

## Corporate leave and HR management system

RESEARCH

Abitha<sup>1</sup>, Madhumathi<sup>1</sup>, Ranjitha<sup>1</sup>, Senthil Prakash<sup>1\*</sup>**Abstract**

This paper explains the development of a Corporate Leave HR management system used to manage employee leave in an organization. In many companies, leave handling is done manually using paper or email, which takes more time and may cause mistakes. By digitizing the leave process, the system cuts down on paperwork, speeds up approvals, and improves accuracy. It also makes communication between employees and HR staff clearer and more effective. It also helps in better communication between employees and HR. Overall, this system makes leave management easy and efficient.

**Keywords:** Leave management, HR system, employee records, automation, leave tracking.

**1. Introduction**

In any organization, managing employee leave is an important task. In the existing method, employees submit leave requests manually. HR personnel are required to verify records, update leave balances, and process approvals manually. This process is time-consuming and increases the chances of errors[1]. The Corporate Leave HR management system to address these challenges, an automated system is developed. It is a software-based solution that enables employees to submit leave requests online while assisting HR in managing them efficiently. The system stores all information in a database, making it easy to access and maintain. The Corporate Leave HR management system is developed to overcome these problems.

It is a software-based system that allows employees to apply for leave online and helps HR manage requests easily. All data is stored in a centralized database, ensuring easy access and efficient maintenance. It reduces manual work, improves accuracy, and saves time [2].

**2. Background and related work****2.1. Existing System**

In the existing system, leave management is handled manually

- Employees fill leave forms or send emails.
- HR maintains records in files or registers approval process takes time.
- Difficult to track leave history.
- This system is not suitable for large organizations and lacks efficiency in handling large volumes of data [3].

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## 2.2. Proposed System

The proposed solution is an automated leave management system designed to improve efficiency. Employees can submit leave requests online, while HR can review and approve or reject them efficiently. Leave balances are updated automatically, and reports can be generated easily. This system improves efficiency and reduces manual work by using modern software development techniques and database management systems [4].



Figure 1: Proposed system

(Figure 1) shows the overall architecture of the proposed Corporate Leave HR management system. It explains how users interact with the system and how data is processed and stored within the database. The system facilitates effective communication between employees and HR personnel.

## 2.3. Leave Management Process

Modern the leave management process in the system is shown below:

- Employee submits leave request
- System checks leave balance
- HR reviews request
- Approval or rejection is given
- Database is updated automatically



Figure 2: Leave process flowchart

(Figure 2) represents the leave management process flow. It shows the steps involved from submitting a leave request to final approval or rejection. The process ensures proper validation, tracking, and updating of leave records.

## 3. Proposed system architecture

The system architecture is designed to provide an efficient structure for managing employee leave operations. The system follows a centralized structure where all data is stored and processed in a single location. The architecture mainly consists of three parts user interface, application logic, and database. These components work together to perform all operations related to leave management. The user interface is used by employees and HR to interact with the system. Employees can submit leave requests, track their status, and view their leave balance. HR or administrators can log into the system to manage employee records, process leave requests, and generate reports. The system is implemented using web technologies and database concepts to ensure efficient data management and smooth user interaction.

**Table 1:** Key components of the proposed architecture

Component	Function	Benefit
Employee Module	Apply and view leave	Easy access
Admin Module	Manage approvals	Better control
Databases	Stores records	Data safety
Login System	User authentication	Security
Report Module	Generate Reports	Easy Analysis

(Table 1) outlines the key components of the proposed system along with their respective functions and benefits. Each module plays a vital role in ensuring efficient leave management. The Employee Module enables users to apply for leave and view details, while the HR/Admin Module handles approvals. The database ensures secure storage of records, and the login system provides authentication. The report module helps in generating reports for analysis.

**Table 2:** Comparison with existing system

Feature	Existing System	Proposed System
Process	Manual	Automated
Time	More	Less
Accuracy	Low	High
Record keeping	Difficult	Easy
Paperwork	High	Low

(Table 2) compares the existing manual system with the proposed automated system. The manual system requires more time, has lower accuracy, and involves high paperwork. In contrast, the proposed system is automated, faster, more

accurate, and reduces paperwork. This comparison highlights the efficiency and reliability of the proposed system.

**Table 3:** Advantages of proposed system

Parameter	Improvement
Time Saving	Fast Processing
Accuracy	Fewer Errors
Data Management	Easy Storage
Communication	Better Interaction
Transparency	Clear Process

(Table 3) shows the major advantages of the proposed system. The system improves processing speed, reduces errors, and simplifies data management. It also enhances communication between employees and HR/Admin and ensures transparency in the leave process. These benefits make the system more efficient and user-friendly.

**Table 4:** System parameters details

Parameter	Description
User ID	Unique ID for each employee
Leave Type	Type of leave (Casual, Sick, etc.)
Leave Balance	Available leave days
Approve status	Approve/Rejected/Pending
Date of leave	Start and end date
Reason	Reason for leave

(Table 4) presents the key parameters used in managing leave requests within the system. Each parameter plays an important role in processing and tracking leave information.

User ID identifies employees, while leave type and balance help in request validation. Approval status, leave dates, and reason ensure proper tracking and record maintenance.

#### 4. Implementation methodology

The implementation of the Corporate Leave HR Management System is carried out in a step-by-step manner. It begins with understanding the requirements of the system and ends with successful deployment. Each step is important to ensure the system works properly and meets user needs. The first step is requirement analysis. In this phase, the needs of employees and HR are identified. The system requirements such as leave application, approval process, and report generation are clearly defined. The next step is system design. In this phase, the overall structure of the system is planned. This includes designing the user interface, database structure, and system modules like employee and admin sections. After completing the design phase, the system proceeds to the development stage. In this step, coding is done using a programming language. The different modules of the system are developed and connected to the database. The testing phase is done after development. The system is tested to identify and resolve errors [5]. This ensures that all features, including leave application, approval, and record management, function correctly. After deployment, user training is an important step. Employees and HR staff are trained to use the system effectively. This includes how to apply for leave, check status, and manage requests. Proper training helps users to understand the system easily and reduces mistakes during usage. Another important part is system maintenance and updates. The system needs to be checked regularly to ensure smooth performance. Any errors are resolved promptly, and new features can be added based on requirements. This helps enhance the system and keep it aligned with organizational needs. Finally, the system is deployed and maintained. It is implemented in the organization and used by employees and HR. Regular

maintenance is done to improve performance and fix any issues that arise. The system is developed using programming languages and tools supported by official documentation and online resources [6]. Various tutorials and practical examples are referred to during development for better understanding and implementation of system features [7]. The system follows the Software Development Life Cycle (SDLC) to ensure proper design, implementation, and maintenance.

#### 5. Results and discussion

The Corporate Leave HR Management System was successfully developed and tested. The system works efficiently and performs all the required functions such as leave application, approval, and record management. It provides a seamless experience for both employees and HR personnel. The system enables employees to apply for leave easily through the interface [8]. They can enter all required details and submit requests without difficulty. This simplifies the process compared to the traditional manual method. The leave approval process is also improved. HR can view all requests in a centralized interface and process them efficiently. This reduces delays and ensures faster decision making. All records are securely maintained within the database [9]. This helps in storing employee details and leave history safely. It also makes it easy to retrieve information whenever required. System accuracy is enhanced as all calculations are performed automatically. The chances of human errors are reduced, and the data remains consistent. The system also provides better transparency. Employees can check the status of their leave requests at any time. This reduces confusion and improves communication between employees and HR. Another important result is quick report generation. HR can generate reports related to leave details easily. This helps in analyzing employee attendance and planning work effectively. Overall, the system demonstrates improved performance compared to the traditional manual

approach by utilizing modern software engineering techniques [10]. It saves time, reduces workload, and improves efficiency. The results prove that the system is reliable and useful for organizations.

## 6. Challenges and future scope

Although the Corporate Leave HR management system is beneficial, it faces certain challenges in implementation and maintenance. These challenges must be addressed effectively to ensure smooth functioning one of the major challenges is ensuring data security. The system stores employee details and leave records, so it must be protected from unauthorized access. Proper security measures like login authentication are required. Another challenge is user adoption. Some employees may not be familiar with using computer systems. They may find it difficult to use the software initially, which can affect system usage. The system also requires regular maintenance. Technical issues such as bugs or errors may occur, and they need to be fixed quickly. Without proper maintenance, system performance may decrease. Integration with other systems, such as payroll, can also be challenging. It requires careful design and testing to ensure seamless interaction between systems. In the future, the system can be enhanced by developing a mobile application. This will enable employees to apply for leave using smartphones, making the system more convenient. The system can be further improved by incorporating advanced features such as automated notifications, email alerts, and detailed reporting. These features will improve user experience and system efficiency. Another future improvement is cloud based implementation. Storing data in the cloud will make the system more secure, accessible, and scalable for large organizations. Overall, despite certain challenges, the future scope of the system is significant. With appropriate improvements, the system can become more advanced, user-friendly, and efficient.

## 7. Conclusion

The Corporate Leave HR management system is developed to streamline the management of employee leave within an organization. It replaces the traditional manual system with an automated system, thereby making the process faster and more efficient the system enables employees to apply for leave easily and assists HR in managing requests efficiently reduces dependency on paperwork and minimizes manual effort, thereby saving time for both employees and management. One of the key advantages of the system is enhanced accuracy as all records are stored in a database and updated automatically, the chances of errors are very low. This helps in maintaining reliable and consistent data. The system also enhances transparency. Employees can monitor their leave status at any time, while HR can efficiently track all requests. This improves communication and reduces misunderstandings within the organization. Another important benefit is better data management. All employee and leave details are stored in an organized way, making it easy to access and generate reports when needed. This helps HR in planning and decision-making. In conclusion, the Corporate Leave HR management system is an effective and efficient solution for modern organizations. It improves productivity, reduces workload, and ensures smooth management of employee leave.

**Conflict of interest statement:** I declare that this project work titled Corporate Leave HR management system is my original work and has been completed by me. I confirm that there is no conflict of interest related to this project. I also state that no external organization or individual has influenced the work. All the information used in this project is for academic purposes only.

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**Data availability statement:** The data used in this project titled Corporate Leave HR management system is based on sample and general information created for academic purposes. No real-time or sensitive personal data has been used. All data related to the project is available within the system design and documentation. The project does not depend on any external datasets.

**Ethical approval statement:** This project titled corporate leave HR management system is developed for academic purposes only. It does not involve any real human participants, animals, or sensitive personal data. All the information used in this project is general and created for learning purposes. Therefore, ethical approval is not required for this project.

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