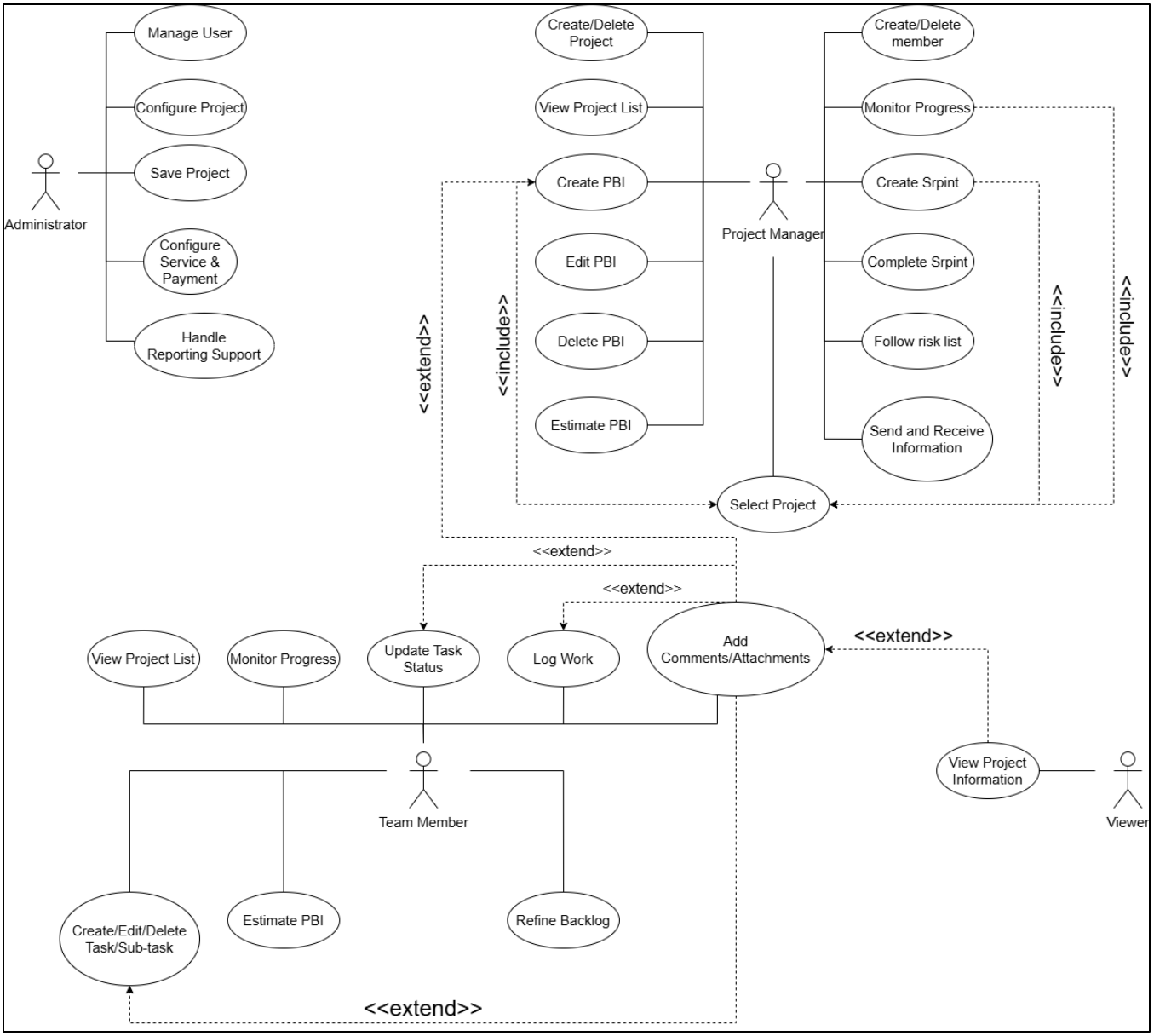
4 Requirements Analysis

4.1 Use Case model



4.2 Use Case Specification

4.2.1. Use Case 1

Use case ID	*UC-ADMIN-001*
Use Case	Manage User
Brief Description	Admin creates, updates, or deactivates user accounts in the system.
Actor	Administrator
Pre-Condition	Admin is logged in.
Result	User information is updated in the database.
Main Scenario	1. Admin navigates to User Management. 2. System lists existing users. 3. Admin selects "Create New" or selects a user to "Edit/Delete". 4. Admin inputs/modifies details and roles. 5. Admin clicks Save. 6. System validates and persists data.
Alternatice Scenarios	Email already exists: System shows a "Duplicate Email" error.
Non-Functional Constraints	Passwords must be encrypted.

Use case ID	*UC-ADMIN-002*
Use Case	Configure Project
Brief Description	Admin creates, updates, Setup technical parameters, workflows, and global settings for a project. or deactivates user accounts in the system.
Actor	Administrator
Pre-Condition	Project must exist.
Result	Project configuration is applied.
Main Scenario	1. Admin selects the target project.

	2. Admin modifies settings (Workflow, Task Types, Permissions). 3. Admin saves configuration. 4. System applies changes to the project scope.
Alternatice Scenarios	N/A
Non-Functional Constraints	Data consistency must be maintained.

Use case ID	***UC-ADMIN-003***
Use Case	Handle Reporting Support
Brief Description	The Administrator reviews system reports regarding errors/issues or handles support tickets submitted by users.
Actor	Administrator
Pre-Condition	There are pending support tickets or system reports generated.
Result	The issue is reviewed, and a resolution or response is recorded.
Main Scenario	1. Admin opens the "Support & Reporting" center. 2. System displays a list of reported issues or tickets. 3. Admin selects a specific item to review details. 4. Admin takes action (e.g., Send Reply, Mark as Resolved, Escalate to Dev Team). 5. System updates the ticket status and notifies the reporter.
Alternatice Scenarios	N/A
Non-Functional Constraints	Response time for critical system reports should be prioritized in the UI.

Use case ID	***UC-ADMIN-004***
Use Case	Configure Service & Payment
Brief Description	The Administrator manages the system's subscription plans, billing

	information, and integration with third-party services.
Actor	Administrator
Pre-Condition	Admin has valid payment credentials or API keys.
Result	Subscription plan is updated or external services are connected.
Main Scenario	1. Admin accesses the "Billing & Services" dashboard. 2. Admin selects an action (e.g., Upgrade Plan, Update Credit Card, Configure API Key). 3. Admin enters the required financial or technical details. 4. Admin submits the form. 5. System verifies with the external payment gateway or service provider. 6. System updates the service status.
Alternatice Scenarios	Payment Failed: Gateway rejects card -> System notifies Admin and retains current plan status.
Non-Functional Constraints	All payment information must be processed via secure channels (SSL/TLS) and comply with PCI-DSS standards.

Use case ID	***UC-ADMIN-005***
Use Case	Save Project
Brief Description	The Administrator manually triggers a save of the project state, often used for creating backups, snapshots, or archiving a finished project.
Actor	Administrator
Pre-Condition	Project is active and selected.
Result	A snapshot of the project data is saved or the project is archived.
Main Scenario	1. Admin navigates to the Project Maintenance area. 2. Admin selects "Save Snapshot" or "Archive Project". 3. System prompts for confirmation or a version name. 4. Admin confirms. 5. System processes the data and stores a secure copy/archive.
Alternatice Scenarios	Storage Full: If system storage is insufficient -> Display error "Insufficient storage space".

Non-Functional Constraints	Data integrity must be guaranteed during the save process.

Use case ID	***UC-PM-001***
Use Case	View Project List
Brief Description	The Project Manager views a list of all projects they are assigned to or own.
Actor	Project Manager
Pre-Condition	User is logged in.
Result	A list of projects is displayed.
Main Scenario	1. PM navigates to the "Projects" dashboard. 2. System retrieves projects linked to the PM's account. 3. System displays the list (Name, Status, Role).
Alternatice Scenarios	No Projects: System displays "No projects found" and prompts to create one.
Non-Functional Constraints	Pagination required if projects > 20.

Use case ID	***UC-PM-002***
Use Case	Create/Delete Project
Brief Description	The PM initializes a new project workspace or removes an obsolete one.
Actor	Project Manager
Pre-Condition	User is logged in.
Result	Project is created or deleted.
Main Scenario	**(Create)** 1. PM clicks "New Project". 2. PM enters Name, Description, Key. 3. PM clicks Save. 4. System creates the project.

Alternatice Scenarios	**(Delete)** 1. PM selects a project in the list. 2. PM clicks "Delete". 3. System asks for confirmation. 4. PM confirms. 5. System soft-deletes the project.
Non-Functional Constraints	Project Key must be unique.

Use case ID	***UC-PM-003***
Use Case	Select Project
Brief Description	The PM selects a specific project context to work within. This is an <<include>> dependency for many other cases. (Create PBI; Create Sprint).
Actor	Project Manager
Pre-Condition	"View Project List" has been executed.
Result	The specific project workspace is loaded.
Main Scenario	1. PM clicks on a specific project card/link from the list. 2. System loads project-specific data (Backlog, Sprints, Members).
Alternatice Scenarios	**(Delete)** 1. PM selects a project in the list. 2. PM clicks "Delete". 3. System asks for confirmation. 4. PM confirms. 5. System soft-deletes the project.
Non-Functional Constraints	Project Key must be unique.

Use case ID	***UC-PM-004***
Use Case	**Create/Delete Member**

Brief Description	The PM manages the project team by adding new users or removing existing ones.
Actor	Project Manager
Pre-Condition	A project is selected.
Result	Member list is updated.
Main Scenario	**(Add)** 1. PM goes to "Team Members". 2. PM clicks "Add Member". 3. PM searches by email and selects role. 4. System adds user to project.
Alternatice Scenarios	**(Remove)** 1. PM finds a member in the list. 2. PM clicks "Remove". 3. System revokes project access for that user.
Non-Functional Constraints	N/A

Use case ID	***UC-PM-005***
Use Case	Create PBI
Brief Description	PM adds a new item (Story, Bug, Task) to the Product Backlog.
Actor	Project Manager
Pre-Condition	Project is selected (<<include>> Select Project).
Result	New PBI is added to the bottom of the backlog.
Main Scenario	1. PM navigates to "Backlog". 2. PM clicks "Create Item". 3. PM enters Summary and Type. 4. System saves the item.
Alternatice Scenarios	N/A

Non-Functional Constraints	N/A

Use case ID	***UC-PM-006***
Use Case	Edit PBI
Brief Description	PM modifies the details of an existing backlog item.
Actor	Project Manager
Pre-Condition	PBI exists in the backlog.
Result	PBI details are updated.
Main Scenario	1. PM clicks on a PBI. 2. System opens detail view. 3. PM updates Description, Priority, or Acceptance Criteria. 4. System saves changes.
Alternatice Scenarios	N/A
Non-Functional Constraints	Concurrent editing handling (optimistic locking).

Use case ID	***UC-PM-007***
Use Case	Delete PBI
Brief Description	PM removes an item from the backlog.
Actor	Project Manager
Pre-Condition	PBI exists in the backlog.
Result	PBI is removed.
Main Scenario	1. PM selects a PBI. 2. PM selects "Delete" option. 3. System prompts confirmation. 4. PM confirms.

	5. System removes PBI.
Alternatice Scenarios	N/A
Non-Functional Constraints	N/A

Use case ID	***UC-PM-008***
Use Case	Estimate PBI
Brief Description	PM assigns complexity points or time estimates to a PBI.
Actor	Project Manager
Pre-Condition	PBI exists in the backlog.
Result	PBI has an estimate value (e.g., Story Points).
Main Scenario	1. PM opens PBI details. 2. PM clicks on "Estimate" field. 3. PM inputs value (e.g., 5 SP). 4. System saves value.
Alternatice Scenarios	N/A
Non-Functional Constraints	Only numeric values or valid Fibonacci sequence allowed.

Use case ID	***UC-PM-009***
Use Case	Create Sprint
Brief Description	PM defines a new sprint cycle.
Actor	Project Manager
Pre-Condition	Project is selected (<<include>> Select Project).
Result	An empty Sprint container is created.
Main Scenario	1. PM clicks "Create Sprint" on the Backlog board.

	2. System creates "Sprint [N]". 3. PM edits Sprint dates and Goal. 4. PM drags PBIs into the Sprint.
Alternatice Scenarios	N/A
Non-Functional Constraints	N/A

Use case ID	***UC-PM-0010***
Use Case	Complete Sprint
Brief Description	PM closes the current active sprint.
Actor	Project Manager
Pre-Condition	Active sprint exists and end date has arrived (or PM forces close).
Result	Sprint is closed; unfinished tasks are moved.
Main Scenario	1. PM clicks "Complete Sprint". 2. System shows summary of completed vs. incomplete issues. 3. PM chooses destination for incomplete issues (Backlog or New Sprint). 4. System archives the sprint.
Alternatice Scenarios	N/A
Non-Functional Constraints	Trigger report generation upon completion.

Use case ID	***UC-PM-0011***
Use Case	Monitor Progress
Brief Description	PM tracks project health via charts (Burndown, Velocity).
Actor	Project Manager
Pre-Condition	Project is selected (<<include>> Select Project).

Result	Project reports are displayed.
Main Scenario	1. PM clicks "Reports". 2. PM selects report type (e.g., Burndown Chart). 3. System renders chart based on current data.
Alternatice Scenarios	N/A
Non-Functional Constraints	Data visualization must be responsive.

Use case ID	***UC-PM-0012***
Use Case	Follow Risk List
Brief Description	PM views and updates the risk register for the project.
Actor	Project Manager
Pre-Condition	Project is selected.
Result	Risk status is updated.
Main Scenario	1. PM opens "Risk Management" tab. 2. System lists identified risks. 3. PM updates status (e.g., Mitigated, Occurred) or adds new risk. 4. System saves changes.
Alternatice Scenarios	N/A
Non-Functional Constraints	N/A

Use case ID	***UC-PM-0013***
Use Case	Send and Receive Information
Brief Description	PM communicates with stakeholders or the system (Notifications / Messages).
Actor	Project Manager

Pre-Condition	User is logged in.
Result	Message sent or notification read.
Main Scenario	1. PM clicks on "Notifications/Inbox". 2. System displays messages from system or members. 3. PM reads or replies to a message. 4. System sends the reply.
Alternatice Scenarios	N/A
Non-Functional Constraints	Real-time notification delivery (WebSockets).

Use case ID	***UC-TM-001***
Use Case	View Project List
Brief Description	The Team Member views the list of projects they have been assigned to.
Actor	Team Member
Pre-Condition	User is logged in.
Result	A list of accessible projects is displayed.
Main Scenario	1. Team Member navigates to the "Projects" dashboard. 2. System filters and retrieves projects. 3. System displays the list (Project Name, Key, Lead).
Alternatice Scenarios	No Assignments: System displays "You are not assigned to any projects."
Non-Functional Constraints	List should load < 2 seconds.

Use case ID	***UC-TM-002***
Use Case	Monitor Progress
Brief Description	The Team Member views the project status, sprint burndown charts,

	or velocity charts to understand team performance.
Actor	Team Member
Pre-Condition	User is inside a specific project.
Result	Progress charts and metrics are displayed.
Main Scenario	1. Team Member clicks on the "Reports" or "Board" tab. 2. System calculates metrics based on current task status. 3. System renders the Sprint Board or Burndown Chart.
Alternatice Scenarios	N/A
Non-Functional Constraints	Data must reflect real-time updates.

Use case ID	***UC-TM-003***
Use Case	Update Task Status
Brief Description	The Team Member changes the workflow status of a task (e.g., from "To Do" to "In Progress").
Actor	Team Member
Pre-Condition	Task exists.
Result	Task status is updated in the database.
Main Scenario	1. Team Member selects a task on the Kanban board. 2. Team Member drags the task to the next column (or changes status via dropdown). 3. System validates the workflow transition. 4. System updates the status. *(Extension Point: Add Comments/Attachments)*
Alternatice Scenarios	Transition Not Allowed: System blocks the move and shows "Invalid Transition" error.
Non-Functional Constraints	N/A

Use case ID	*UC-TM-004*
Use Case	Log Work
Brief Description	The Team Member records the time spent working on a specific task.
Actor	Team Member
Pre-Condition	Task exists.
Result	Work log is saved, and remaining estimate is updated.
Main Scenario	1. Team Member opens a task. 2. Team Member clicks "Log Work". 3. Team Member inputs "Time Spent" (e.g., 2h) and "Date Started". 4. Team Member clicks Save. 5. System deducts time from "Remaining Estimate". *(Extension Point: Add Comments/Attachments)*
Alternatice Scenarios	N/A
Non-Functional Constraints	Input format validation (e.g., '1h 30m').

Use case ID	*UC-TM-005*
Use Case	Create/Edit/Delete Task/Sub-task
Brief Description	The Team Member manages the breakdown of work items under a PBI.
Actor	Team Member
Pre-Condition	A PBI exists.
Result	Task/Sub-task is created, modified, or removed.
Main Scenario	**(Create)** 1. Team Member selects a parent PBI.

	2. Team Member clicks "Create Sub-task". 3. Team Member enters Summary, Assignee, and Estimate. 4. Team Member saves the task. *(Extension Point: Add Comments/Attachments)*
Alternatice Scenarios	**(Delete)** User selects task -> Clicks Delete -> Confirms -> System removes task.
Non-Functional Constraints	N/A

Use case ID	***UC-TM-006***
Use Case	Estimate PBI
Brief Description	The Team Member provides an estimation (Story Points) for a PBI during planning.
Actor	Team Member
Pre-Condition	A PBI exists.
Result	Estimation value is saved.
Main Scenario	1. Team Member views a PBI. 2. Team Member clicks the "Estimate" field. 3. Team Member selects a value from the sequence (e.g., 1, 2, 3, 5, 8). 4. System updates the PBI.
Alternatice Scenarios	N/A
Non-Functional Constraints	N/A

Use case ID	***UC-TM-007***
Use Case	Refine Backlog

Brief Description	The Team Member reviews backlog items, adds technical details, or splits items to prepare them for future sprints.
Actor	Team Member
Pre-Condition	Access to Product Backlog.
Result	Backlog items are detailed and ready for planning.
Main Scenario	1. Team Member opens the Backlog view. 2. Team Member selects a PBI. 3. Team Member adds "Technical Description" or "Acceptance Criteria". 4. Team Member saves changes.
Alternatice Scenarios	N/A
Non-Functional Constraints	N/A

Use case ID	***UC-TM-008***
Use Case	Add Comments/Attachments
Brief Description	An extension use case that allows adding context (text or files) to various objects (Tasks, Logs, PBIs).
Actor	Team Member
Pre-Condition	User is executing a base use case (e.g., Log Work, Create Task, Update Status, View Project Info).
Result	Comment or file is appended to the object.
Main Scenario	1. User clicks the "Comment" or "Attachment" icon within the active form/view. 2. User enters text or uploads a file. 3. User clicks "Add". 4. System saves the entry and timestamp.
Alternatice Scenarios	Upload Fail: File size too large -> System shows error.
Non-Functional Constraints	Max file size 10MB. Allowed types: PNG, JPG, PDF, DOCX.

Use case ID	*UC-VIEWER-001*
Use Case	**View Project Information**
Brief Description	The Viewer (stakeholder/guest) accesses project details in read-only mode.
Actor	Viewer
Pre-Condition	User is executing a base use case (e.g., Log Work, Create Task, Update Status, View Project Info).
Result	Comment or file is appended to the object.
Main Scenario	1. User clicks the "Comment" or "Attachment" icon within the active form/view. 2. User enters text or uploads a file. 3. User clicks "Add". 4. System saves the entry and timestamp.
Alternatice Scenarios	Upload Fail: File size too large -> System shows error.
Non-Functional Constraints	Max file size 10MB. Allowed types: PNG, JPG, PDF, DOCX.