Software Requirements Specification For Task, Process and Compliance Management System

Domain: Office Management
Team Name: OptiFlow
Section: 1

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1.0 Introduction:

1.1 Purpose of this Document

This Software Requirements Specification (SRS) document provides a comprehensive description of the **Task, Process, and Compliance Management System**. It outlines the functional and non-functional requirements necessary to build a streamlined platform for managing office workflows, ensuring adherence to internal policies, and tracking task progression.

The primary objective is to provide a clear roadmap for the development team and serve as a formal agreement between stakeholders—including **Employees, Managers, Process Admins, and Compliance Officers**—regarding the system's capabilities.

1.2 Scope of the Project

The system is designed to automate, manage, and monitor office operations through defining process templates, task execution workflows, approval mechanisms, and integrated compliance verification. The scope of this project includes the following key functionalities:

- **Workflow Automation:** Enables users to initiate process requests, execute assigned tasks, and monitor the progress of process instances across departments.
- **Task and Approval Management:** Supports task assignment, task lifecycle tracking, and approval or rejection by authorized roles.
- **Compliance Integration:** Performs automatic validation of compliance rules during process execution, detects policy violations, and maintains audit logs
- **Oversight and Reporting:** Offers reporting and audit features that allow Compliance Officers and Managers to review process performance, identify violations, and ensure adherence to organizational policies.

Out of Scope:

The following functionalities are explicitly excluded from the scope of this project:

- **Human Resource and Payroll Management:** The system does not handle salary processing, payroll calculation, attendance tracking, leave management, or employee benefits administration.

- **Financial and Accounting Operations:** The system does not support budgeting, invoicing, expense management, or financial transaction processing.

- **External Regulatory Enforcement and Legal Actions:** While the system identifies and reports compliance violations, it does not perform external regulatory filings, legal enforcement, or disciplinary actions beyond internal reporting and escalation.

1.3 Intended Audience

This document is intended for the following stakeholders:

- **Development Team**: To understand the technical requirements and system architecture.
- **Project Managers**: To monitor project milestones and resource allocation.
- **Compliance Officers:** To verify that the system effectively supports regulatory compliance, policy enforcement, and audit requirements..

2.0 System Overview:

The **Task, Process, and Compliance Management System** is a centralized platform designed to digitize office workflows and ensure regulatory oversight directly into the task lifecycle. It bridges the gap between daily operations and compliance by ensuring every action is tracked, verified, and audited in real-time.

2.1 Core Architecture & Logic

The system is built on three pillars to ensure operations are efficient, systematic, and legal:

2.1.1. Task Management (Execution Layer)

- **Actionable Units**: Breaks down processes into specific tasks for Employees and Managers.
- **Operational Tracking**: Enables "Submitting Process Requests" and real-time "Monitoring Process Status".
- **State Management**: Tracks task lifecycles from initiation to final verification.

2.1.2. Process Management (Orchestration Layer)

- **Workflow Modeling**: Allows Admins to create standardized "Process Templates".
- **Structural Consistency**: Enforces "Task Rules" to prevent unauthorized deviations from the workflow.
- **Lifecycle Control**: Ensures process closure only occurs after all prerequisites are met.

2.1.3. Compliance Checking (Governance Layer)

- **Real-time Verification**: Automatically triggers "Verify Compliance Rules" during task execution.
- **Automated Exceptions**: Uses "Report/Flag Policy Violation" to alert Compliance Officers of issues.
- **Audit Readiness**: Compiles all verification data into a "Finalized Compliance Report."

2.2 Key Benefits

- **Error Reduction**: Automates mandatory steps to prevent skipped requirements.
- **Instant Visibility**: Provides a live dashboard of process status, removing the need for manual follow-ups.
- **Proactive Risk Management**: Handles compliance "in-flight", allowing for immediate intervention before violations escalate.

3.0 Functional Requirements

FR-1: User and Role Management

Description: This requirement defines how users and roles are managed within the system.

Requirements:

i. The system shall allow users to be onboarded by an administrator.

ii. The system shall authenticate users before granting access.

iii. The system shall assign roles to users based on organizational hierarchy.

iv. The system shall restrict system functionality based on assigned roles.

FR-2: Process Template Management

Description: This requirement specifies the creation and configuration of process workflows.

Requirements:

i. The system shall allow Process Administrators to create process templates.

ii. The system shall support defining sequential and conditional process steps.

iii. The system shall allow configuration of task rules and dependencies.

iv. The system shall publish process templates for execution.

v. The system shall allow modification of process templates before execution.

FR-3: Process Execution and Monitoring

Description: This requirement governs how processes are initiated, executed, and monitored.

Requirements:

i. The system shall allow users to submit process requests.

ii. The system shall instantiate a process based on an approved template.

iii. The system shall track the status of process instances.

iv. The system shall notify users of process state changes

FR-4: Task Lifecycle Management

Description: This requirement defines how tasks are assigned, executed, and completed.

Requirements:

i. The system shall display assigned tasks to users(Employees) based on role and availability.

ii. The system shall allow users to perform assigned tasks.

iii. The system shall update task status upon completion or rejection.

iv. The system shall maintain task history for audit purposes.

FR-5: Approval Management

Description: This requirement defines the approval mechanisms for tasks and processes.

Requirements:

i. The system shall route tasks and processes for approval when required.

ii. The system shall notify approvers of pending approvals.

iii. The system shall allow managers to approve or reject requests.

iv. The system shall update process status based on approval outcomes.

FR-6: Compliance Management

Description: This requirement specifies compliance validation and violation handling.

Requirements:

i. The system shall validate process execution against defined compliance rules.

ii. The system shall detect and flag compliance violations automatically.

iii. The system shall log compliance violations for audit purposes.

iv. The system shall notify Compliance Officers of violations.

FR-7: Exception and Escalation Handling

Description:
This requirement defines how exceptions and escalations are managed.

Requirements:

i. The system shall detect exceptions such as task delays and approval timeouts.

ii. The system shall escalate exceptions based on predefined escalation rules.

iii. The system shall notify higher authority roles during escalation.

iv. The system shall allow authorized users to take corrective action.

FR-8: Reporting and Audit Management

Description: This requirement defines reporting and audit capabilities.

Requirements:

i. The system shall generate process execution reports.

ii. The system shall generate compliance and violation reports through audit records.

iii. The system shall provide audit logs for tasks, approvals, and processes.

iv. The system shall allow authorized users to view and export reports.

4.0 Non-Functional Requirements

4.1. Security & Access Control

i. Role-Based Access Control (RBAC): The system must enforce strict permissions ensuring that only specific actors—Employee, Manager, Process Admin, and Compliance Officers—can access their respective functions as defined in the use case diagram.

ii. Data Integrity: The system must ensure that "Finalized Compliance Reports" are tamper-proof and cannot be modified once closed to maintain audit validity.

iii. Audit Logging: Every system action, particularly compliance verifications and policy violations, must be logged with a user ID and timestamp for accountability.

4.2. Performance & Scalability

i. Concurrency: The system must support multiple users (Managers and Employees) executing process steps and monitoring statuses simultaneously without data collisions or performance degradation.

ii. Responsiveness: Key dashboards, such as "Monitor Process Status," should load in under 2 seconds to ensure operational efficiency.

4.3. Reliability & Availability

i. System Uptime: The platform should maintain 99.9% availability during standard office hours to support continuous workflow execution.

ii. Fault Tolerance: The "Verify Compliance Rules" module must fail-safe; if a check cannot be completed, the process should be paused rather than allowing a potential violation to proceed.

4.4. Usability

i. Intuitive Configuration: The interface for "Defining Process Templates" must be user-friendly, allowing Process Admins to model workflows without requiring technical coding skills.

ii. Visibility: Status indicators for tasks must be clear and easily digestible for Employees to track their requests at a glance.

5. Assumptions and Constraints

5.1 Assumptions

- The system is intended for use within a **single organization** to manage internal office operations.
- Users are assigned **roles and permissions** that govern access to system functionalities.
- Office workflows such as onboarding, task execution, approvals, and compliance validation are **structured and repeatable**.
- Organizational policies, approval hierarchies, and compliance rules are **clearly defined** and configurable within the system.
- Users have access to the system through a **stable internal network or internet connection**.

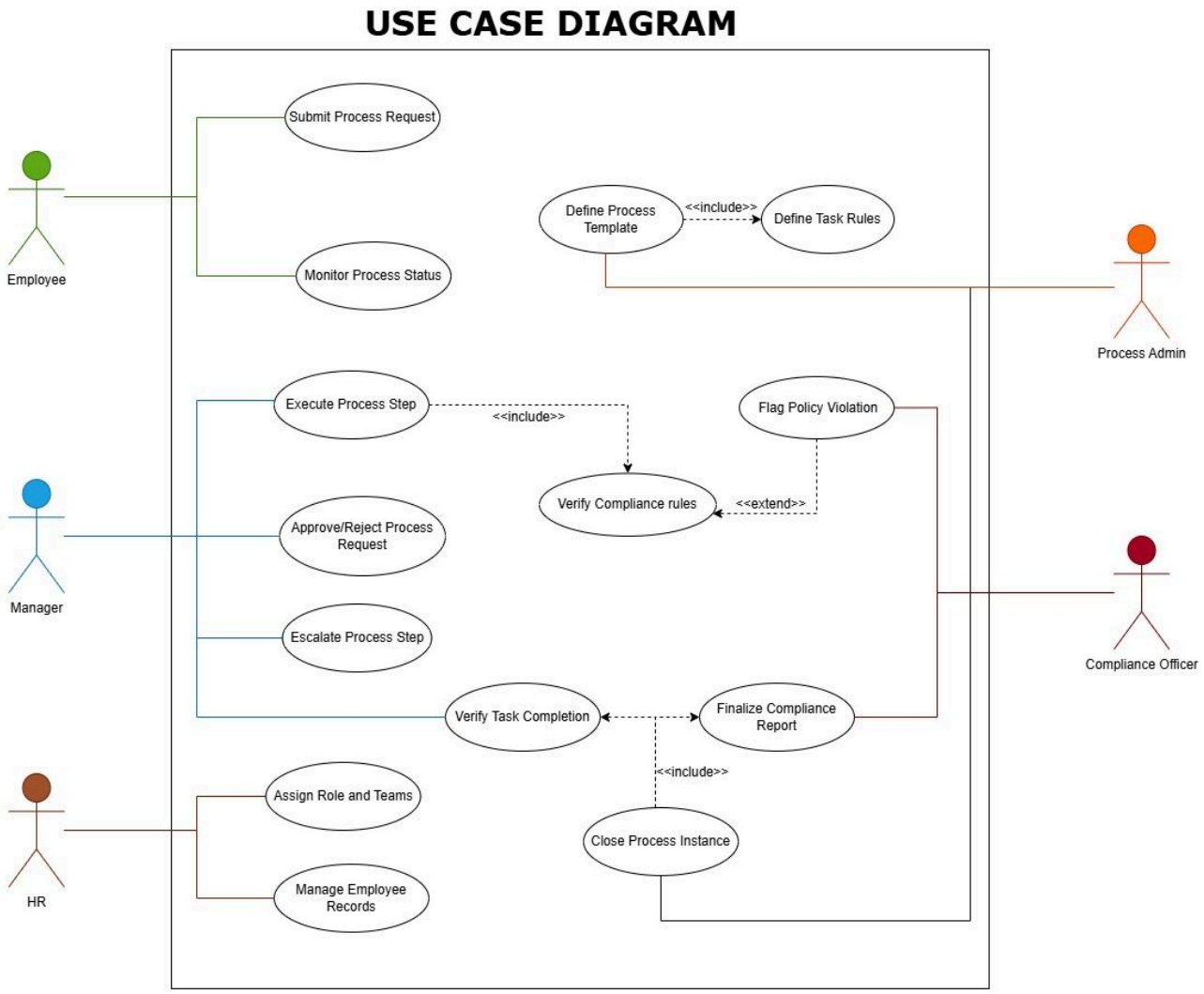
5.2 Constraints

- Integration with **external payroll, accounting, or financial systems** is outside the scope of this project.
- Compliance enforcement is limited to **organization-defined policies** and does not include external legal or regulatory enforcement.
- The system supports **single-organization deployment** and does not provide multi-tenant capabilities.
- All system operations are governed by **role-based access control** to ensure security and accountability.
- As an **academic project**, real-world production deployment, large-scale scalability testing, and advanced third-party integrations are limited.

6. UML Diagrams:

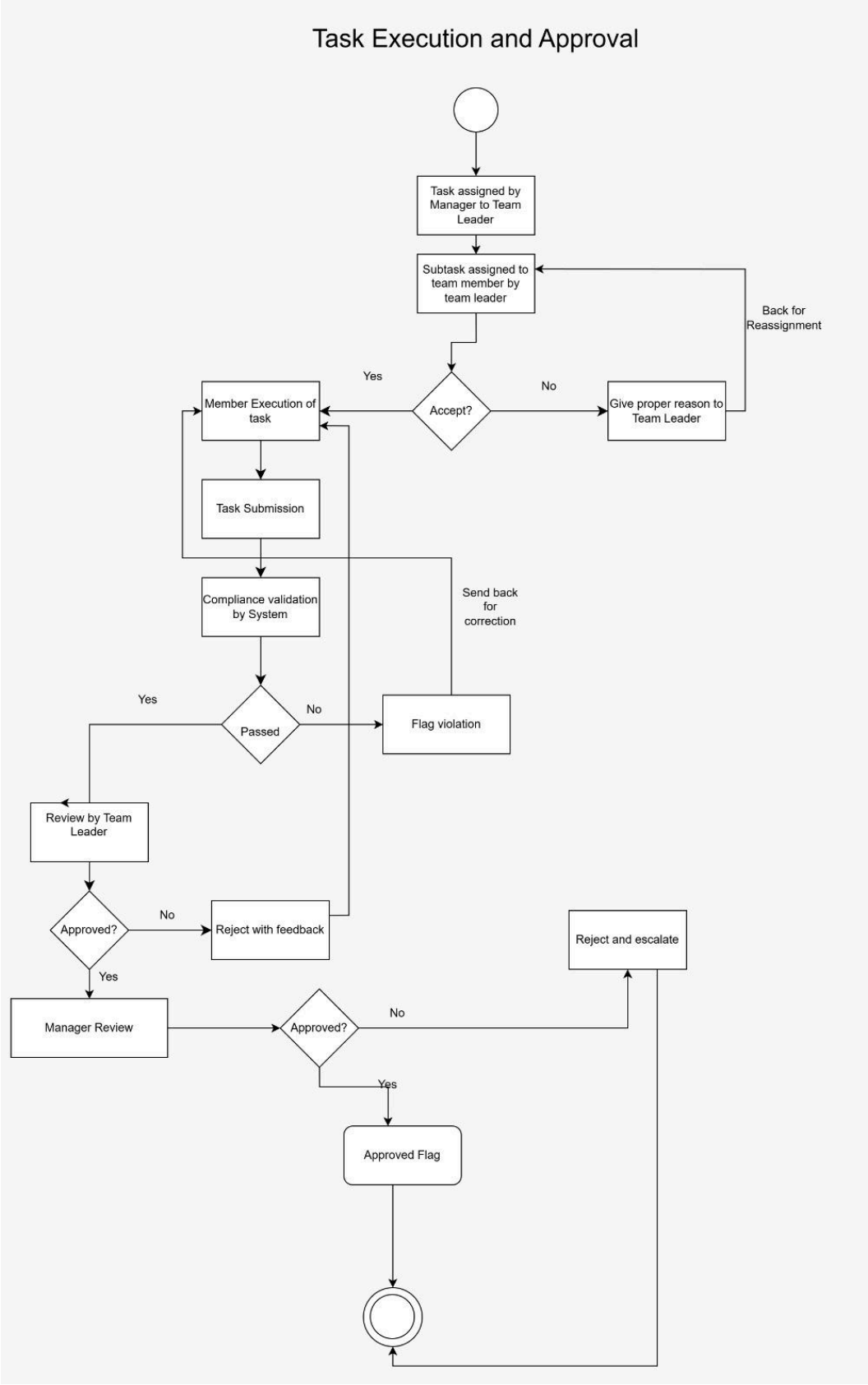
USE CASE DIAGRAM:

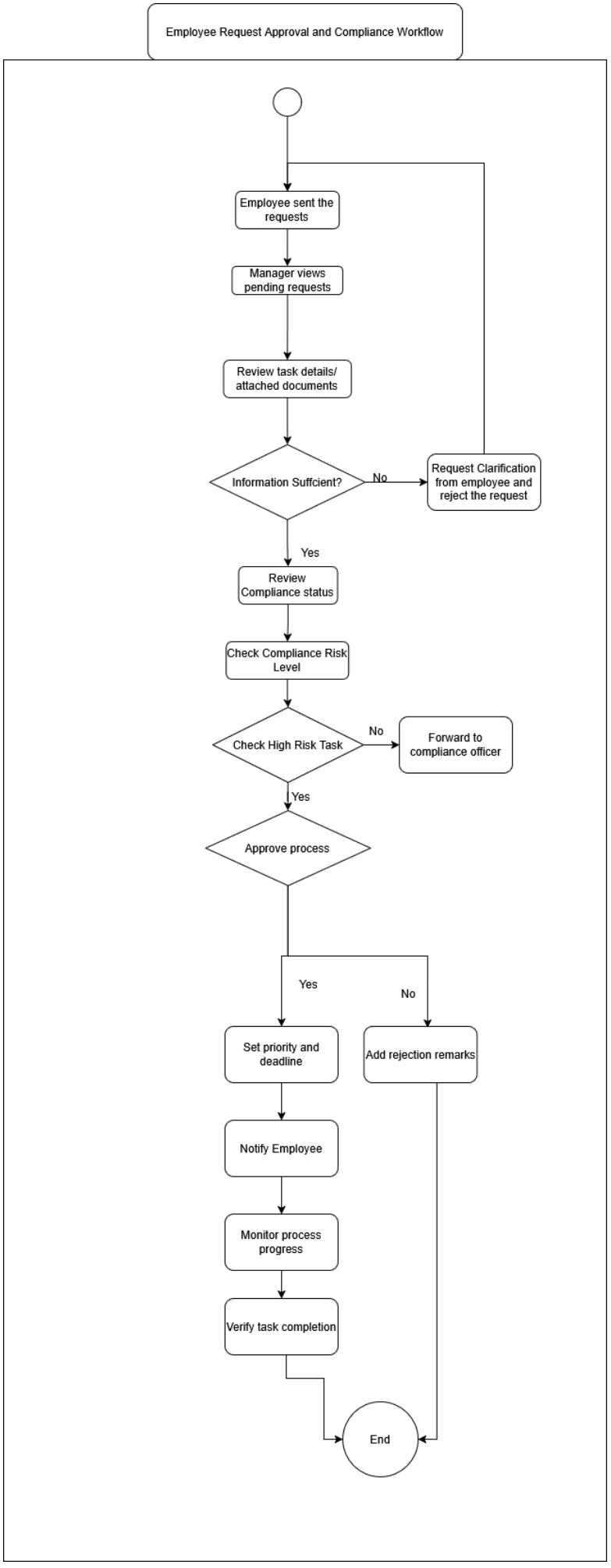
The Use Case Diagram presents a high-level functional view of the Office & Organizational Workflow Management System. It identifies the main actors—such as Admin, Manager, Employee, Process Admin, and Compliance Officer—and shows the core functions they interact with, including task management, approvals, compliance checks, and reporting.



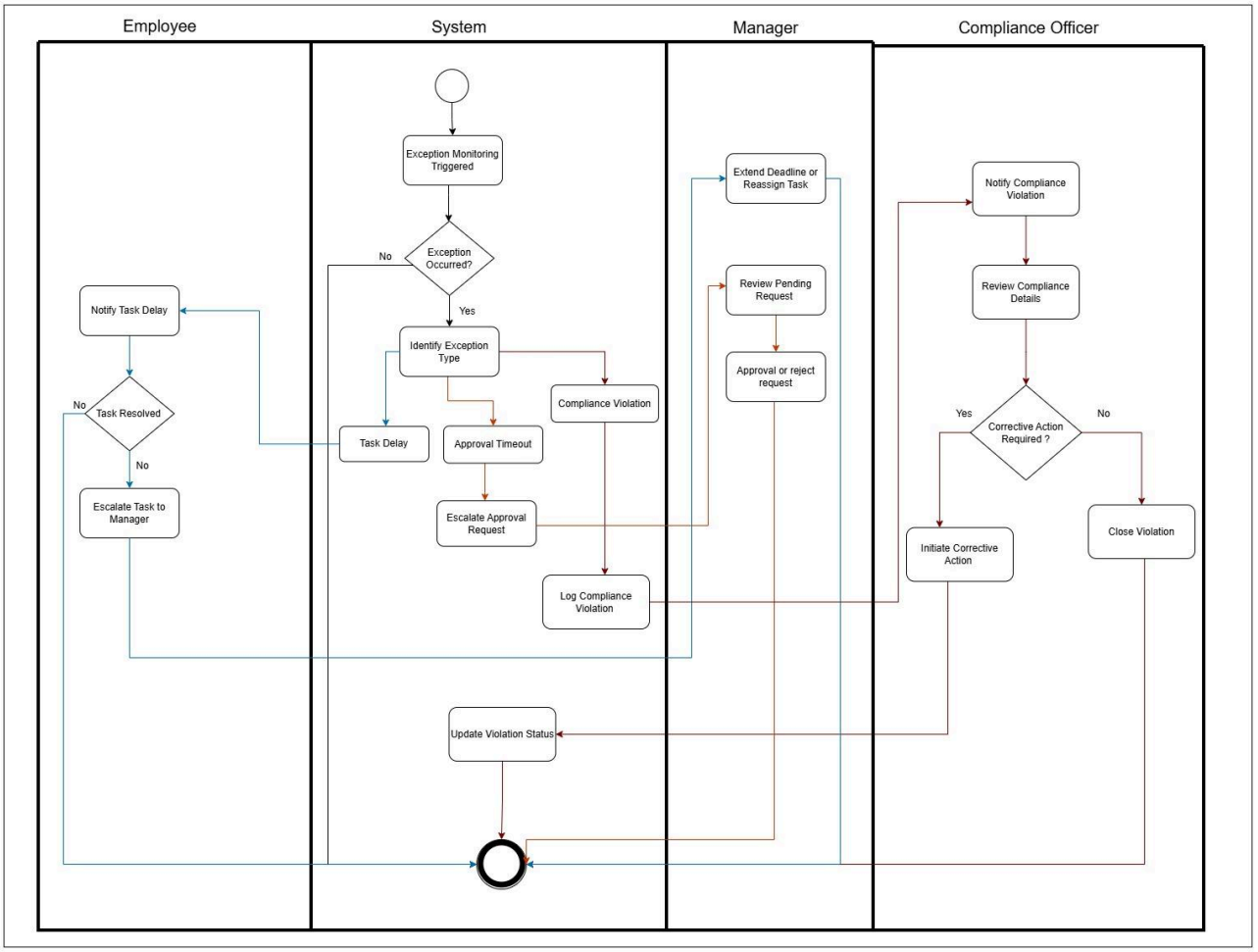
ACTIVITY DIAGRAMS

The Activity Diagram illustrates the end-to-end flow of tasks and processes within the system. This diagram helps in understanding **process logic and control flow**.

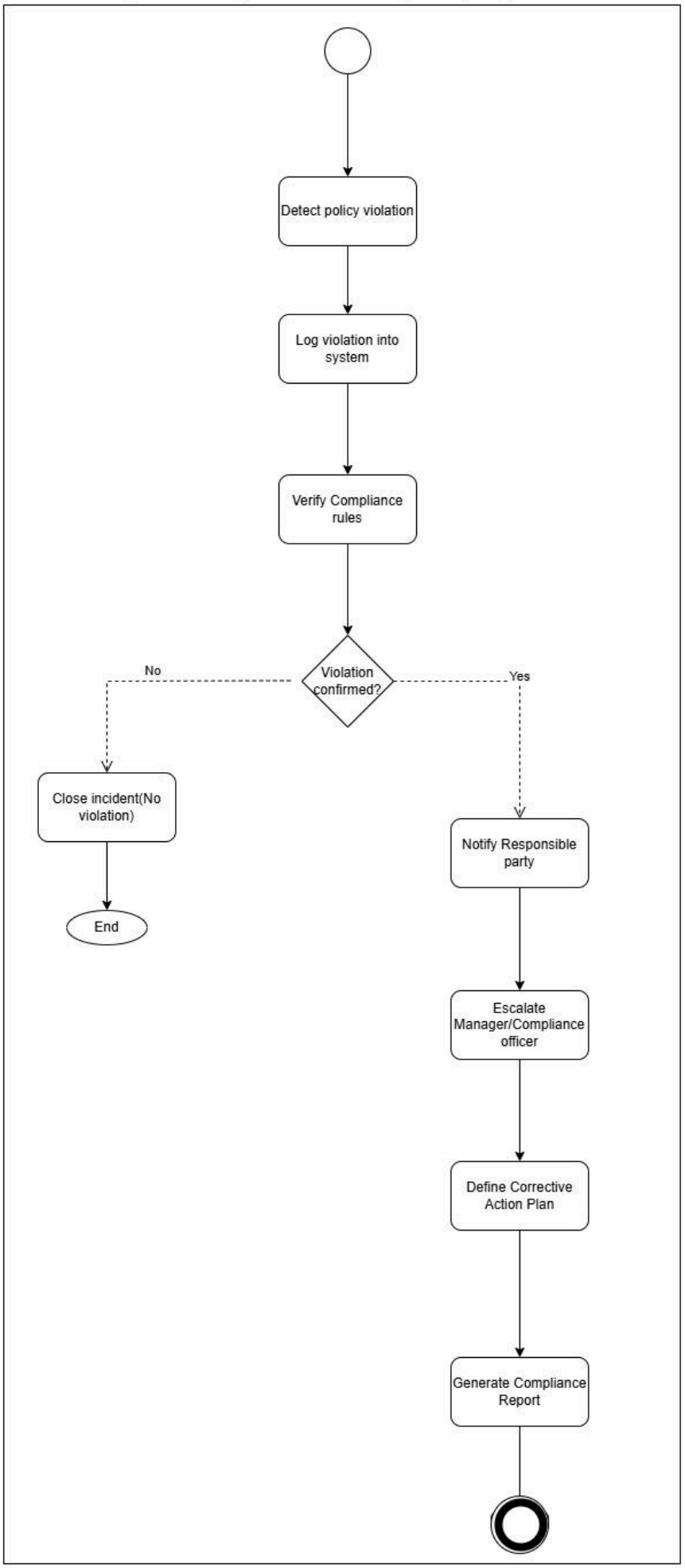


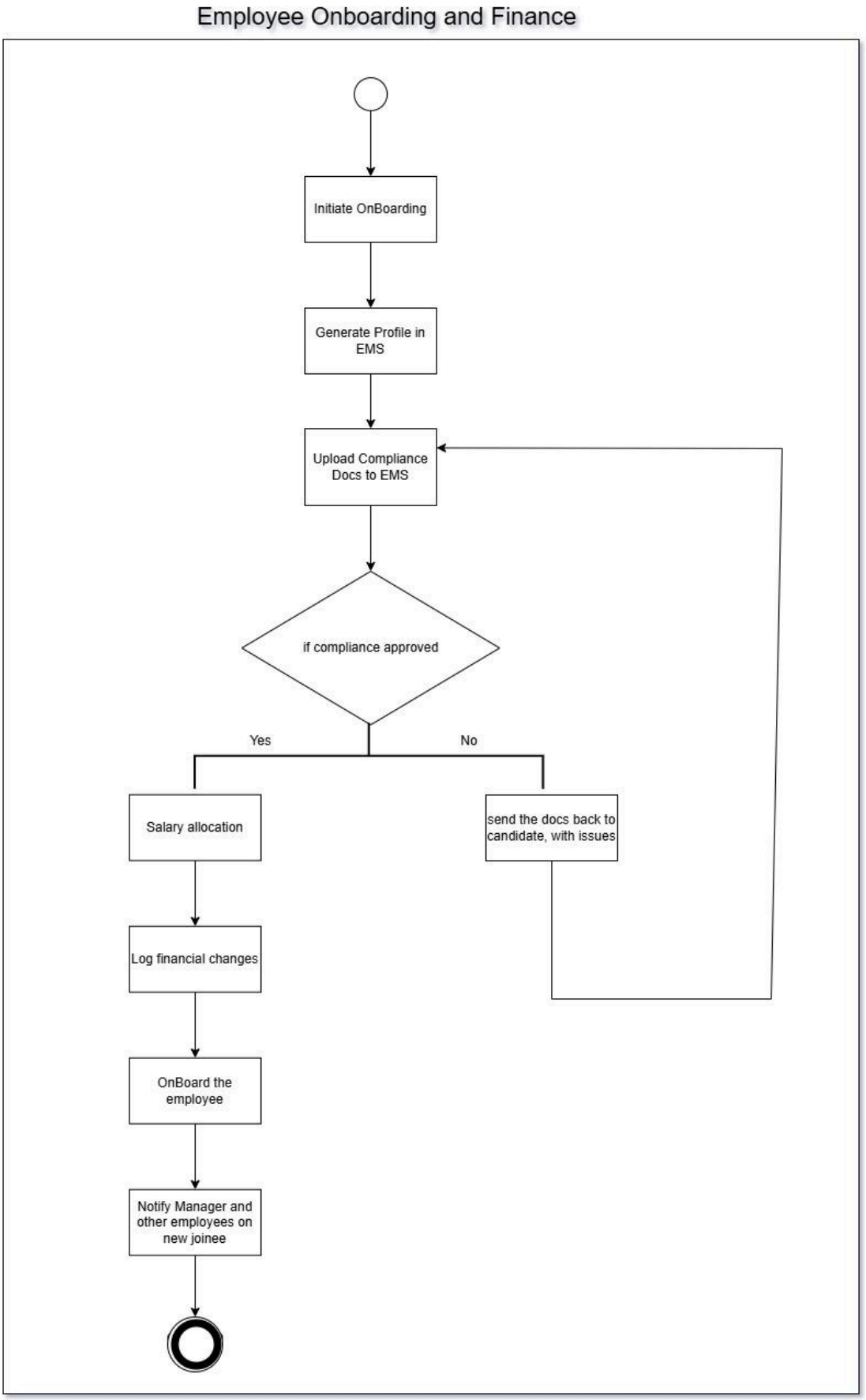

Employee Request Approval and Compliance Workflow
Employee sent the requests
Manager views pending requests
Review task details/ attached documents
Information Suffcient?
No
Request Clarification from employee and reject the request
Yes
Review Compliance status
Check Compliance Risk Level
Check High Risk Task
No
Forward to compliance officer
Yes
Approve process
Yes
No
Set priority and deadline
Add rejection remarks
Notify Employee
Monitor process progress
Verify task completion
End

EXCEPTION AND ESCALATION HANDLING



Compliance Handling and Violation Handling -Activity Diagram

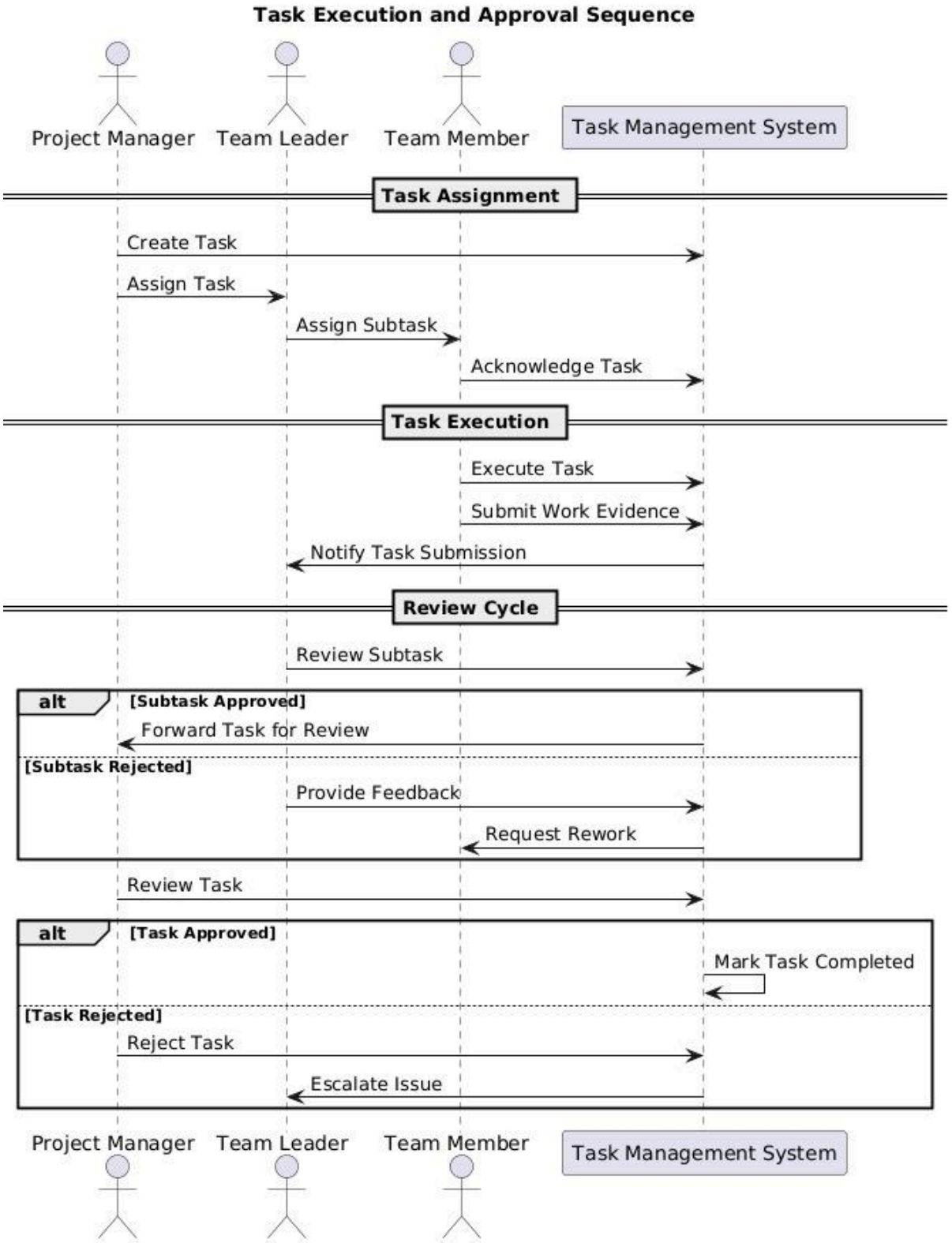


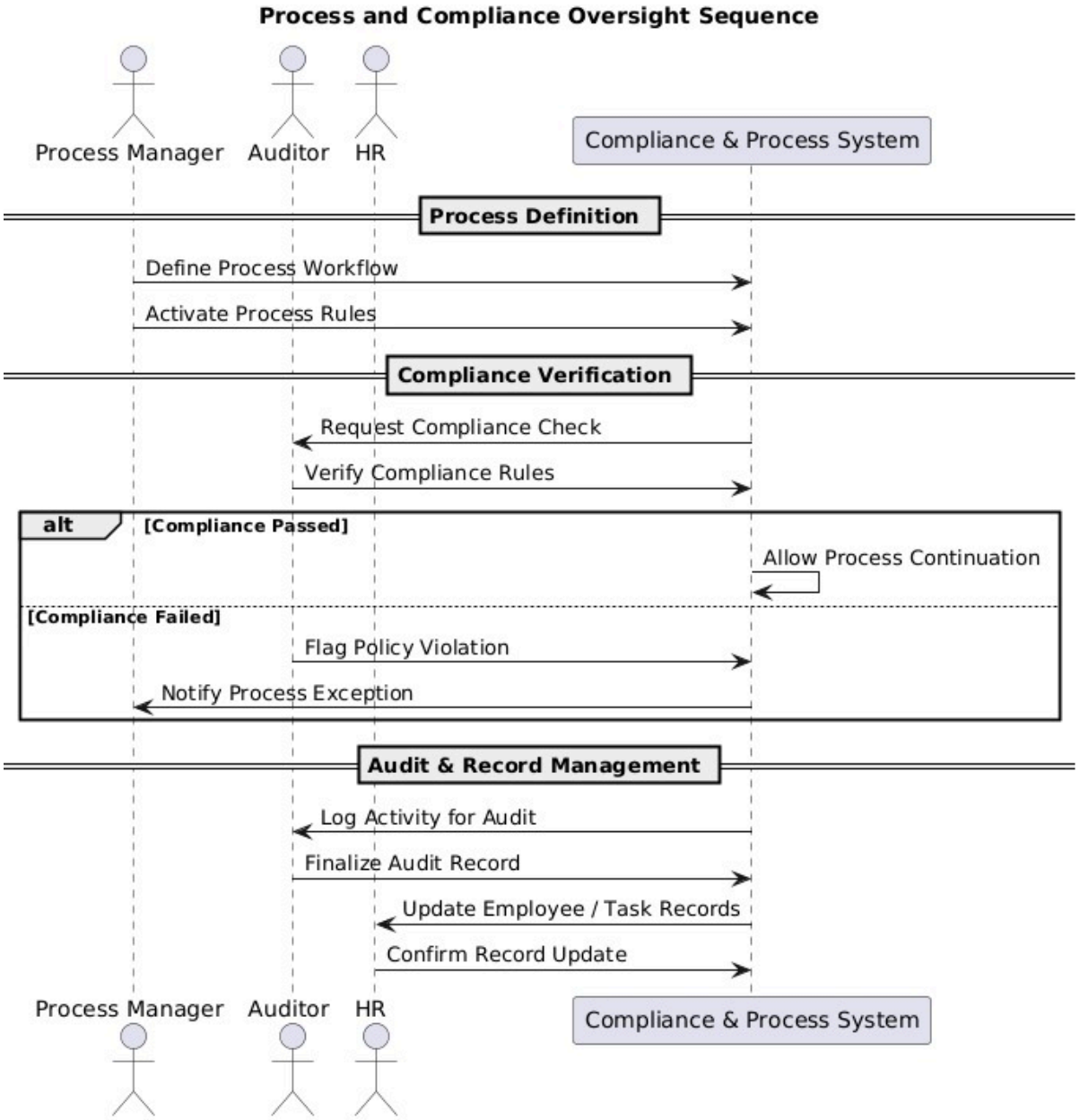


(EMS - Employee Management System)

SEQUENCE DIAGRAMS:

The Sequence Diagram shows the time-ordered interaction between actors and system components during key scenarios such as task assignment, approval, and compliance verification.




Process and Compliance Oversight Sequence
Process Manager
Auditor
HR
Compliance & Process System
Process Definition
Define Process Workflow
Activate Process Rules
Compliance Verification
Request Compliance Check
Verify Compliance Rules
alt
[Compliance Passed]
Allow Process Continuation
[Compliance Failed]
Flag Policy Violation
Notify Process Exception
Audit & Record Management
Log Activity for Audit
Finalize Audit Record
Update Employee / Task Records
Confirm Record Update
Process Manager
Auditor
HR
Compliance & Process System