

# Smart Leave Management System

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**Abstract**— This work is aimed at developing an online leave management system that is of importance to either an organization. The Online Faculty Leave Management System is a web based application that can be used by the colleges or a specified Department of that college. This system is used to automate the workflow of leave applications and their approvals. There are features like notifications messages, approval of leave, report generators etc in this system. This system will reduce paper work and will maintain record in more efficient way. The paper also discusses about various profiles and modules used in the system and also advantages of the proposed system.

**Key words:** Leave Management System, Modules, Profiles, Technology Used, Digitization, Automated System

## I. INTRODUCTION

The idea behind this application is to reduce the redundant data and manual efforts which were prevalent in the existing leave application system. Most of the organizations today give out leave to their various employees. This involves certain time that the faculty has privilege to time of such as public holiday, annual leave that have been approved by the management.

### A. Human Resources Department

The Office of Human Resources at Geetanjali Institute of Technical Studies, Udaipur (Rajasthan) contributes to the institute's mission of public service by facilitating informed decision making regarding employee benefits by providing accurate, timely, accessible information. Of the many benefits, available to the employees, leave is one of the most valuable. The Human Resources Department is responsible for keeping track of multiple types of leave for all of its employees.

### B. Current Working System and its Drawbacks

The current procedure requires an employee to manually fill a leave-request form and submit it to his/her supervisor for approval. After the supervisor's signature, the leave form is submitted to the Human Resources Department. The Human Resources Department retrieves the employee's record from a database, currently maintained in registers and paper files, and reviews his/her available leave hours. Depending on the result of the review, requested hours are posted into the database. An audit report showing the employee's remaining leave hours is attached to the leave form and returned to the respective department to the employee's attention. This procedure suffers from certain drawbacks:

- The Human Resources Department must get their leave-application forms printed from any paper printer company that wins a bid, leading to a high cost of paper and printing charges.
- The employees must wait outside the office of their HOD/Functional Head for the approval of a leave application, and then must approach the Director to get it approved and finally it is submitted to HR.
- The HOD/Functional Head cannot verify the employee's available leave hours before approving the leave-request. Also, Human Resources personnel must manually check the leave requests of any employee before posting into the registers.
- The Human Resources Department must maintain bundles of papers in their files or drawers.

### C. Benefits of Proposed Leave Management System

**Benefits of Leave Management System** The primary objective of the proposed Leave Management System is to ensure the administration of standard leave policies, centralize the collection and maintenance of leave records, and automate as much of the process as possible. This system allows creating, monitoring, and routing of the leave applications from the applicants to the acting supervisors in the department and to the administrator of the Human Resources Department. The Leave Management System enables employees with capabilities to submit leave requests online, check their leave-time balances and view the status of the leave requests via the World Wide Web (Web), relieving the Human Resources Department from time-consuming inquiries. The automated leave management ensures that employees accrue the right amount of "leave" that they are entitled to receive, and provides a quick and efficient validation method that saves precious time and eliminates a cumbersome paper process. Also, enabling the supervisor to approve online requests saves management time. The Leave Management System calculates and maintains balances of each employee's vacation, sick and other benefit time. It gives Human Resource administrators the ability to review, edit, and approve employee time and leave from any location by using a standard Web browser. Thus, the Leave Management System simplifies the leave process, makes it more maintainable, gives better, clearer and more frequent information to end users, standardizes the processing of different types of leaves, and lowers the amount of data entry and verification activities.

The proposed system automates the existing system. It decreases the paperwork and maintains easy record by having a database for leave maintenance, reduces the over work and time duration. It provides an easy, maintained and systematic

environment for the higher authority (HOD/Director) for the approval of leave. The role of Director has been added where the HOD can request for the leave to the Director, for approval

## II. DESIGN

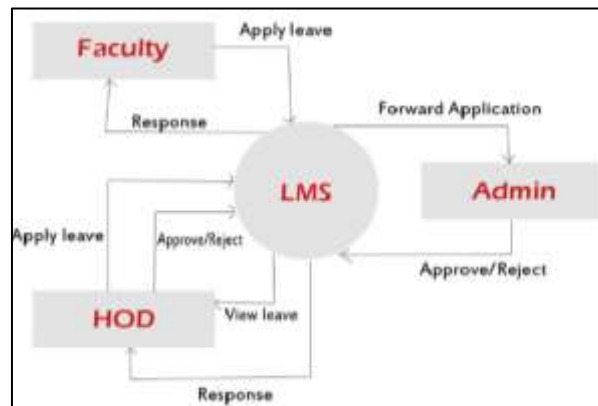


Fig. 1: DFD 0 Level

In the above figure 1, the faculty can apply for leave and the request will go to the HOD where HOD can view leave status and can accept/reject the leave, after accepting the request the application will be forwarded to the admin.

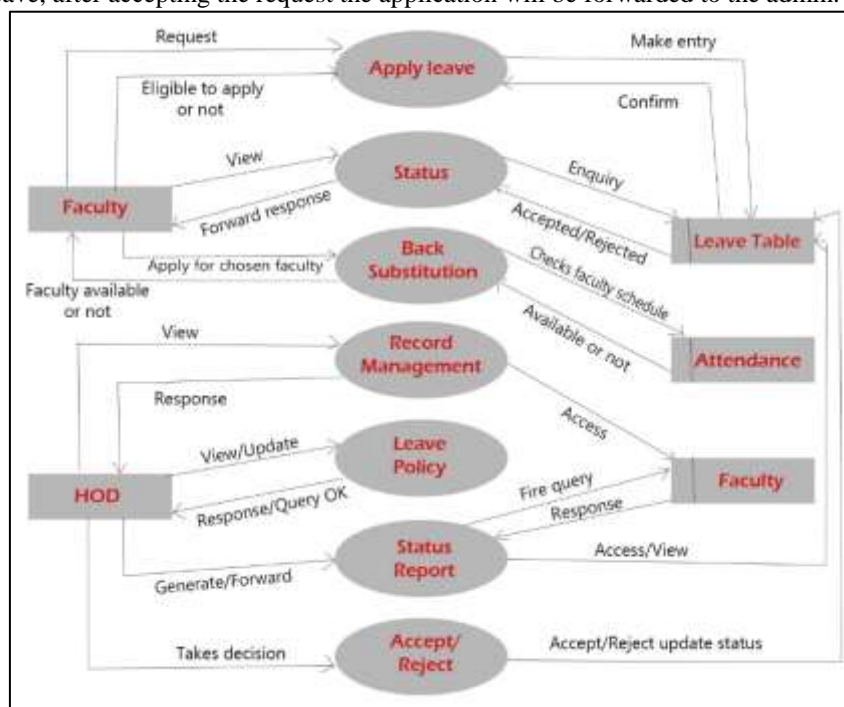


Fig. 2: DFD 1 Level

The above figure 2, explains the roles of the actors where the faculty can request for leave, view leave status. The HOD can view, update the leave and can also view the generated report. All the forms are connected to the database tables like leave table, attendance table and faculty table

## III. MODULES

### A. Staff Management Module

#### 1) Add Faculty

Add & manage a faculty by providing their account details, profile setup & designation setup.

#### 2) Remove Faculty (Edit or Delete)

In this module we can remove the faculty from the database completely or can also edit the profile of any faculty.

#### 3) Leave Report Generation

We can generate leave report of every faculty which includes all the information about the staff's CL, PL, SPL & others.

### B. Leave Management Module

- When a faculty applies for a leave he/she assigns substitutes for his/her lectures.

- If substitutes confirm the request, leave application is forwarded to the HOD. If rejected then the applicant will be notified and needs to reapply application by selecting another substitute.
- If further, HOD recommends the application is forwarded to the director.
- The director can then accept or reject the leave.
- The director can view leave report generation of all the staff members, whereas the HOD can view leave report generation of all the faculties of his/her department.

#### C. Substitution Module

- When any faculty applies for leave he/she has to assign a substitute for their lectures.
- The substitutes selected are notified & can confirm or reject the request.
- If confirmed, the substitutes are informed about the slot, year, semester and the date on which they are assigned the lecture.
- If rejected then it is notified to the applicant & he/she has to reapply the leave.

#### D. Notification Module

When a faculty applies for leave he/she has to select a substitute. The substitute is notified about this and can confirm or reject the request. The director can then accept or reject the leave and is notified to the applicant.

### IV. RESULTS

This section describes the snapshots of the working module in developed product. The application is developed through HTML, CSS, JavaScript and JSP at the server side. The database for the application is MySQL.

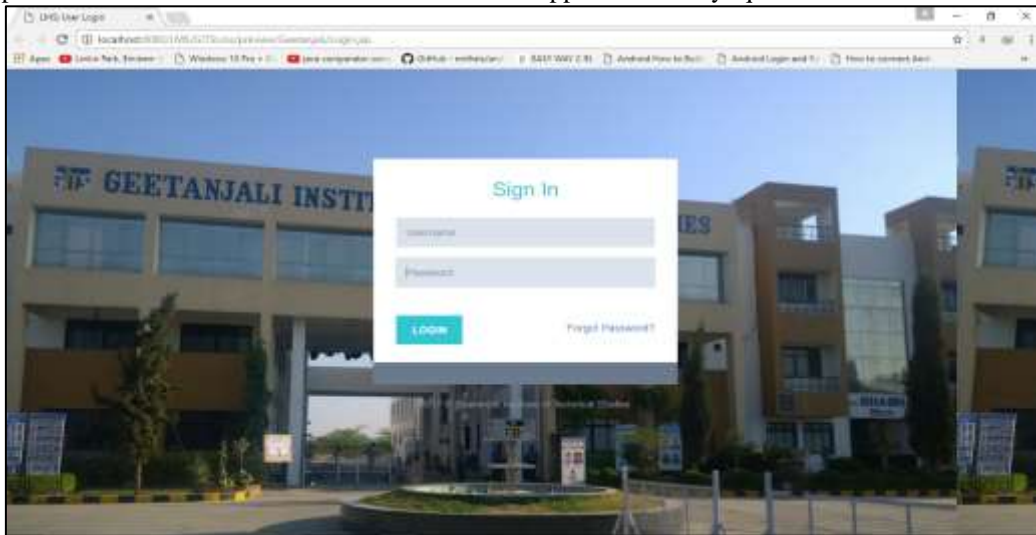


Fig. 3: Snapshot of Login Page

- Step 1: The faculty/HOD/Director/Admin can login into their respective accounts using valid credentials provided to them.
- Step 2: If the credentials are not valid, the page will be redirected to login page again showing the error message.
- Step 3: If the user forgets the credentials then he/she can click on the forget password and he will receive a mail which will contain username and password.



Fig. 4: Faculty Dashboard

- Step 1. The faculty dashboard consists of the features like apply leave, status report, and substitution request and leave policy.
- Step 2. The dashboard also consists of the calendar which helps the user to get reminders.



Fig. 5: Leave Application form

- Step 1: The faculty/HOD can apply for leave using the leave application form.
- Step 2: The form consists of text fields like name, email address, designation, department, leave type, reason and date.

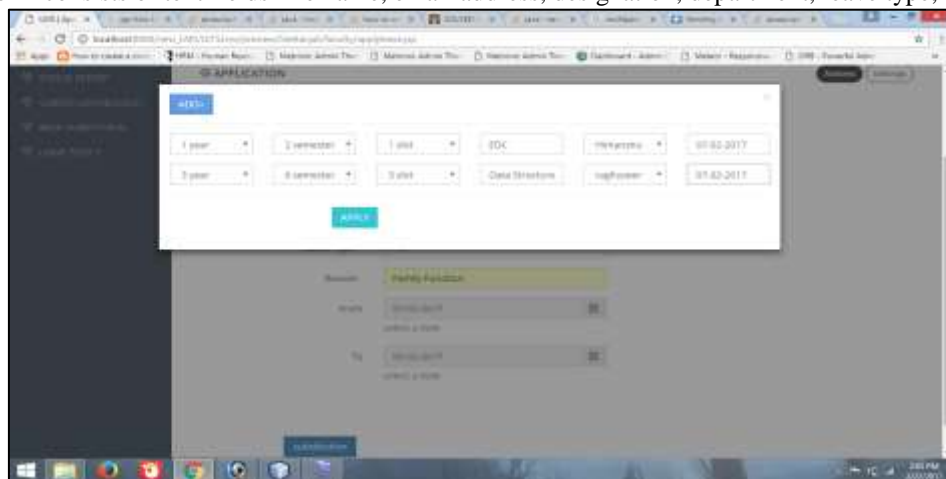


Fig. 6: Substitution Pop-up form

- Step 1: When any faculty applies for leave he/she has to assign a substitute for their lectures.
- Step 2: The substitutes selected are notified & can confirm or reject the request.
- Step 3: If confirmed, the substitutes are informed about the slot, year, semester and the date on which they are assigned the lecture.
- Step 4: If rejected then it is notified to the applicant & he/she has to reapply the leave.

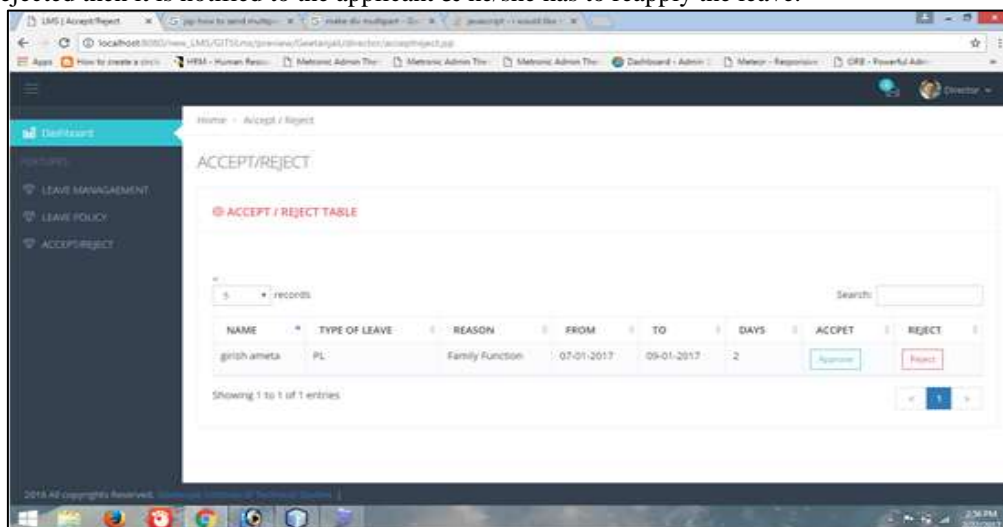


Fig. 7: Accept/Reject Table

- 1) Step 1: When a faculty applies for a leave he/she assigns substitutes for his/her lectures.
- 2) Step 2: If substitutes confirm the request, leave application is forwarded to the HOD. If rejected then the applicant will be notified and needs to reapply application by selecting another substitute.
- 3) Step 3: If further, HOD recommends the application is forwarded to the director.
- 4) Step 4: The director can then accept or reject the leave.
- 5) Step 5: The director can view leave report generation of all the staff members, whereas the HOD can view leave report generation of all the faculties of his/her department.

#### V. ADVANTAGES

These are the following advantages of the application:-

- The application is eliminating almost complete usage of pen and paper.
- In India, most of the schools and colleges are not using this technology. They are still stuck up in old fashion of writing applications on paper. Authenticity of such approvals is also questionable. They may be fake. Thus our application is a revolutionary step towards the secure and more transparent way of submitting your documents which are genuine, certified and accurate.[4]
- The application has option of declining leave consent. Thus, it completely removes additional efforts of calling up to authority or sending any message from external sources. The application nearly takes few minutes and with its ready content, one can easily fill up all the required and essential details.

#### VI. CONCLUSION

The purpose of Leave Management System is to automate Leave management. With the help of this system users can apply leave online, supervisors can approve or escalate to higher levels, and HOD and Director can update leave status online. The faculty and HOD can view the status of their respective applications. Admin can manage all Leave Transactions with the help of this system. The work flow is designed in such a way the Leave System generates notification messages as alerts to respective faculty, HOD and to the Director to enable them to act upon.

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