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A PROJECT PROPOSAL ON EMPLOYEE LEAVE MANAGEMENT SYSTEM

# Introduction:

The ability to handle leave successfully is crucial to both productivity and staff satisfaction in the contemporary work environment. In general, the traditional methods of leave management encompass paper-based forms that are entered into spreadsheets manually, thus rendering the system to suffer from errors and inefficiencies. Some may carry problems related to overlapping periods of leave, wrong leave balances, and failure to process leave applications in a timely manner. In line with this, as organizations grow in size, the complexity and volume of leave application increases, thus rendering manual systems quite unsupportable.

In view of addressing such challenges, we propose the development of an Employee Leave Management System (ELMS). ELMS is a web-based application designed to make the process of leave management easy and fully automatic. Modern web technologies drive the system, providing a single platform where employees can create leave requests and managers can approve or disapprove them. This ensures security, consistency, and accessibility for all leave records. It is also intended that the system will create detailed leave reports that will be useful to the management in decision making and enforcement of policies of an organization.

# Problem of Statement:

The current leave management processes in many organizations are inefficient and likely to get more error. Manual systems for managing leave, such as paper-based forms and spreadsheets, are not scalable and often result in data inconsistencies. Employees frequently face difficulties in tracking their leave balances, and managers struggle with overlapping leave requests and inadequate leave data for decision-making. Additionally, the manual process is time-consuming, requires significant administrative effort to handle leave requests, approvals, and record-keeping.

Furthermore, without a centralized system, there is a higher risk of data loss, unauthorized access, and lack of transparency. The absence of automated notifications and reminders leads to delays and communication gaps between employees and managers. As organizations expand, these problems exacerbate, leading to decreased employee satisfaction and productivity.

The new Employee Leave Management System will therefore tackle these challenges by offering an automated, secure, user-friendly platform for leave management. Such a system will maintain an updated record of leave balances and will approve leaves with ease. It will also be able to generate detailed management reports. In this regard, the ELMS will reduce administrative workload, reduce errors, and increase the overall efficiency and transparency related to the management of leaves in an organization.

# 3 Objectives:

* To provide a centralized platform for leave application and approval.
* To ensure accurate tracking of leave balances and histories.
* To reduce administrative workload and minimize errors.

# 4 Methodology:

### **4.1: Requirement Identification:**

### **4.1.1 Study Of Existing System:**

System 1

Employee Attendance Management System:

Some organizations use attendance management as leave management system for convenient.

Props

* Increased Accuracy: Reduces errors associated with manual attendance tracking.
* Efficiency: Saves time for both employees and HR personnel by automating the attendance process.

Cons

* Initial Setup Cost: Requires investment in digital devices and software.
* Training: Employees and managers need training to use the new system effectively.

System 2

Employment Performance Management System:

Some organizations use performance management as leave management system for tracking employee leaves.

Props

* Fair Evaluations: Standardized evaluation criteria ensure fair and consistent performance assessments.
* Development Focus: Helps identify strengths and areas for improvement, supporting employee development.

Cons

* Complexity: Setting up and customizing evaluation criteria can be complex and time-consuming.
* Technical Challenges: Requires reliable IT infrastructure and ongoing technical support.

### **4.1.2 Requirement Collection**

#### **4.1.2.1 Functional Requirement**

Employee Leave Management System have following Functionality:

* Employee leave application submission.
* Managerial leave approval and rejection.
* Leave balance tracking.
* Generation of leave reports.

#### **4.1.2.2 Non-Functional Requirement**

Employee Leave Management System have following Non-Functionality:

* System security and data protection.
* User-friendly interface.
* Reliability and availability.

## 4.2 Feasibility Study:

### **4.2.1 Technical Feasibility:**

The proposed system is technically feasible as it will be developed using widely adopted technologies such as HTML, CSS, JavaScript for the front-end, and a robust back-end framework like Node.js or Django. Necessary hardware and software resources are readily available.

The technical issue usually raised during the feasibility stage of the investigation includes the following:

* Does the necessary technology exist to do what is suggested.
* Do the proposed equipment have the technical capacity to hold the data required to use the new system.
* Will the proposed system provide adequate response to inquiries, regardless of the number or location of users.

### **4.2.2 Operational Feasibility:**

The system is designed to be user-friendly, requiring minimal training for end-users. It will significantly reduce the administrative workload associated with leave management.

Some of the important issues raised are to test the operational feasibility of a project includes the following: -

* Is there sufficient support for the management from the users.
* Will the system be used and work properly if it is being developed and implemented
* Will there be any resistance from the user that will undermine the possible application benefits.

## 4.3 High Level Design of System

### **4.3.1 System Flowchart:**



Details valid

Login page

Dashboard

Manager

Employee

Leave Application

Request More Info.

Reject Leave

Approve Leave

Leave Status

Notify Employee

Update Leave Request Status

Generate Reports

Update Leave Balance

Notify Employee

### **4.3.2 Methodology of the Proposed System:**

The development of the Employee Leave Management System (ELMS) will follow the Waterfall model, which is a linear and sequential approach to software development. This methodology is selected due to its simplicity and structured approach, ensuring that each phase of the project is thoroughly completed before moving on to the next.

The process begins with Requirement Analysis, where all the necessary requirements for the system are gathered from stakeholders, including the features needed for leave management, user interface preferences, and security requirements. These requirements are then documented and verified to ensure that they accurately reflect the needs of the organization.

Once the requirements are clear, the System Design phase begins. In this phase, the system architecture is designed, and detailed specifications are created. This includes designing the database schema, user interfaces, and defining the interactions between different components of the system.

After the design is finalized, the Implementation phase commences. During this phase, the actual code for the system is written based on the design specifications. The front-end, back-end, and database components are developed.

Following implementation, the system undergoes Testing to ensure that it meets all specified requirements and functions correctly. Testing includes unit testing of individual components, integration testing to ensure all parts work together, and user acceptance testing to validate the system's performance from the end-user's perspective. Any issues identified during testing are resolved before moving forward.

Once the system passes all tests, it is ready for Deployment, where it is rolled out for use by employees and administrators. The deployment phase includes setting up the system in a live environment, training users, and providing initial support as they begin using the system.

Finally, the system enters the Maintenance phase. In this phase, ongoing support is provided to address any issues that arise after deployment, including fixing bugs, making minor updates, and adding new features as needed. Maintenance ensures that the system remains functional and continues to meet the organization's needs over time.

This structured approach provided by the Waterfall model ensures that the ELMS is developed in a controlled and systematic manner, reducing the risk of errors and ensuring that the final product meets all requirements.

