

Enterprise Employee Management System

Umapathy .M¹, Srikanth Y², Santhanaraman R³, Srimurugan B⁴, Suriyaprakash B⁵

Assistant Professor, Department of Information Technology, The Kavery Engineering College (Autonomous), Mecheri,
Salem, Tamilnadu, India¹.

UG Students, Department of Information Technology, The Kavery Engineering College (Autonomous), Mecheri,
Salem, Tamilnadu, India^{2,3,4,5}.

ABSTRACT: In the ever-changing world of technology, every organization whether it is big or small has to overcome human resources challenges. Evolution in modern-day industrialization has resulted in different challenges in different sectors of organizations, therefore a convincing Employee Management System that is also adaptive to an organization's managerial needs can be significant. The right EMS helps in strategic planning and helps ensure to meet the future goals of an organization. The main purpose of implementing a proper Employee Management System is to be equipped with modern technology that boosts performance and productivity and also achieving paperless management. Without a proper employee task management system in an organization, it is very unvaried and difficult for the human resource department to maintain records of every employee in the organization and even harder for project managers to assign tasks or jobs to the project team. Using modern technologies like Cloud Computing also offers Information accessibility on the go, allowing the management to be more flexible. This system eliminates the drawbacks of the existing conventional management system which are time-consuming and also confusing if not properly scheduled. The Employee Management System is a distributed system, developed to maintain a systematic collection of information of the workforce within an organization

I. INTRODUCTION

Employees are considered to be the backbone of an organization and hence their management plays a vital role in driving the success of the organization. Utilizing a company's most valuable asset, its human resources to their maximum potential sometimes necessitates the use of technology that effectively addresses time limits and management issues. An Employee management system makes it very easy and efficient for the employer to keep a track of all the records. Such records of the organization are meant to be streamlined the organization's input and consequently, maximize its performance. This Employee management system is expected to be user-friendly and offers easy to access data and it also enables the employees to create and store their records. Without a proper employee management system, it is very difficult for the human resource department to track every employee of the organization and even harder for the project manager to assign tasks to the project team. The system will maintain all payroll activities like managing employee's data, assigning tasks to a specific employee with a start date and an end date of the task, updating employee's data, receiving and responding to employee's feedback, etc. This application is designed to ease the process of storing both official and personal details of the employees in an organization. It is simple to understand and can be used by anyone who is not even familiar with the employee's system. It is simple and allows the user to input and also retrieve the data of the employees easily. It is user-friendly and can perform many operations of an organization. This application is developed using HTML (Hypertext Markup Language), CSS (Cascading Style Sheets), and JS (JavaScript) for the Front end and it uses PHP (Hypertext Preprocessor), MySQL for the Back end, and WampSever for the server-side. This application has a multi-user approach with modules likes Admin and Employee. For further improvements, user's feedback will be considered. The application takes care of the database and day-to-day operations as it developed using the powerful and widely used MySQL.

OVERVIEW

The objectives of this Online Employee Management System are as follows – Paperless Administration: To remove the drawback from the existing conventional systems to record information of employees in a bunch of files which makes it very difficult to access the required data whenever needed. Ease to information accessibility: As the conventional system needs a lot of human resource work to maintain and keep records of the details of all the working employees in the organization. Using a convenient employee management system in the organization will boost the performance and

productivity and hence lowering the workload of the human resource. Integration of modern cloud-based technology will make the system available to any device connected over the internet, thus making information retrieval easier than ever.

II. IMPLEMENTATION

1. A Review Paper on Advance Employee Management System

Companies and organizations, large and small, usually have a huge army of people working under them. In such a scenario with a large number of personnel to manage, it becomes difficult to efficiently monitor and manage the activities of human resources. Such companies and organizations need sophisticated employee management systems that can handle everything related to their human resources. The purpose of this project is to set up an advanced employee management system that integrates all relevant information from the enterprise's human resources department. It has the main components of managers and employees. The manager is responsible for company information, vacation management, and payroll, and also adds adjustments to employee details. Similarly, employees can use this system to check vacation status, view salary details and annual leave lists, and file or cancel complaints.

2. Employee Attendance Monitoring System by Applying the Concept of Enterprise Resource Planning (ERP)

Enterprise Resource Planning (ERP) is a business process management system that integrates and automates the activities of an organisation in terms of its technology, human resources and services. ERP provides an integrated environment that links the business processes of different departments of an organisation into one unit so that departments benefit from each other through their joint transactions. This study applies the ERP concept to create an employee attendance monitoring system (EAMS). Three departments, HR, Finance and the Director of Administration, were linked using the EAMS. The traditional system of attendance monitoring was time consuming and required greater effort. This is because the attendance report needed to be printed from the HR department and then sent to the Finance Department for any necessary actions (i.e. salary deduction). The EAMS will automate the whole process, thus resulting in fair decisions in less time. In the traditional system, the any delay in calculations of attendance can be unwarranted or maintaining an accurate time record can be difficult as it is manually updated. To solve these issues, a computer based monitoring system is required to establish accuracy and fairness. For that purpose, we designed and developed the EAMS. The EAMS automatically calculates any delay in employee attendance using the concept of ERP systems. More precisely, this system will calculate the delay in the attendance within set rules, as defined and applied by the different departments in the organisation. The attendance times will be checked automatically by the system: if there is any delay which violates the set rules of the organisation, necessary action will be taken automatically against the employee in terms of salary deduction or other notifications. To apply the EAMS, we constructed a case study at the "Faculty of Economics and Business Administration at King Abdulaziz University, (Female Section)". Later, it is hoped, that this system can be used in other organisations based on their needs and enhancement to the existing framework. The expected results of this system are that it will save time and effort for all employees at the Faculty of Economics and Administration. In addition, there will be a reduction of errors in the attendance reports.

III. EXISTING SYSTEM

- Paper-based records – Prone to loss, damage, and retrieval delays.
- Manual attendance registers – Vulnerable to buddy-punching and errors.
- Excel payroll processing – High error rate (15–20%) and slow (3–5 days).
- Email/paper leave requests – Often lost and require manual tracking.
- Physical file security – Risk of unauthorized access and no audit trails.
- Manual report creation – Time-consuming (2–3 days per report) and inconsistent.
- Limited scalability – Only supports up to 300 employees.
- No real-time access – Data not available remotely or in real-time.
- High monthly manual effort – Over 200 hours wasted on repetitive tasks.

3.1. DISADVANTAGES OF EXISTING SYSTEM

- High Error Rates – Payroll calculations have a 15–20% error rate.
- Time-Consuming Processes – Payroll takes 3–5 days; reports take 2–3 days each.

- Security Vulnerabilities – 3–5 security incidents per year due to physical file access.
- Manual Inefficiency – Over 200 hours/month wasted on repetitive HR tasks.
- Poor Scalability – Maximum capacity limited to 300 employees.
- No Real-Time Access – Data and reporting are not available immediately or remotely.
- Low Transparency – No audit trail or tracking for changes or access.
- Data Inconsistency – Multiple sources lead to conflicting and unreliable records.
- Limited Accessibility – Employees cannot access self-service features or view their data easily.

3.2. PROPOSED SYSTEM

- A centralized web platform automates all HR tasks in one secure location.
- Seven core modules manage everything from login and employee data to attendance, leaves, payroll, documents, and reports.
- Strong login security uses tokens and four user roles to control access.
- Automated workflows handle attendance, leave approvals, and payroll without manual input.
- Built with Spring Boot in a three-layer design for easy growth and maintenance.
- Organized MySQL database keeps data accurate with rules and links between tables.
- Live dashboards show charts and key numbers for quick understanding.
- Automatic emails and alerts keep everyone updated on approvals and changes.
- Mobile-friendly design works on phones, tablets, and computers.
- Easy reporting lets users create and download reports in Excel or PDF.

3.2.1. ADVANTAGES

- Time Efficiency – HR processes 80% faster; payroll in 5 minutes.
- High Accuracy – Error rate reduced from 15–20% to <0.5%.
- Enhanced Security – JWT-based authentication and role-based access.
- Centralized Data – Single, consistent source for all employee information.
- Scalability – Supports from 300 to over 10,000 employees.
- 24/7 Accessibility – Web-based, mobile-responsive platform.
- Cost Reduction – Cuts HR operational costs by up to 70%.
- Real-Time Reporting – Interactive dashboards with PDF/Excel export.
- Full Automation – Eliminates manual tasks and paper-based workflows.
- Employee Self-Service – Portal for leaves, payslips, and updates.
- Audit & Compliance – Complete logs and statutory compliance features.

WORKING

1. Authentication & Authorization Module

- Provides secure login and user authentication.
- Uses JWT tokens and Spring Security for security.
- Supports role-based access control (Admin, HR, Manager, Employee).
- Includes password encryption, session management, and password reset features.

2. Employee Management Module

- Manages the complete employee lifecycle from joining to exit.
- Allows adding, updating, deleting, and viewing employee records.
- Stores employee details such as personal info, contact details, salary, and documents.
- Provides employee search, filtering, and export options.

3. Department & Designation Module

- Organizes employees into departments and job roles.
- Allows creating and updating departments and designations.
- Supports department-wise employee listing and hierarchy management.
- Helps improve organizational structure and reporting.

4. Attendance Management Module

- Tracks daily employee attendance with check-in and check-out features.
- Records late arrivals, early departures, and working hours.
- Provides monthly attendance reports and analytics.
- Displays attendance in calendar view and graphical format.

5. Leave Management Module

- Allows employees to submit leave requests online.
- Supports different leave types such as Casual Leave, Sick Leave, Earned Leave, and LOP.
- Includes approval workflow (Manager → HR).
- Maintains leave history and leave balance tracking.

6. Payroll Management Module

- Automates salary calculation and payroll processing.
- Manages salary components such as Basic Salary, HRA, DA, and Allowances.
- Handles deductions like PF, ESI, and tax.
- Generates monthly payslips in PDF format and payment history.

7. Dashboard & Reporting Module

- Provides role-based dashboards for Admin, HR, Manager, and Employee.
- Displays key performance indicators and statistics.
- Generates attendance, payroll, and employee reports.
- Allows exporting reports in PDF and Excel formats.

8. Document Management Module

- Allows uploading and storing employee documents securely.
- Supports file download and document categorization.
- Maintains version control for document updates.

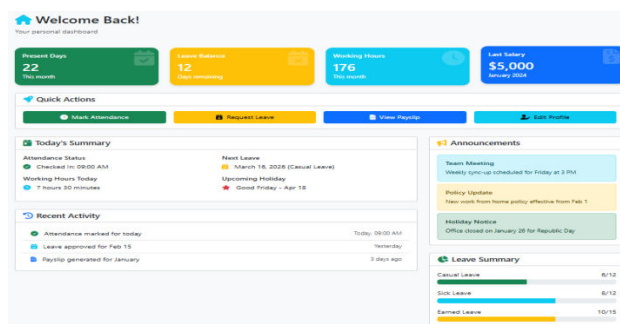
9. Email Notification Module

- Sends automated notifications to users.
- Includes leave approval emails, payslip delivery, and password reset emails.
- Keeps employees informed about system updates and approvals.

10. Audit & Logging Module

- Tracks all system activities and user actions.
- Records login history, data updates, and system events.
- Helps maintain security, transparency, and compliance.

IV. SAMPLE OUTPUT



Daily Attendance

Check in and out for your work day

11:26:15 PM

Sunday, March 8, 2026

Welcome, Employee01 E

Check-in Status

Waiting for check-in

→

→ Check In Now

Standard check-in time: 9:00 AM

Check-out Status

Waiting for check-out

←

← Check In First

Attendance Dashboard

[View History](#) | [My Report](#) | [Calendar View](#) | [Dashboard](#)

Remember to check in when you arrive and check out when you leave.

Leave Balance Dashboard

Track your leave balance and utilization

Year: 2026

Total Allocated

12 Days

Available

10 Days


Used

0 Days


Pending

2 Days

Leave Balance Distribution



Leave Type Utilization



Leave Type	Allocated	Carry Forward	Total Available	Used	Pending	Balance	Utilization	Status
Casual Leave	12	0	12	0	2	10	<div style="width: 100%;"></div>	Healthy
Total	12	0	12	0	2	10		

Recent Leave History

Leave Type	Start Date	End Date	Days	Status
No recent leave history found.				

[Apply for Leave](#) | [View All Leaves](#)

Apply for Leave

Submit your leave request

[My Leaves](#)

Casual Leave
10 Available / 12 Total

Leave Application Form

Leave Type *

Select Leave Type

Leave Duration

Half Day Leave
Check this if applying for half day only

Start Date *

dd-mm-yyyy

End Date *

dd-mm-yyyy

Reason *

Enter reason for leave (minimum 10 characters)

0/500 characters

Contact Number

e.g. 9876543210

Contact number during leave

Contact Address

Address during leave

Where you can be reached

[Cancel](#) | [Back](#) | [Submit Leave Request](#)

Leave Application Guidelines

- Leave applications should be submitted at least 2 days in advance
- Emergency leaves can be applied on the same day with proper justification
- Ensure you have sufficient leave balance before applying
- For sick leave exceeding 3 days, medical certificate is mandatory
- Contact your manager for urgent leave requirements
- You will receive an email notification once your leave is approved/rejected

HR Dashboard

Employee Management and Operations

New Hires

12

Leave Requests

15

Attendance

96%

Payroll Status

Draft

HR Quick Actions

[Add Employee](#) | [Approve Leaves](#) | [Process Payroll](#)

Pending Approvals

- Leave request from John Doe Pending
- Leave request from Jane Smith Pending
- Document verification for Mr. Wilson Pending

This Month Stats

- Employee Satisfaction: 85%
- Attendance Rate: 96%
- Leave Utilization: 72%

V. CONCLUSION

- The Enterprise Employee Management System provides an efficient and secure solution for managing organizational HR activities. The system automates important processes such as employee data management, attendance tracking, leave management, payroll processing, and reporting.
- By implementing modern technologies like Spring Boot, MySQL, and JWT-based authentication, the system ensures secure access, reliable data management, and role-based control for different users such as Admin, HR, Manager, and Employee.
- The system reduces manual work, minimizes errors, and improves operational efficiency through automation and centralized data management. Features such as real-time dashboards, automated payroll, leave tracking, and document management help organizations manage their workforce more effectively.
- Overall, the proposed system improves productivity, enhances transparency, and provides a scalable platform that can support the growing needs of modern enterprises.

REFERENCES

- [1] Singh P, Fartyal H, Zubair KA, Laddha A. Employee Management System. International Research Journal of Engineering and Technology (IRJET). 2019 May;6.
- [2] A.S. SyedNavaz, A.S. SyedFiaz, C. Prabhadevi, V. Sangeetha, S.Gopalakrishnan, "Human Resource Management System", IOSR Journal of Computer Engineering (IOSR-JCE), Volume 8, Issue 4 (Jan. – Feb. 2013)
- [3] Special issue of the International Journal of Human Resource Management: Digitization and the transformation of human resource management. (2018). The International Journal of Human Resource Management, 1–5.
- [4] Y. Mounika, S. Tharun Kumar Reddy, S. Ravikiran, M. Reddy Vijay Kumar, D.Sowjanya. Employee Task Management System with High Authentication. International Research Journal of Engineering and Technology (IRJET). 2019 March;6.
- [5] Costa, C.J. ERP– Enterprise Resource Planning. OAE– Organizational Architect and Engineer Journal. (2019).



INTERNATIONAL
STANDARD
SERIAL
NUMBER
INDIA



INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN SCIENCE | ENGINEERING | TECHNOLOGY

 9940 572 462  6381 907 438  ijirset@gmail.com



www.ijirset.com

Scan to save the contact details