4	startDate	Private	Date	Project start date.
5	endDate	Private	Date	Project deadline.
6	status	Private	String	Current state (Planned, Active, etc.).

List of main methods/operations:

Seq	Operation	Modifier	Constraint	Description
1	getProjectInfo()	Public	Project	Returns full project object.
2	updateProject(data: Project)	Public	void	Updates project metadata.

3.3.7 Class Issue

Inherits from: None

List of attributes:

Seq	Property	Modifier	Constraint	Description
1	id	Private	String (PK)	Unique issue ID.
2	title	Private	String	Short summary.
3	description	Private	String	Detailed requirements.
4	type	Private	IssueType	Enum: STORY, TASK, BUG.
5	status	Private	IssueStatus	Enum: TODO, IN_PROGRESS, DONE.
6	priority	Private	Priority	Enum: LOW, MEDIUM, HIGH.
7	storyPoints	Private	int	Complexity estimation.
8	createdAt	Private	Date	Creation timestamp.
9	updatedAt	Private	Date	Last update timestamp.

List of main methods/operations:

Seq	Operation	Modifier	Constraint	Description
1	editIssue(data: Issue)	Public	void	Updates issue details.
2	deleteIssue()	Public	void	Removes the issue.
3	updateStatus(status)	Public	void	Transitions workflow state.

3.3.8 Class Sprint

Inherits from: None

List of attributes:

Seq	Property	Modifier	Constraint	Description
1	id	Private	String (PK)	Unique sprint ID.
2	name	Private	String	Sprint name (e.g., Sprint 1).
3	startDate	Private	Date	Sprint start.
4	endDate	Private	Date	Sprint finish.
5	goal	Private	String	Sprint objective.
6	status	Private	SprintStatus	Enum: PLANNED, ACTIVE, COMPLETED.

List of main methods/operations:

Seq	Operation	Modifier	Constraint	Description
1	addIssue(issueId)	Public	void	Assigns issue to sprint.
2	removeIssue(issueId)	Public	void	Removes issue from sprint.
3	completeSprint()	Public	void	Closes sprint and calculates stats.

3.3.9 Class ProjectMember

Inherits from: None

List of attributes:

Seq	Property	Modifier	Constraint	Description
1	id	Private	String (PK)	Unique membership ID.
2	userId	Private	String (FK)	Reference to User.
3	projectId	Private	String (FK)	Reference to Project.
4	role	Private	ProjectRole	Enum: MANAGER, MEMBER, VIEWER.

5	joinedAt	Private	Date	Date added to project.

List of main methods/operations:

Seq	Operation	Modifier	Constraint	Description
1	changeRole(role: ProjectRole)	Public	void	Updates member permissions.

3.3.10 Class Subscription

Inherits from: None

List of attributes:

Seq	Property	Modifier	Constraint	Description
1	id	Private	String (PK)	Unique subscription ID.
2	userId	Private	String (FK)	Reference to User.
3	planName	Private	PlanType	Enum: FREE, STANDARD, PREMIUM.
4	price	Private	double	Cost of plan.
5	status	Private	SubStatus	Enum: ACTIVE, EXPIRED, TRIAL.
6	startDate	Private	Date	Start date.
7	endDate	Private	Date	Renewal/Expiry

				date.

List of main methods/operations:

Seq	Operation	Modifier	Constraint	Description
1	upgradePlan(newPlan)	Public	void	Changes subscription tier.
2	renew()	Public	void	Extends subscription.
3	cancel()	Public	void	Cancels auto-renewal.

3.3.11 Class Risk

Inherits from: None

List of attributes:

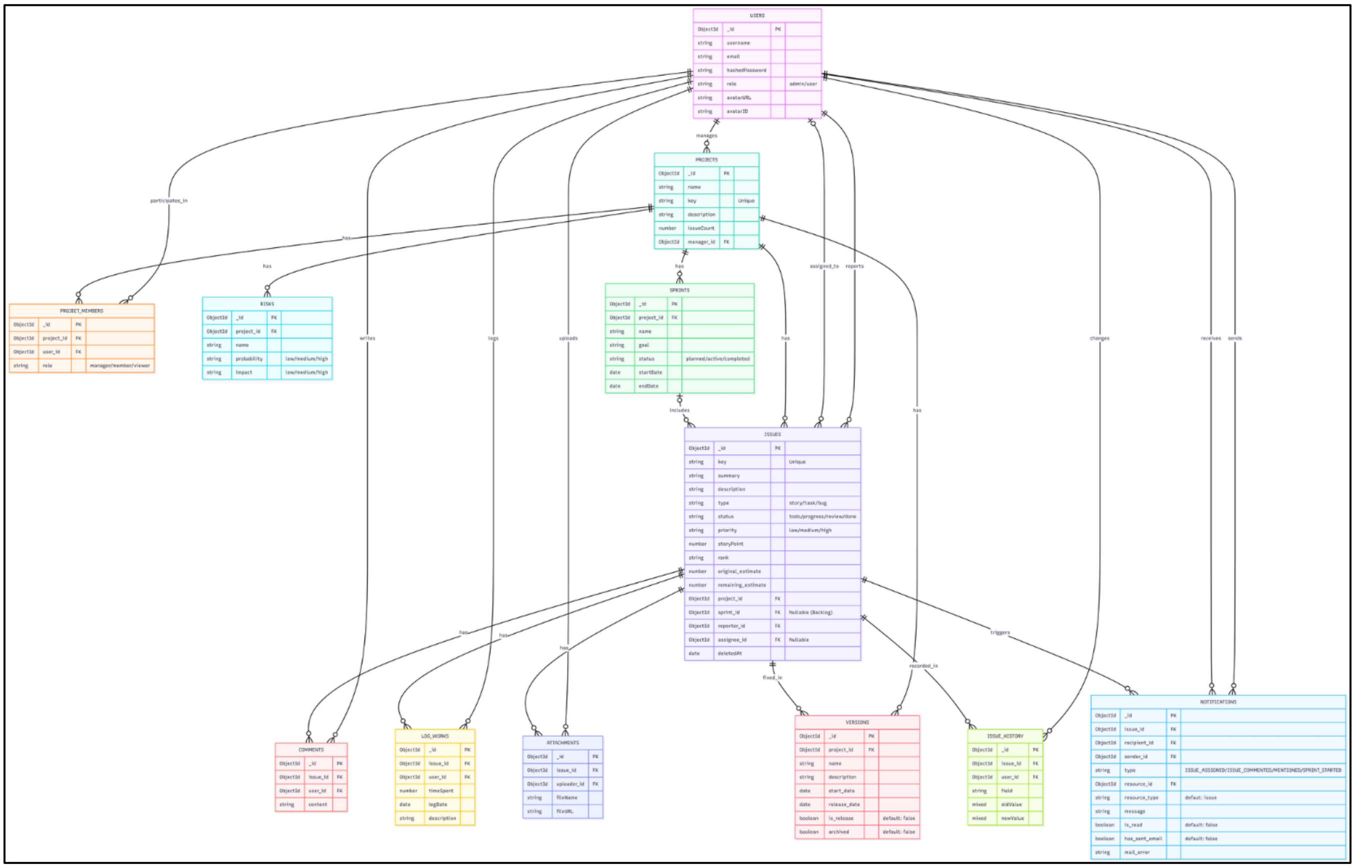
Seq	Property	Modifier	Constraint	Description
1	id	Private	String (PK)	Unique risk ID.
2	projectId	Private	String (FK)	Reference to Project.
3	title	Private	String	Risk name.
4	description	Private	String	Impact details.
5	level	Private	String	Severity level.
6	mitigationPlan	Private	String	Action plan.

List of main methods/operations:

Seq	Operation	Modifier	Constraint	Description
1	addRisk(data: Risk)	Public	void	Logs a new risk.
2	updateRisk(data: Risk)	Public	void	Updates risk status.

4 Data Design

4.1 Data Diagram



Picture: Data Diagram

4.2 Data Specification

USERS

Attribute	Type	Constraint	Description
_id	ObjectId	Primary Key	User ID
username	String	required, unique, lowercase, trim	Account
hashedPassword	String	required	Hash password

email	String	required, unique, lowercase, trim	Email user
avatarURL	String	optional	Avatar URL
avatarID	String	optional	Avatar ID
role	String	enum("user", "admin"), default="user"	User role
createdAt	Date	auto	Creation date
updatedAt	Date	auto	Update date

PROJECTS

Atttribute	Type	Constraint	Description
_id	ObjectId	PK	
name	String	required	Project name
key	String	required, unique	Project key
description	String	optional	
manager	ObjectId	required, ***FK → Users._id***	Manager
issueCount	Number	default: 0	Number of issue
createdAt	Date	auto	
updatedAt	Date	auto	

PROJECT_MEMBERS

Attribute	Type	Constraint	Description
_id	ObjectId	PK	
project	ObjectId	required, ***FK → Projects._id***	
user	ObjectId	required, ***FK → Users._id***	
role	String	enum("manager", "member", "viewer")	Role in project
createdAt	Date		
updatedAt	Date		

RISKS

Attribute	Type	Constraint
_id	ObjectId	PK
project	ObjectId	required, ***FK → Projects._id***
name	String	required
probability	String	enum("low","medium","high")
impact	String	enum("low","medium","high")
createdAt	Date	
updatedAt	Date	

SPRINTS

Attribute	Type	Constraint
_id	ObjectId	PK
project	ObjectId	required, ***FK → Projects._id***
name	String	required
goal	String	optional
startDate	Date	optional
endDate	Date	optional
completedAt	Date	optional
status	String	enum("planned", "active", "completed")
createdAt	Date	
updatedAt	Date	

ISSUES

Attribute	Type	Constraint	Description
_id	ObjectId	PK	
project	ObjectId	***FK → Projects._id***	
summary	String	required	Title
key	String	required, unique	Key issue (JIRA-123)
description	String		
type	String	enum("story", "task", "bug")	
status	String	enum("todo", "in_progress", "review",	

		"done")	
priority	String	enum("low","medium","high")	
storyPoint	Number	default: 0	
rank	String	optional	
reporter	ObjectId	***FK → Users._id***	
assignee	ObjectId	***FK → Users._id***, optional	
originalEstimate	Number	default 0	
remainingEstimate	Number	default 0	
sprint	ObjectId	***FK → Sprints._id***, optional	
fixVersion	ObjectId	***FK → Versions._id***	
deletedAt	Date	soft delete	
createdAt	Date		
updatedAt	Date		

COMMENTS

Attribute	Type	Constraint
_id	ObjectId	PK
issue	ObjectId	required, ***FK → Issues._id***
user	ObjectId	required, ***FK → Users._id***
content	String	required
createdAt	Date	
updatedAt	Date	

LOG_WORKS

Attribute	Type	Constraint
_id	ObjectId	PK
issue	ObjectId	required, ***FK → Issues._id***
user	ObjectId	required, ***FK → Users._id***
timeSpent	Number	required
logDate	Date	default: now
description	String	optional
createdAt	Date	
updatedAt	Date	

ATTACHMENTS

Attribute	Type	Constraint
_id	ObjectId	PK
issue	ObjectId	required, ***FK → Issues._id***
fileName	String	required
fileURL	String	required
uploader	ObjectId	***FK → Users._id***
createdAt	Date	
updatedAt	Date	

ISSUE_HISTORY

Attribute	Type	Constraint
_id	ObjectId	PK
issue	ObjectId	required, ***FK → Issues._id***
user	ObjectId	required, ***FK → Users._id***
field	String	required
oldValue	Mixed	
newValue	Mixed	
createdAt	Date	
updatedAt	Date	

NOTIFICATIONS

Attribute	Type	Constraint
_id	ObjectId	PK
recipient	ObjectId	***FK → Users._id***
sender	ObjectId	***FK → Users._id***
type	String	enum("ISSUE_ASSIGNED", "ISSUE_COMMENTED", "MENTIONED", "SPRINT_STARTED")
resourceId	ObjectId	required
resourceType	String	default "issue"
message	String	
isRead	Boolean	default false
hasSentEmail	Boolean	default false

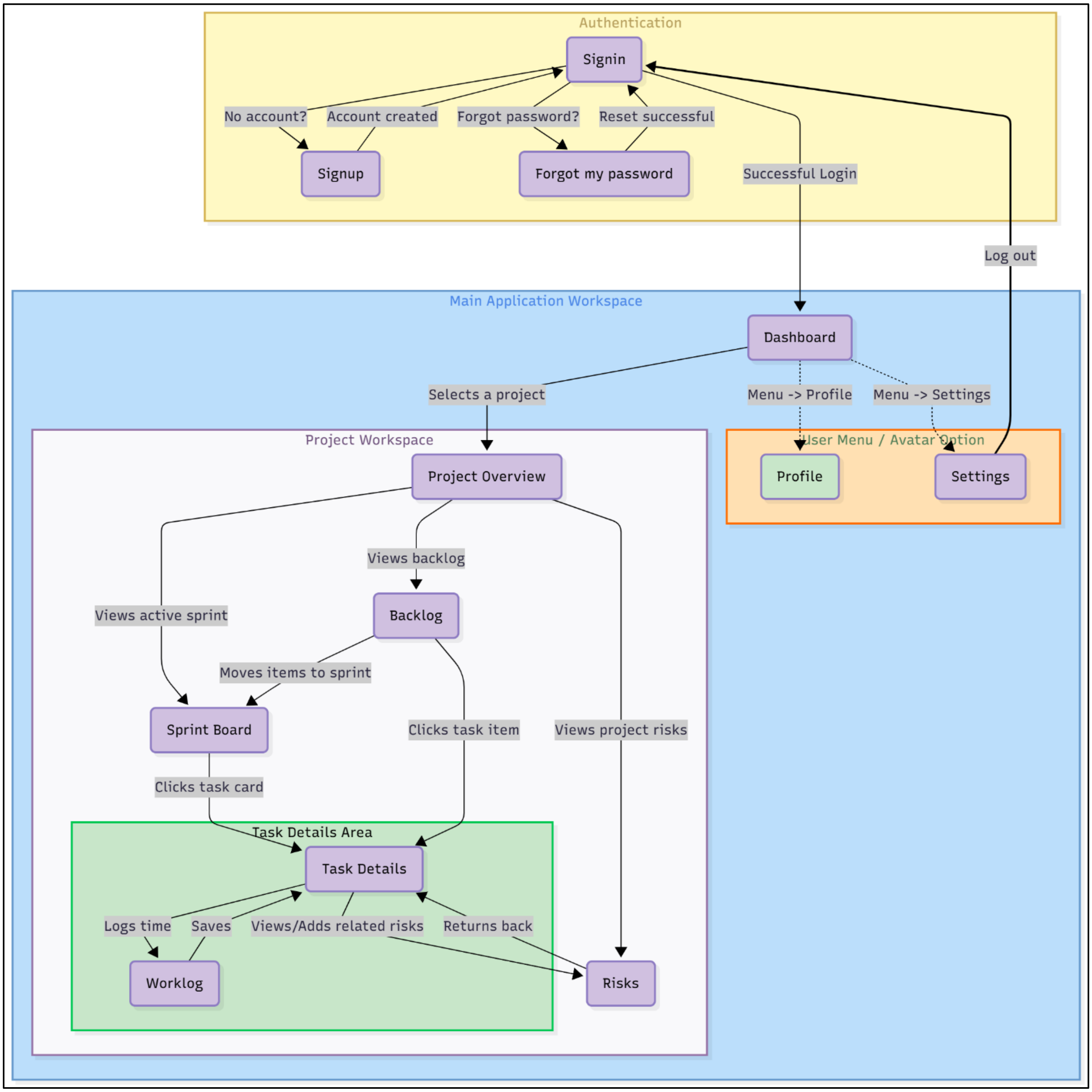
mailError	String	optional
createdAt	Date	TTL index 30 days
updatedAt	Date	

VERSIONS

Attribute	Type	Constraint
_id	ObjectId	PK
project	ObjectId	required, ***FK → Projects._id***
name	String	required
description	String	
startDate	Date	
releaseDate	Date	
isReleased	Boolean	default false
archived	Boolean	default false
createdAt	Date	
updatedAt	Date	

5 User Interface and User Experience Design

5.1 Screen Diagram



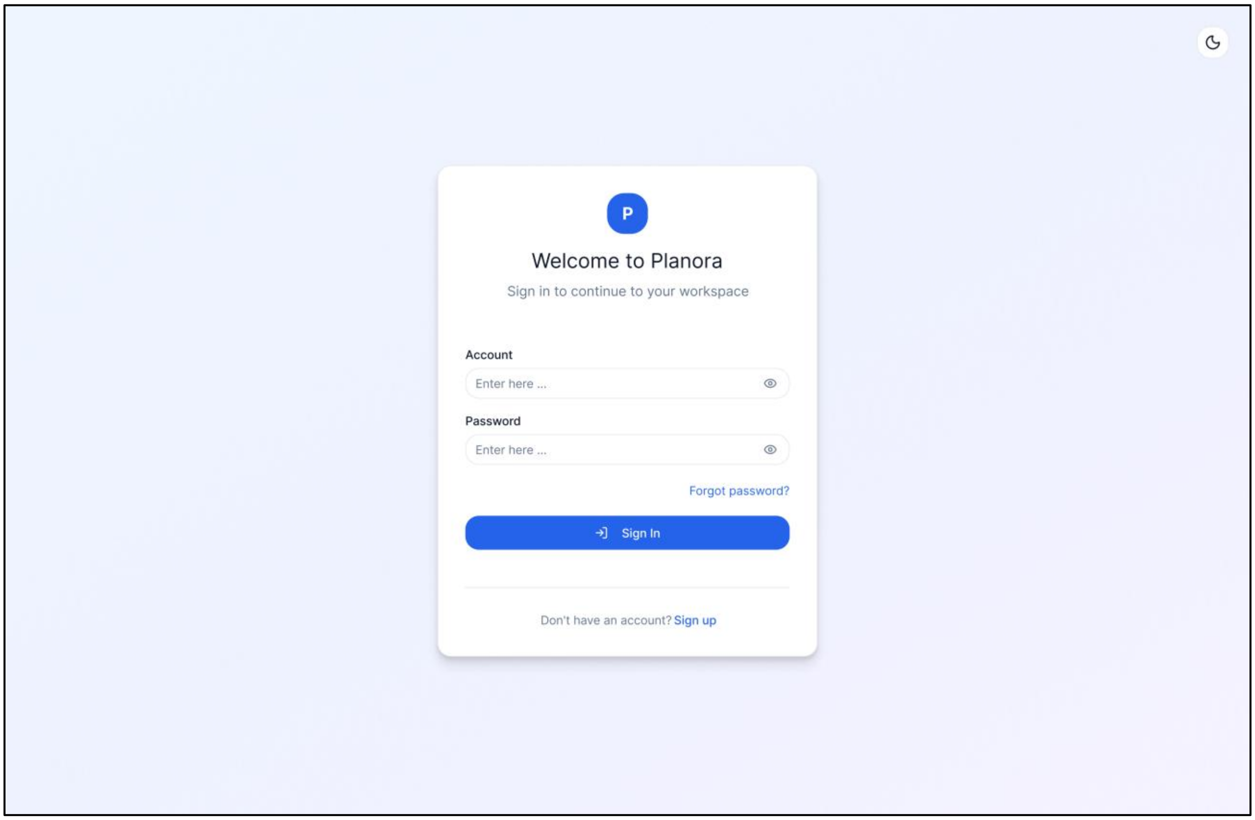
Picture: Screen Diagram

Seq	Screen	Description
1	Signin	Login interface for existing users to access the system.
2	Signup	Registration interface for new users to create an account.
3	Forgot my password	Password recovery screen for users who have lost their login credentials.
4	Dashboard	The central landing page after logging in, providing a high-level overview of all projects and general statistics.
5	Project	The overview screen for a specific project, showing summary metrics and progress.
6	Backlog	A repository for managing pending requirements, user stories, and tasks not yet assigned to an active cycle.
7	Sprint	The active board (e.g., Scrum/Kanban) displaying the status of tasks in the current iteration.
8	Task	A detailed view of a specific work item, containing descriptions, comments, attachments, and history.
9	Worklog	Interface (or modal) for users to log the time and effort spent on a specific task.
10	Risks	A management screen to track, assess, and mitigate potential risks associated with the project or tasks.
11	Profile	User profile screen displaying personal details such as avatar, name, email, and role.
12	Settings	Configuration screen for application preferences, password management, and the Log out function.

5.2 Screen Specifications

5.2.1 Login

This interface serves as the entry point for the "Planora" workspace, providing a clean, focused environment for users to authenticate or navigate to account recovery/creation.



A. Presentation Format (UI Layout)

The screen utilizes a minimalist, centered layout designed to reduce distractions and focus attention on the authentication form.

Global Layout (Background & Utilities)

- **Background:** A solid, light grayish-blue background color covering the entire viewport.
- **Theme Toggle:** A circular "Moon" icon located in the top-right corner, indicating a switch for Dark Mode.

Authentication Card (Centered Container)

- **Container:** A white, rounded rectangular card with a soft drop shadow, centered vertically and horizontally on the screen.
- **Header Section:**
  - **Logo:** A circular blue avatar with a white "P" in the center.
  - **Title:** "Welcome to Planora" (Bold, large font).
  - **Subtitle:** "Sign in to continue to your workspace" (Grey, smaller font).
- **Form Section:**
  - **Input Field 1 (Account):** Labeled "Account". Contains placeholder text "Enter here ..." and a visibility (eye) icon on the right.
  - **Input Field 2 (Password):** Labeled "Password". Contains placeholder text "Enter here ..." and a visibility (eye) icon on the right.
  - **Helper Link:** "Forgot password?" link aligned to the right, below the password field.
- **Primary Action:**
  - **Button:** A full-width, bright blue button labeled "Sign In" with a right-arrow icon (→).
- **Footer Section:**
  - **Divider:** A faint horizontal line separating the form from the footer.

Registration Prompt: Text reading "Don't have an account?" followed by a blue "Sign up" link.

B. Event Handling (Interaction Logic)

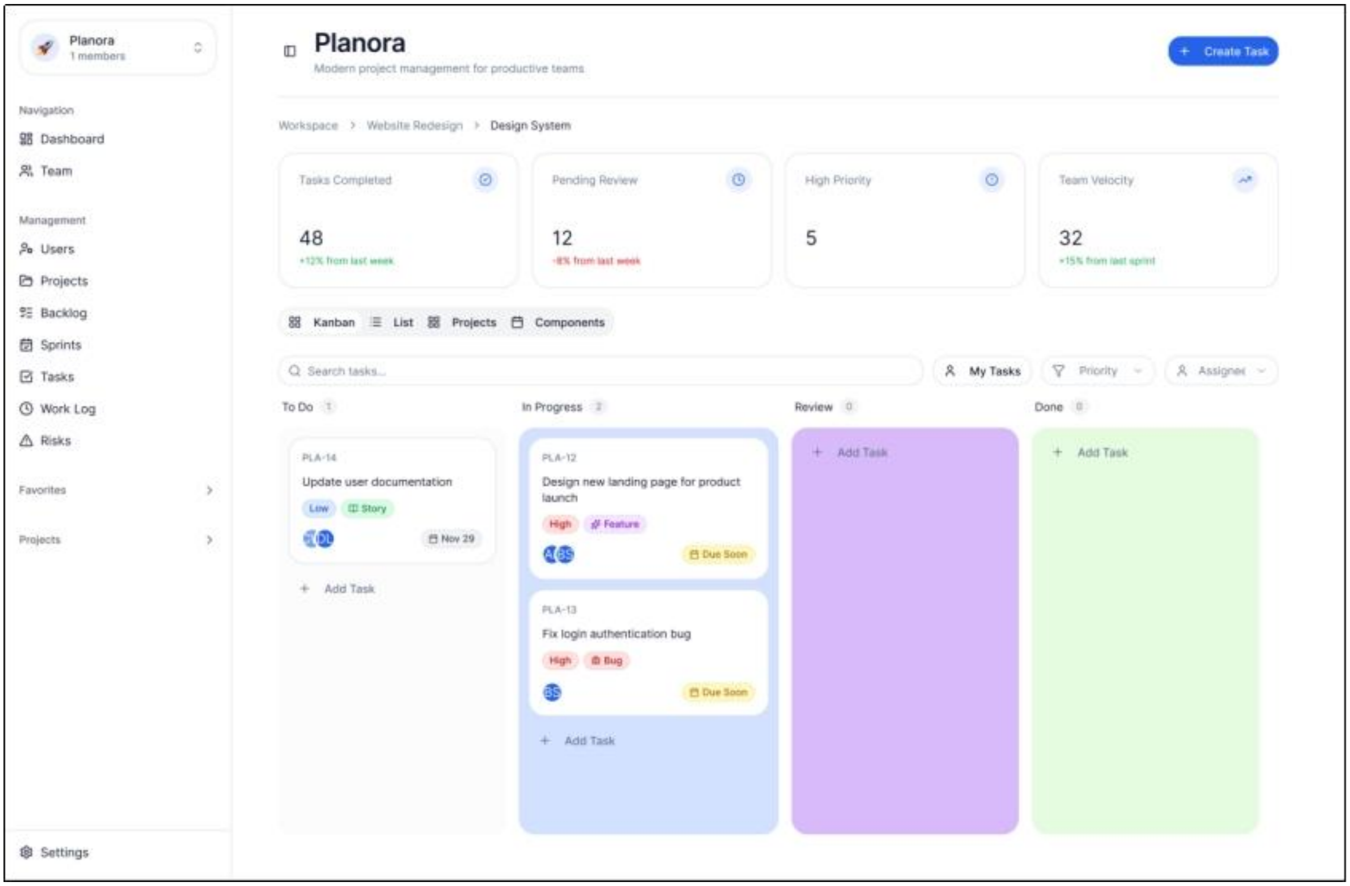
The table below describes how specific user interactions are handled within this specific design.

Event / User Action	Trigger Element	System Response / Transition
Toggle Theme	Click "Moon" Icon (Top Right)	**Action:** Switch the entire UI to Dark Mode (background becomes dark, card adjusts contrast).

Enter Credentials	Type in "Account" / "Password" fields	**Action:** Capture input characters.
Toggle Visibility	Click "Eye" Icon (Inside Input)	**Action:** Reveal or mask the text content of the respective input field (Password or Account).
Recover Password	Click "Forgot password?"	**Transition:** Navigate to the "Reset Password" screen.
Submit Form	Click "Sign In" Button	**Action:** Validate inputs. If valid, authenticate with backend. **Transition:** On success, redirect to the Project Dashboard.
Create Account	Click "Sign up" Link	**Transition:** Navigate to the "Registration" screen.

5.2.2 Dashboard

This interface allows users to track the health of a specific project **Planora** through metrics and actively manage tasks using a Kanban board.



A. Presentation Format (UI Layout)

The screen is divided into two main panels: The Navigation Sidebar (Left) and the Main Workspace (Right).

Navigation Sidebar (Left Panel)

- **Workspace Switcher:** Top dropdown (e.g., "Personal Workspace") to switch between different team environments.
- **Links** to "Dashboard" and "Team".
- **Management:** The core functional menu matching your previous user flow:
  - Users, Projects, Backlog, Sprints, Tasks, Work Log, Risks.
- **Favorites & Projects:** Collapsible sections for quick access.
- **Settings:** Located at the bottom footer.

Header & Controls (Top Right Panel)

- **Breadcrumbs & Title:** Displays the current path (Workspace > Website Redesign > Design System) and the Project Title ("Planora Design System").
- **Primary Action:** A prominent blue **"+ Create Task"** button.
- **Key Metrics (KPI Cards):** Four summary cards at the top:
    - Tasks Completed: (e.g., 48, +12%).
    - Pending Review: (e.g., 12, -8%).
    - High Priority: (e.g., 5).
    - Team Velocity: (e.g., 32).
- **View Switcher:** Tabs to toggle view modes: **Kanban** (Active), **List**, **Projects**, **Components**.
- **Filter Bar:**
    - Search input ("Search tasks...").
    - Quick filters: "My Tasks", "Priority", "Assignee".

Kanban Board (Main Content Area)

- **Columns:** Organized by workflow status: **To Do** (1), **In Progress** (2), **Review** (0), **Done** (0).
- **Task Cards:** Each card displays:
    - ID: (e.g., PLA-14).
    - Title: (e.g., "Update user documentation").
    - Tags: Priority (Low/High), Type (Story/Feature/Bug).
    - Assignees: Avatar circles.
    - Due Date/Status: (e.g., "Nov 29" or "Due Soon").
- **"Add Task" Button:** A ghost button at the bottom of each column for quick inline creation.

B. Event Handling (Interaction Logic)

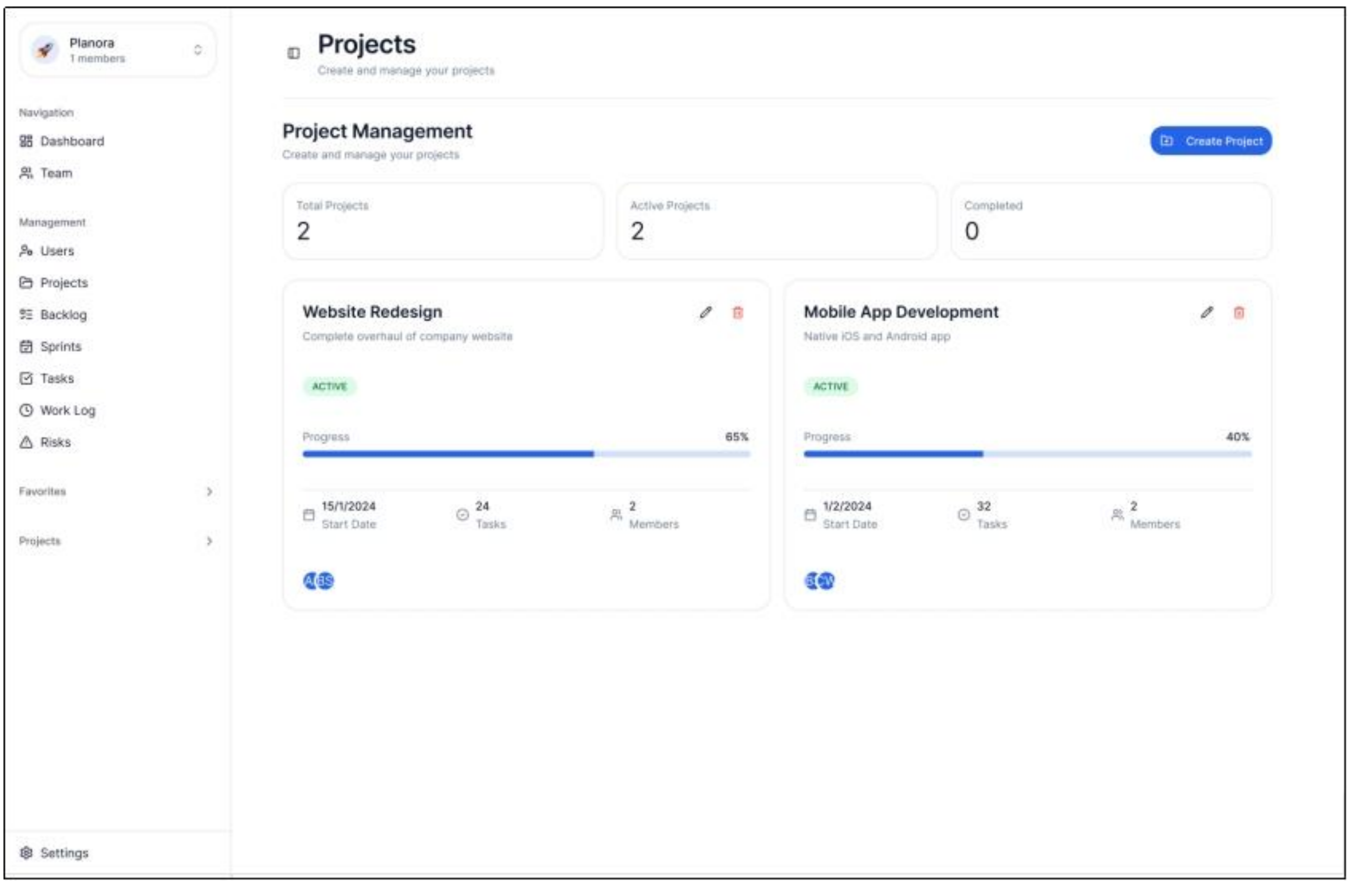
The table below describes how specific user interactions are handled within this specific design.

Event / User Action	Trigger Element	System Response / Transition
Switch View Mode	Click **"List"** or **"Projects"** tab	**Action:** Re-render the main content area to show tasks in a table list or project grid format without reloading the page.
Create New Task	Click **"+ Create Task"** (Top Right)	**Action:** Open a "Create Task" Modal overlay with fields for Title, Description, Assignee, and Priority.
Quick Add Task	Click **"+ Add Task"** (Bottom of Column)	**Action:** An input field appears inline within that column to quickly type a task name and press Enter.
View Task Details	Click on a **Task Card** (e.g., PLA-12)	**Transition:** Navigate to the **Task Details** screen (or open a side-drawer details panel).
Move Task (Status)	**Drag and drop** a card (e.g., from "To Do" to "In Progress")	**Action:** Update the task status in the database automatically.
Filter Tasks	Type in **"Search tasks..."**	**Action:** Real-time filtering of the visible cards on the board to match keywords.
Filter by Person	Click **"My Tasks"** button	**Action:** Hide all cards except those where the Assignee matches the current logged-in user.
Access Risks	Click **"Risks"** in	**Transition:** Navigate to the **Risks** management

	Sidebar	screen.
View Backlog	Click **"Backlog"** in Sidebar	**Transition:** Navigate to the **Backlog** screen to view unscheduled tasks.
Settings	Click **"Settings"** (Bottom Left)	**Transition:** Navigate to the global **Settings** page.

5.2.3 Projects

This interface serves as the central hub for overseeing all ongoing, active, and completed projects within the workspace. It provides high-level status visibility and entry points to specific project details.



A. Presentation Format (UI Layout)

The screen follows the standard split-panel layout: a fixed Navigation Sidebar on the left and a scrollable Main Workspace on the right.

Navigation Sidebar (Left Panel)

- **Structure:** Identical to the Dashboard sidebar.
- **Workspace Switcher:** "Planora" (1 members) dropdown at the top.
- **Navigation:** Links to **Dashboard** and **Team**.
- **Management:** Active link on **Projects** (highlighted/bolded). Other links: Users, Backlog, Sprints, Tasks, Work Log, Risks.
- **Footer:** Settings option.

Header & Metrics (Top Right Panel)

- **Page Title:** "Projects" with a subtitle "Create and manage your projects".
- **Section Header:** "Project Management" with a repeating subtitle "Create and manage your projects".
- **Primary Action:** A prominent blue **"+ Create Project"** button located in the top right.
- **Summary Metrics:** Three horizontal cards displaying high-level counts:
  - **Total Projects:** (e.g., 2).
  - **Active Projects:** (e.g., 2).
  - **Completed:** (e.g., 0).

Project Grid (Main Content Area)

- **Layout:** A responsive grid displaying projects as detailed cards.
- **Project Card Components:**
  - **Header:** Project Title (e.g., "Website Redesign") and Description (e.g., "Complete overhaul of company website").
  - **Controls:** Edit (Pencil icon) and Delete (Trash can icon) buttons in the top right of the card.
  - **Status Badge:** A "pill" shaped badge (e.g., **ACTIVE** in green text with green background).

- **Progress Bar:** A visual bar indicating completion percentage (e.g., 65% filled with blue).
- **Meta Data Row:**
  - **Start Date:** Calendar icon + Date (e.g., 15/1/2024).
  - **Tasks:** Checkmark icon + Count (e.g., 24 Tasks).
  - **Members:** User icon + Count (e.g., 2 Members).

Team: Stacked avatar circles (Initials like A, B, S) showing assigned members.

B. Event Handling (Interaction Logic)

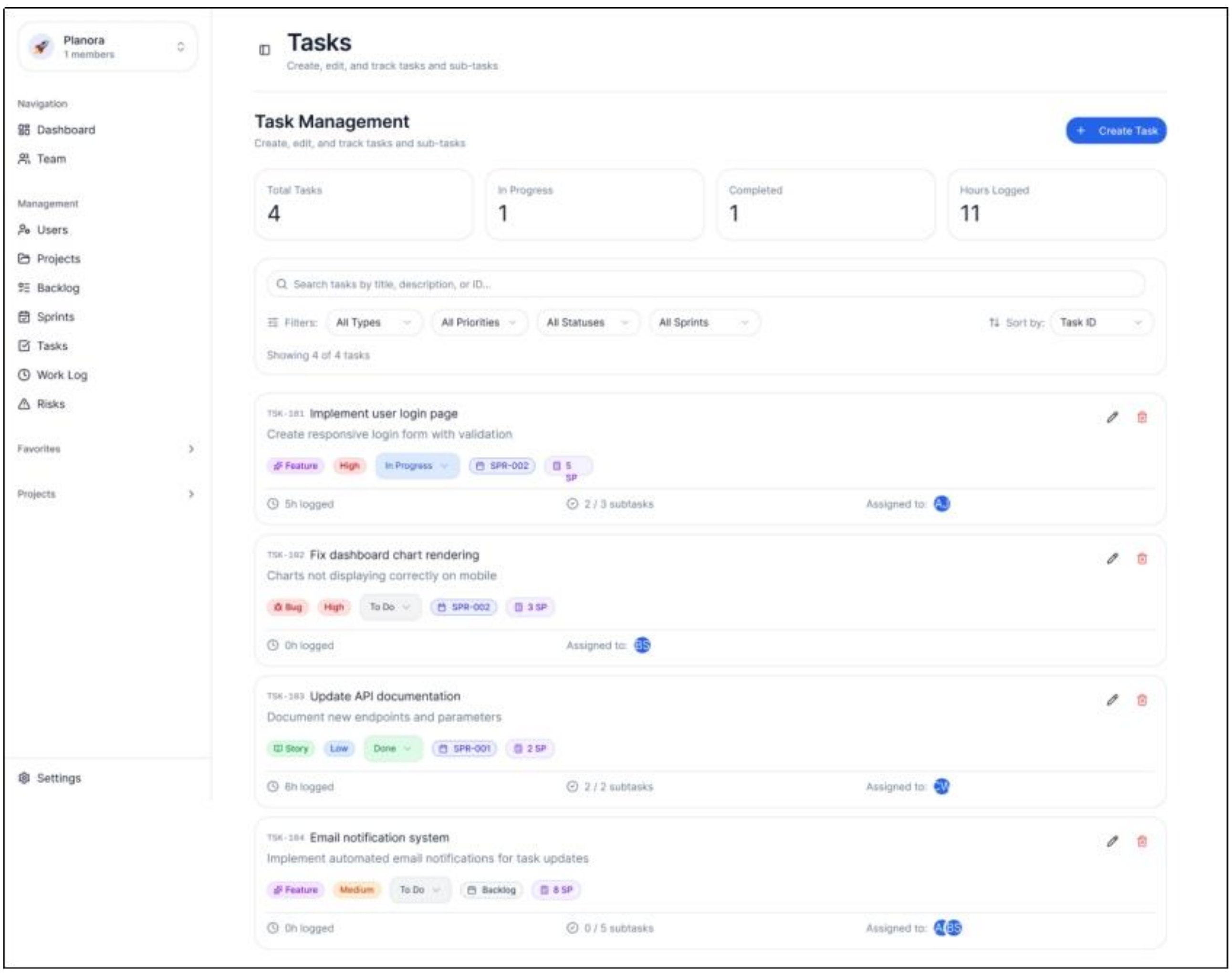
The table below describes how specific user interactions are handled within this specific design.

Event / User Action	Trigger Element	System Response / Transition
Creating New Project	Click "+ Create Project" Button	**Action:** Open a "New Project" Modal with fields for Title, Description, Start/End Date, and Team Members.
Edit Project	Click "Pencil" Icon (Card Top Right)	**Action:** Open the "Edit Project" Modal pre-filled with current project data.
Delete Project	Click "Trash" Icon (Card Top Right)	**Action:** Display a confirmation dialog ("Are you sure you want to delete...?"). **Confirm:** Remove project from database and refresh grid.
View Project Details	Click Project Card Body (e.g., "Website Redesign")	**Transition:** Navigate to the specific **Project Dashboard** (the Kanban view described earlier) for that project.

Navigate Sidebar	Click "Dashboard" or "Tasks"	**Transition:** Navigate to the respective module page.
Manage Team	Click Member Avatars on Card	**Transition:** Navigate to the "Team Settings" or "Project Members" list for that specific project.

5.2.4 Tasks

This interface allows for granular tracking of individual work items across the entire workspace. Unlike the Kanban view, this list view focuses on detailed metadata, filtering, and reporting metrics (like hours logged and story points).



A. Presentation Format (UI Layout)

The screen maintains the consistent split-panel layout, with a specific focus on a vertical list presentation for the main content.

Navigation Sidebar (Left Panel)

- **Structure:** Identical to the Dashboard and Project screens.
- **Active State:** The **"Tasks"** link in the Management section is highlighted/bolded to indicate the current page.
- **Links:** Dashboard, Team, Users, Projects, Backlog, Sprints, **Tasks**, Work Log, Risks.

Header & Metrics (Top Right Panel)

- **Page Title:** "Tasks" with subtitle "Create, edit, and track tasks and sub-tasks".
- **Section Header:** "Task Management" with specific action instructions.
- **Primary Action:** A **"+ Create Task"** button (Blue) in the top right.
- **Performance Metrics:** Four summary cards providing instant project health data:
    - **Total Tasks:** (e.g., 4).
    - **In Progress:** (e.g., 1).
    - **Completed:** (e.g., 1).
    - **Hours Logged:** (e.g., 11).

Control Bar (Filter & Sort)

- **Search:** A wide input field: "Search tasks by title, description, or ID..."
- **Filters:** Four dropdown menus to refine the list:
    - *All Types* (Feature, Bug, Story).
    - *All Priorities* (High, Medium, Low).
    - *All Statuses* (To Do, In Progress, Done).
    - *All Sprints* (e.g., Sprint 1, Backlog).
- **Sort:** A dropdown labeled "Sort by: **Task ID**" (or Due Date, Priority).
- **Counter:** Text indicating "Showing 4 of 4 tasks".

Task List (Main Content Area)

- **Layout:** A vertical stack of detailed row cards.

- **Row Components (Example: TSK-101):**
  - **Identifier:** Task ID in gray (e.g., TSK-101).
  - **Content:**
    - **Title:** Bold text (e.g., "Implement user login page").
    - **Description:** Secondary text (e.g., "Create responsive login form with validation").
  - **Tags & Badges:** A row of color-coded "pills":
    - *Type:* Purple "Feature", Red "Bug", Green "Story".
    - *Priority:* Red "High", Orange "Medium", Blue "Low".
    - *Status:* Blue "In Progress", Gray "To Do", Green "Done".
    - *Sprint:* Blue outlined "SPR-002" or Gray "Backlog".
    - *Points:* Purple outlined "5 SP" (Story Points).
  - **Meta Data Footer:**
    - **Time:** Clock icon + text (e.g., "5h logged").
    - **Subtasks:** Check-circle icon + text (e.g., "2 / 3 subtasks").
    - **Assignee:** "Assigned to:" label with Avatar circles (e.g., AJ, BS).
  - **Row Actions:** Located on the far right of the row:
    - **Edit:** Pencil icon.
    - **Delete:** Trash can icon (Red).

B. Event Handling (Interaction Logic)

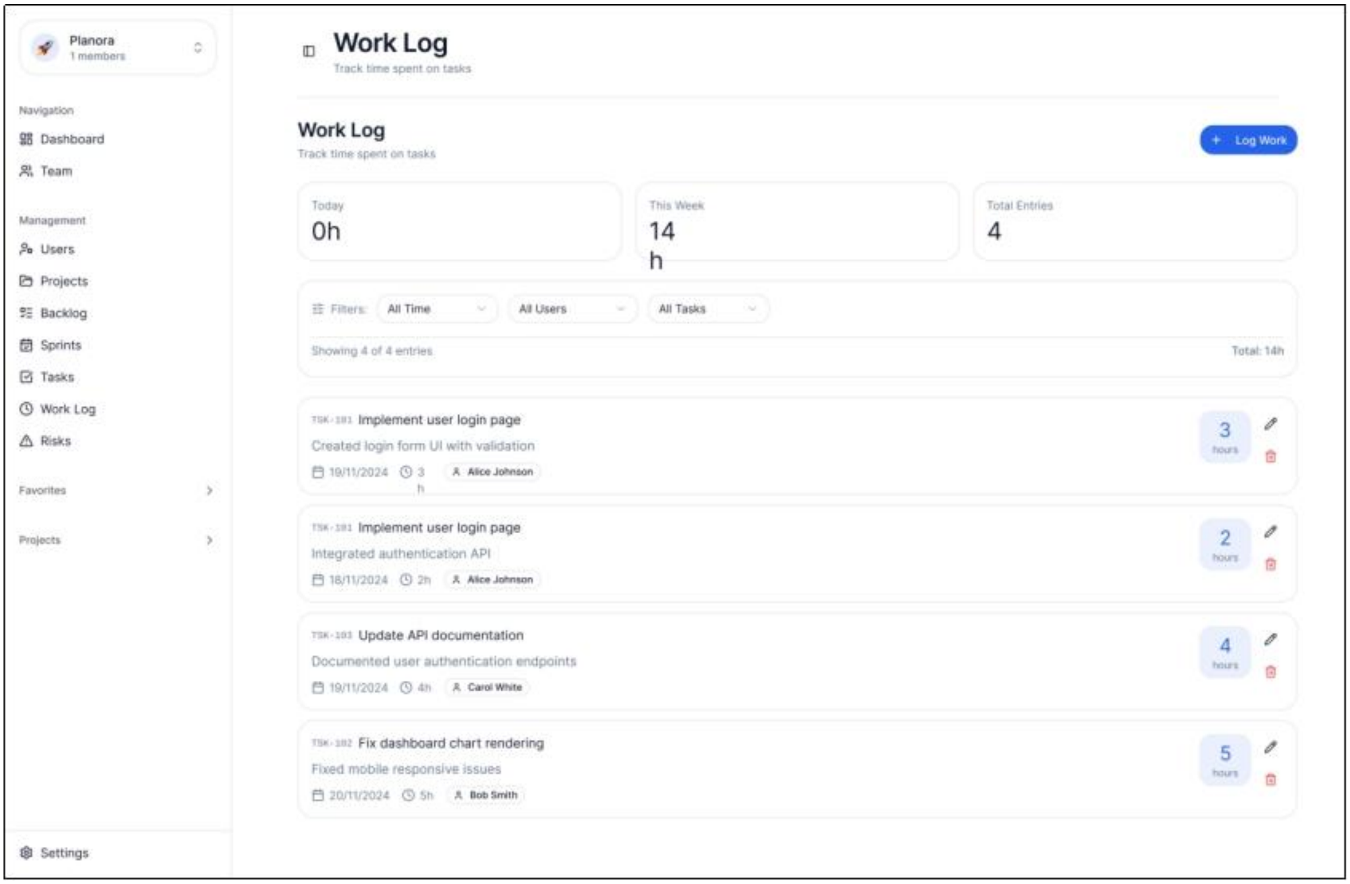
The table below describes how specific user interactions are handled within this specific design.

Event / User Action	Trigger Element	System Response / Transition
Search Tasks	Type in "Search tasks..." input	**Action:** Real-time filtering of the task list to match keywords in Title, Description, or ID.

Apply Filters	Click "All Types" / "All Priorities" etc.	**Action:** Dropdown opens. Selection refreshes the list to show only matching items (e.g., only "High" priority).
Create Task	Click "+ Create Task" Button	**Action:** Open "Create Task" Modal with extended fields (Time Estimate, Story Points, Sprint assignment).
Edit Task	Click "Pencil" Icon (Row Right)	**Action:** Open "Edit Task" Modal pre-filled with current task data.
Delete Task	Click "Trash" Icon (Row Right)	**Action:** Display confirmation dialog. On confirm, remove task from list and update "Total Tasks" metric.
View Details	Click Task Title or ID (e.g., TSK-101)	**Transition:** Navigate to the detailed **Task View** page (showing comments, history, and attachments).
Update Status	Click Status Badge (e.g., "In Progress")	**Action:** (Optional) Quick-toggle dropdown to change status directly from the list view.
Sort List	Click "Sort by" Dropdown	**Action:** Reorder the list based on selected criteria (e.g., Highest Priority first).

5.2.5 Worklog

This interface is designed to track time spent on specific tasks, providing both high-level summaries and detailed entry logs. It allows team members to log hours and managers to review effort distribution.



A. Presentation Format (UI Layout)

The screen follows the consistent split-panel layout, prioritizing a vertical list of time entries.

Navigation Sidebar (Left Panel)

- **Structure:** Standard "Planora" sidebar structure.
- **Active State:** The **"Work Log"** link in the Management section is highlighted/bolded.
- **Links:** Dashboard, Team, Users, Projects, Backlog, Sprints, Tasks, **Work Log**, Risks.

Header & Metrics (Top Right Panel)

- **Page Title:** "Work Log" with subtitle "Track time spent on tasks".
- **Section Header:** Repeated "Work Log" title and subtitle.
- **Primary Action:** A blue **"+ Log Work"** button in the top right corner.
- **Summary Cards:** Three KPI cards displaying time metrics:
  - **Today:** "0h".
  - **This Week:** "14h".

  - **Total Entries:** "4".

Control Bar (Filter & Sort)

- **Filters:** Three dropdown menus for refining the log list:
  - *Time Range:* "All Time".
  - *User:* "All Users".
  - *Task:* "All Tasks".
- **Footer/Meta:** "Showing 4 of 4 entries" on the left and "Total: 14h" on the right.

Work Log List (Main Content Area)

- **Layout:** A vertical stack of white cards, each representing a single work log entry.
- **Entry Card Components:**
  - **Header:** Task ID (e.g., TSK-101) followed by the Task Title (e.g., "Implement user login page") in bold.
  - **Description:** A specific note about the work done (e.g., "Created login form UI with validation").
  - **Meta Data Row:**
    - **Date:** Calendar icon + Date (e.g., 19/11/2024).
    - **Duration:** Clock icon + Time (e.g., 3h).
    - **User:** User icon + Name pill (e.g., Alice Johnson).
  - **Time Badge:** A large light-blue badge on the right showing the logged hours (e.g., "3 hours").
  - **Actions:** Small Pencil (Edit) and Trash Can (Delete) icons vertically stacked on the far right.

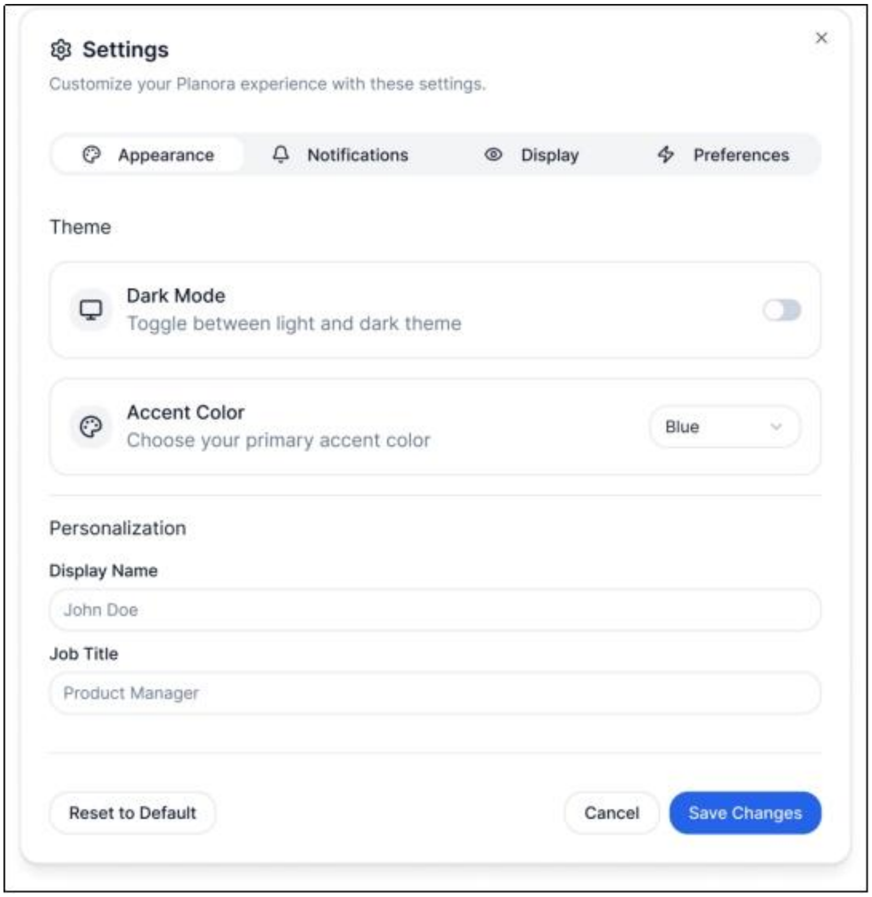
B. Event Handling (Interaction Logic)

The table below describes how specific user interactions are handled within this specific design.

Event / User Action	Trigger Element	System Response / Transition
Log New Work	Click "+ Log Work" Button	**Action:** Open a "Log Time" Modal with fields for Task ID, Duration (hours), Date, and Description.
Filter Logs	Click "All Time" / "All Users"	**Action:** Dropdown opens. Selection refreshes the list to show specific entries (e.g., only "This Week").
Edit Entry	Click "Pencil" Icon (Card Right)	**Action:** Open the "Edit Work Log" Modal pre-filled with the selected entry's data.
Delete Entry	Click "Trash" Icon (Card Right)	**Action:** Display confirmation dialog. On confirm, remove the entry and recalculate "This Week" and "Total" metrics.
View Task Context	Click Task Title (e.g., "Implement...")	**Transition:** Navigate to the specific **Task Details** page for that task ID.
Filter by User	Click User Pill (e.g., Alice Johnson)	**Action:** Quickly apply a filter to show only work logs created by that specific user.

5.2.6 Settings

This interface is presented as a modal or a focused settings panel that allows users to customize the visual aspects and personal profile details of their workspace experience.



A. Presentation Format (UI Layout)

The design is contained within a clean, white card structure, likely appearing as an overlay (modal) on top of the main application.

Header Section

- **Title:** "Settings" accompanied by a generic gear icon.
- **Subtitle:** "Customize your Planora experience with these settings."
- **Close Action:** A standard **"X"** icon located in the top-right corner to dismiss the modal.

Navigation Tabs

- **Style:** A horizontal, pill-shaped segmented control bar.
- **Tabs:**
    - **Appearance** (Currently Active: White background with shadow).
    - **Notifications** (Inactive).

  - **Display** (Inactive).
  - **Preferences** (Inactive).

Content Area: Theme

- **Section Header:** "Theme" (Text label).
- **Dark Mode Card:**
  - **Icon:** Monitor/Display icon in a circle.
  - **Label:** "Dark Mode" with subtitle "Toggle between light and dark theme".
  - **Control:** A standard **Toggle Switch** (currently set to Off/Grey).
- **Accent Color Card:**
  - **Icon:** Paint palette icon in a circle.
  - **Label:** "Accent Color" with subtitle "Choose your primary accent color".
  - **Control:** A **Dropdown Menu** currently displaying "Blue".

Content Area: Personalization

- **Section Header:** "Personalization" (Text label).
- **Input Field 1:**
  - **Label:** "Display Name".
  - **Value:** Text input currently filled with "John Doe".
- **Input Field 2:**
  - **Label:** "Job Title".
  - **Value:** Text input currently filled with "Product Manager".

Footer Action Bar

- **Separation:** A divider line separates the content from the footer.
- **Secondary Actions:**
  - **Reset:** A "Reset to Default" ghost button on the far left.
  - **Cancel:** A "Cancel" outlined button on the right.
- **Primary Action:**
  - **Save:** A solid blue "Save Changes" button on the far right.

B. Event Handling (Interaction Logic)

The table below describes how specific user interactions are handled within this specific design.

Event / User Action	Trigger Element	System Response / Transition
Close Modal	Click "X" Icon (Top Right)	**Action:** Close the Settings modal without saving unsaved changes.
Switch Tab	Click "Notifications" / "Display" etc.	**Action:** Switch the main content view to the selected category (e.g., show Notification preferences).
Toggle Dark Mode	Click Toggle Switch	**Action:** Immediately switch the UI theme to Dark Mode (visual preview) or toggle the switch state to "On".
Select Accent	Click "Blue" Dropdown	**Action:** Open a list of color options (e.g., Red, Green, Purple). selection updates the primary color used in buttons/links.
Edit Profile	Click/Type in "Display Name" or "Job Title"	**Action:** Capture text input for user profile updates.
Reset Settings	Click "Reset to Default"	**Action:** Revert all unsaved changes in the current tab to their original system defaults.
Discard Changes	Click "Cancel" Button	**Action:** Close the modal and discard any changes made during the session.

Save Settings	Click "Save Changes" Button	**Action:** Persist changes to the user's profile database and close the modal.

5.2.7 Remaining Screen

This link figma prototypes for remaining screen: Planora-Prototype