Software Requirements Specification (SRS) Document

Project Name: Leave Management System and Events Management System

Team Number : 5

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Brief Problem Statement

NGOs often face problems with managing leave requests and event planning efficiently. Manual processes can lead to miscommunication, scheduling conflicts, and administrative overhead. A digital Leave Management System and Event Management System will streamline these processes, ensuring better coordination, transparency, and ease of access for employees and administrators.

System Requirements

Technologies Used:

- Frontend: React.js with typescript

- CSS: shadcn , tailwind css

- Backend: Node.js with Express.js

- Database: MongoDB

- Authentication: JWT-based authentication system

- Version Control: GitHub

- API Testing: ThunderClient

- Browser: Google Chrome / Firefox

- Nodemon: Server starting after changes to backend

- Additional Libraries: Mongoose for MongoDB interactions
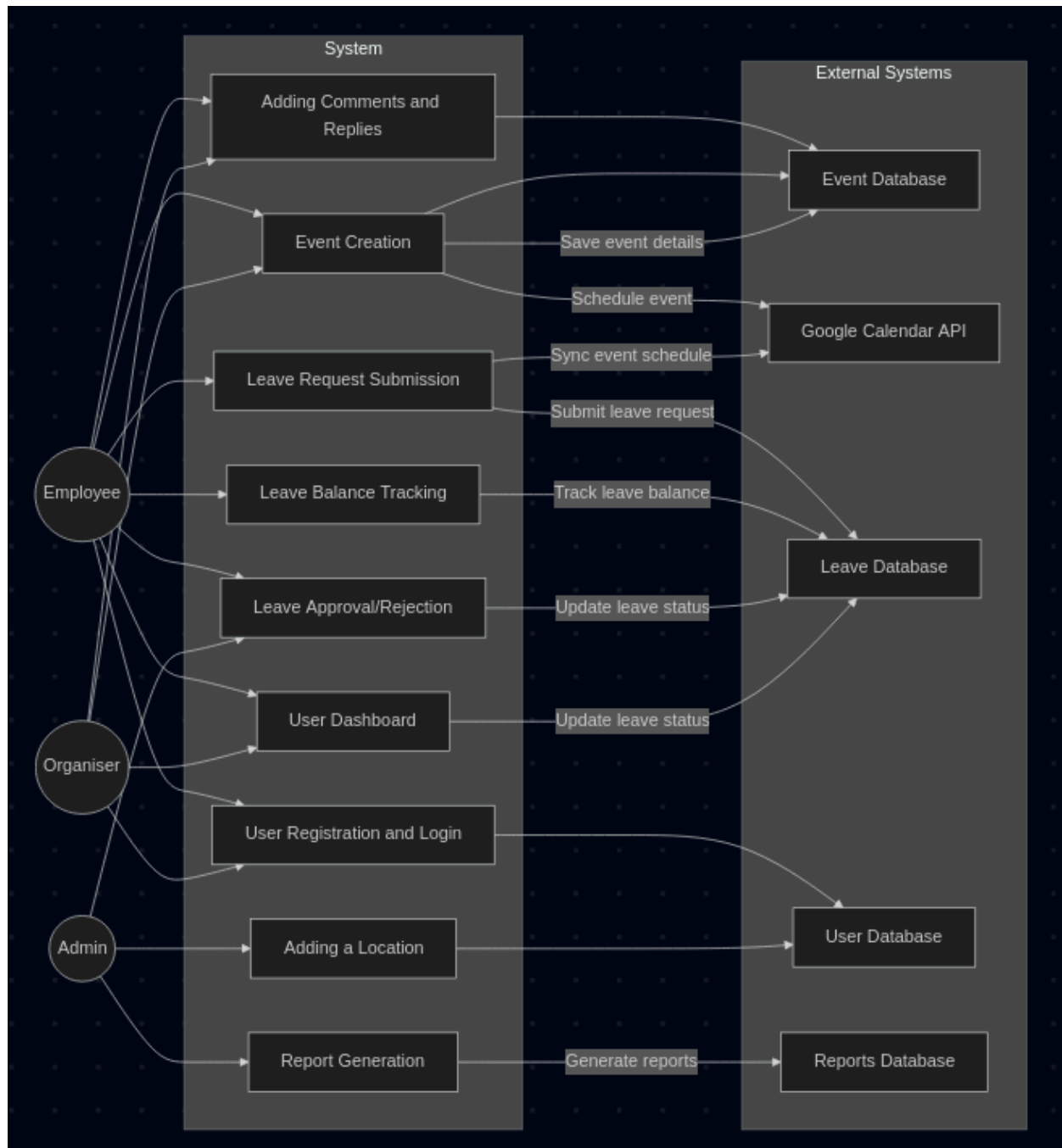
User's Profile

- **User:** NGO staff member who submits leave requests and views assigned events. Moderate experience with web applications.

- **Admin:** NGO administrator responsible for approving leave requests, managing events, and generating reports. Familiar with basic computer operations.

- **Super Admin:** NGO would have a Super Admin who will have the access to register the new user in order to avoid threats from false registrations.

Feature Requirements (Use Cases)

No.	Use Case Name	Description	Release
1	User Registration & Login	Users (Admin, Employee, Organizer) can register and log in.	R1
2	Leave Request Submission	Employees can apply for leave with details.	R1

3	Leave Approval/Rejection	Admin/HR can approve or reject leave requests.	R1
4	Leave Balance Tracking	Employees can view remaining leave balance.	R2
5	Event Creation	Event organizers can create and schedule events.	R1
6	User Dashboard	Users can view their leave history and upcoming events.	R1
7	Report Generation	Admin can generate reports on leaves, event participation and projects.	R2
8	Adding a location	Allows to add new location to the organization	R2
9	Adding Comments to events	Allows for users to communicate on an events page	R2
10	Adding Replies to comments on events page	Allows for users to communicate on an events page	R2

Use Case Diagram

Use Case Description

Use Case Number	UC-01
Use Case Name:	User Login

Overview	Users (Admin, Employee, Event Organizer) logs into the system.
Actors	Employee, Admin, Event Organizer
Precondition	User must have valid credentials for login; Admin registers the user
Main Flow:	1. User enters required details (name, email, password, role). 2. System verifies credentials and logs the user in. 3. User is redirected to their dashboard.
Alternate Flows	1. If login fails, an error message is displayed.
Post Condition	User is logged in and has access to system features.

Use Case Number	UC-02
Use Case Name:	Leave Request Submission
Overview	Employees can submit leave requests with details like start date, end date, and reason.
Actors	Employee, Admin
Precondition	Employee must be logged in
Main Flow:	1. Employee navigates to the leave request page. 2. Employee selects leave type, start date, end date, and provides a reason. 3. Employee submits the request. 4. System records the request and notifies the Admin.
Alternate Flows	1. If any field is missing, the system prompts the user to complete the form.
Post Condition	Leave request is successfully submitted and stored.

Use Case Number	UC-03
Use Case Name:	Leave Approval/Rejection
Overview	Admin reviews and either approves or rejects leave requests.
Actors	Employee, Admin

Precondition	Leave request must exist in the system.
Main Flow:	1. Admin logs in and navigates to the leave request list. 2. Admin selects a pending leave request. 3. Admin reviews details and chooses to approve or reject. 4. System updates leave status and notifies the Employee.
Alternate Flows	1. If the request is rejected, the Employee is notified with a reason.
Post Condition	Leave request status is updated.

Use Case Number	UC-04
Use Case Name:	Leave Balance Tracking
Overview	Employees can view their remaining leave balance.
Actors	Employee
Precondition	Employee must be logged in.
Main Flow:	1. Employee navigates to the leave balance page. 2. System retrieves leave data. 3. System displays available leave balance.
Alternate Flows	1. If employee has an unused leave carry-forward policy, the system shows adjusted leave balance.
Post Condition	Employee can view leave balance.

Use Case Number	UC-05
Use Case Name:	Event Creation
Overview	Event organizers can create events with details.
Actors	Event Organizer, Admin
Precondition	Event Organizer must be logged in.
Main Flow:	1. Event Organizer navigates to the event creation page. 2. Organizer enters event details (name, date, location, description). 3. Organizer submits event. 4. System saves the event and makes it visible to users.

Alternate Flows	1. If required fields are missing, an error is displayed. 2. If an event already exists then the system throws an error
Post Condition	Event is stored in the system.

Use Case Number	UC-06
Use Case Name	User Dashboard
Overview	Users can view their leave history and upcoming events.
Actors	Admin , Employee
Precondition	User must be logged in.
Main Flow	1. User navigates to the dashboard. 2. System fetches and displays leave and event data.
Alternate Flows	1. If a user has pending approvals or registrations, they get a notification badge on the dashboard. 2. If the user has no leave requests or event registrations, the dashboard displays an empty state with guidance.
Post Condition	User can view relevant details.

Use Case Number	UC-07
Use Case Name	Report Generation
Overview	Admin can generate reports on leave and event participation.
Actors	Admin
Precondition	Admin must be logged in.
Main Flow	1. Admin navigates to the reports section. 2. Admin selects report type (leave history, event participation). 3. System generates and displays the report.
Alternate Flows	1. If Admin lacks the necessary permissions to generate reports, they see an "Access Denied" message.
Post Condition	Admin receives a detailed report.

Use Case Number	UC-08
Use Case Name:	Adding a location
Overview:	Allows to add new location to the organization
Actors:	Admin
Precondition:	Admin is authenticated.
Main Flow:	1. The admin accesses the "Add Location" section from the dashboard. 2. The system presents the "Add Location" form. 3. The admin fills in the location details, including name, address, and contact information. 4. The admin submits the form. 5. The system verifies the provided details. 6. The system stores the new location in the database. 7. A confirmation message appears, confirming the successful addition of the location.
Alternate Flows:	1. If the admin provides incomplete or incorrectly formatted details (e.g., missing required fields or entering an existing location). It displays an error message, highlighting the incorrect fields, and prompts the admin to correct the input. The location is not saved, and the admin remains on the "Add Location" form until valid details are entered. 2. If a database failure or connectivity issue occurs while saving the location it shows an error message indicating the issue and logs the error for troubleshooting. The location is not stored, and the admin is advised to retry later.
Post Condition:	The new location is successfully saved in the database and is available for use within the organization..

Use Case Number:	UC-09
Use Case Name:	Adding Comments on an Event Page

Overview:	Employees can post comments on an event page to share their thoughts or ask questions.
Actors:	Employees
Precondition:	The employee must be logged in and viewing an event page.
Main Flow:	1.The employee navigates to an event page. 2.The system displays a comment section under the event details. 3.The employee types a comment in the input field. 4.The employee clicks the "Post Comment" button. 5.The system verifies the comment that is ensures required fields are filled and confirms the comment length is within limits. 6.If the input is valid, the system stores the comment in the database. 7.The comment appears in the event discussion thread, visible to all employees.
Alternate Flows:	1.If the comment field is empty, the system prompts the employee to enter text. 2.If the comment exceeds the allowed character limit, an error message is displayed, and the employee must edit it before posting. 3.If the system cannot store the comment due to a database error, it displays an error message. 4.The system logs the issue for troubleshooting and advises the employee to retry later.
Post Condition:	The comment is successfully saved in the database and displayed under the event discussion.

Use Case Number:	UC-10
Use Case Name:	Adding Replies to Comments on an Events Page
Overview:	Employees can reply to existing comments on an event page to engage in discussions.
Actors:	Employees
Precondition:	The employee must be logged in and viewing an event page with at least one comment present.
Main Flow:	1.The employee navigates to the event page. 2.The system displays all existing comments in the discussion thread. 3.The employee clicks on the "Reply" button under a comment. 4.A reply input field appears below the selected comment.

	5.The employee types a reply and clicks the "Post Reply" button. 6.The system verifies the reply that is ensures required fields are filled and confirms the comment length is within limits. 7.If the input is valid, the system stores the reply in the database. 8.The reply appears indented below the original comment, indicating a threaded discussion.
Alternate Flows:	1.If the reply field is empty, the system prompts the employee to enter text. 2.If the reply contains restricted words or exceeds the character limit, an error message appears, and the employee must correct it before submitting. 3.If the system cannot store the reply due to a database error, it displays an error message. 4.The system logs the issue for troubleshooting and advises the employee to retry later.
Post Condition:	The reply is successfully saved in the database and displayed under the corresponding comment.