

Software Requirement Specification for Leave Request and Approval

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| Problem Statement | Leave Request and Approval |

1. Introduction

1.1 Purpose:

This document outlines the procedures and guidelines for the Leave Request and Approval system, part of the Academics Module. The primary focus is on managing and facilitating the leave approval process for students and faculty members.

1.2 Scope of Project:

The scope of the Leave Request and Approval project encompasses developing and implementing a comprehensive system to manage leave within the academic module for students and faculties.

2. System Overview

2.1 Users:

1. Students:

Students can submit leave requests specifying the type of leave (medical, personal, internal OD) and provide reason. They can monitor their leave application's status in realtime and review past interactions related to leave applications.

2. Faculty:

Faculty members can submit their own leave applications, review and approve or reject student leave requests. Faculty can monitor the status of their leave requests and those submitted by students. They can also access the student leave history.

3. Administrators:

Administrators can review and approve or reject faculty leave applications. They have comprehensive access to manage all submitted leave requests and access analytical dashboards for project oversight.

2.2 Features:

1. Login and Registration:

Users can register for an account or log in with existing credentials. The login page will have three buttons named student, faculty and administrator.

2. Leave Request Submission:

An online portal where users can submit leave requests and attach supporting documents.

3. Status Tracking:

Realtime tracking of leave request status and notifications for requestors.

4. Record Management:

Secure and organized storage of leave records with easy retrieval and reporting.

5. User Roles and Permissions:

Definition of different user roles with role-based access control to ensure data privacy and security.

3. System Requirements Specification

3.1 Functional Requirements:

User Management:

Students can register and log in.

Admins have access control with an analytical dashboard and dedicated features.

Leave Request Submission:

Users can submit applications with appropriate details and provide reason for the leave.

Application Status:

Users can view the current status of their applications and logs.

Rejection remarks are visible to students.

Admin Dashboard:

View and manage all submitted leave applications, filter by category, approve/reject applications, and schedule meetings.

3.2 Non Functional Requirements:

Performance:

The system must process and respond to leave requests within 2 hours and support up to 500 concurrent users.

Security:

Robust authentication and authorization mechanisms, with all data transmissions encrypted using SSL/TLS.

Usability:

Intuitive and easy to navigate user interface with clear instructions and feedback.

Availability:

99.9% uptime with minimal scheduled maintenance communicated in advance.

Scalability:

Designed to accommodate increasing users and data volume, supporting additional features and functionalities.

4. System Architecture

Backend:

1. Student Entity:

Name: String

Email: String

Password: Hash code

2. Leave Details Entity:

Leave type: radio button

From Date: calendar

From Time: calendar

To Date: time

To Time: time

STACK:

Front End: Angular

Back End: Express.js and Node.js

Database: MongoDB

5. Prototype of the Project

1. Login Form: Users select their role (Student, Faculty, Administrator) to log in.
2. Register Form: New users register for an account.
3. Student's View: Dashboard for submitting and tracking leave requests.
4. Leave Form: Submission form for leave requests with reason.
5. Admin's View: Dashboard for managing leave requests and appointments.
6. Activity Page: Overview of leave request activities and status and specify whether the leave is approved or rejected or in waiting stage.

TECHNOLOGIES WILLING TO ADD:

1. Push notification for leave responses / Balance leave days.
2. Integrate calendar with working days and leave days.
3. Edit response for leave request.

