

# From Paper to Digital: Transitioning Employee Processes with an Employee Management System

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**Abstract** - Teachers and students form the core of any educational institution, be it a college or school. However, traditional methods of managing their tasks often result in cumbersome paperwork and complex processes. This paper delves into the creation of a cost-effective system aimed at alleviating these challenges. Unlike many existing computerized systems that primarily focus on attendance, leave, and salary management, this proposed system seeks to address a broader scope. Typically, crucial employee data, including personal information, task assignments, leave records, and work allocations, are manually handled. To streamline these operations, a web-based Employee Management System is suggested herein. This system not only saves considerable time but also ensures accurate pay calculations, thereby enhancing efficiency. In contrast to the technologies discussed in existing literature, this solution offers a more user-friendly approach. The primary objective of this endeavor is to evaluate and enhance employee performance within the institution.

**Keywords** – Employee Management System (EMS), Employee (EMP)

## I. INTRODUCTION

Employee Management System (EMS) is an innovative application designed to streamline the creation and storage of employee records within an organization. This system serves as a valuable asset for departments tasked with managing vast amounts of employee data efficiently. With its user-friendly interface, EMS provides a straightforward approach to accessing and understanding each step of the process. Notably, it operates independently of any particular platform, making it versatile for use on both standalone machines and distributed networks. [8] In today's era of advancing technology, the workforce has expanded significantly, necessitating a reliable system to handle the associated data. Unlike traditional paper records that consume physical space and are prone to damage or loss, EMS offers a digital solution that simplifies record-keeping.

The core strength of EMS lies in its ability to seamlessly integrate backend and frontend functionalities, ensuring proper synchronization of data. A robust understanding of databases and design principles is crucial for meeting the system's diverse needs. To facilitate user interaction, EMS provides an intuitive graphical interface tailored to different roles. Administrators retain control over most data management tasks, while employees can conveniently update their personal information. This mobile application-based system not only enhances

efficiency but also proves to be a cost-effective solution, saving time, resources, and money for owners, HR personnel, and managers alike.[10] Implementing such systems can often be a daunting and expensive endeavor, but EMS offers a practical and accessible alternative. By offering a comprehensive solution to employee data management, EMS stands as an invaluable tool in the modern organizational landscape. Top of Form

The Employee Management System is a Java-based application created for efficient management of employee data. Utilizing a Java GUI interface and the H2 database, it offers a user-friendly experience for storing essential details such as employee IDs, first names, surnames, and ages. This streamlined system is solely accessible to the admin, ensuring a secure environment where only authorized personnel can modify or access records. Developed with the main aim of reducing errors inherent in manual systems, this project simplifies the process of retrieving employee information. With a straightforward search function based on employee IDs, users can effortlessly find the details they need. By storing all employee records in the H2 database, updating information becomes a seamless task.

The Employee Management System project in Java, built with Java GUI or Swing, presents a straightforward solution for managing employee data efficiently. It stands as a practical example of an easy-to-use and reliable system, perfect for academic projects or small-scale applications.

Building on the review section, this chapter provides detailed information on the design of an employee management system (EMS). EMS is organized into modules and groups that show their interaction and coordination in the system. The framework is designed to address existing limitations in existing workforce management software.

The system will be responsible for managing employees' information, including their personal information and related details. EMS simplifies the process of managing and updating employee information by centralizing all employee information. This design enables managers to have user relationships that can effectively handle all aspects of the management of employees in the organization.

## II. PROBLEM STATEMENT

HTML is a foundational tool for website creation, supported universally by web browsers. However, it is limited



to rendering static and basic pages, which poses challenges for creating dynamic web applications. As the demand for high-resolution web experiences grows, modern technologies like HTML fall short. This is where Java technology steps in to develop dynamic CRUD applications. Java technology offers developers robust tools such as Java Servlet Pages, spring, and Hibernate for efficient web development.

These tools streamline the process of creating, modifying, and removing data, reducing human effort significantly. In this project, spring is utilized for its modularity in web project development. It provides a Model View Control (MVC) architecture that supports the development of business applications.[4] What sets spring apart is its efficiency: it seamlessly integrates with Hibernate and other Java frameworks, allowing developers to work across front-end, back-end, and dynamic platforms. With spring's modules like Spring MVC, Spring ORM, and Spring JDBC, future implementations are made smoother. This framework simplifies the creation of connections to databases using data drivers such as JDBC. Spring stands out as a technology that will continue to dominate web development, thanks to its numerous advantages over other technologies.

Features of the three-tier architecture are displayed by the system. With the help of the Express JS backend and React JS front end, it should function quickly and offer a comfortable user experience. A user management function is included in the suggested system. A user's role can be changed, deleted, edited, and added by an admin. A user's username can be searched by the admin throughout the editing process. Next, they can modify user information. The administrator can alter a user's feature and role simultaneously. Using their usernames, the administrator can remove people.

A high importance function is attendance management. Through this system, the administrator and employees can both record their attendance and leave. The administrator can also see the attendance report, look up attendance information, and download the attendance report as The Asset Management element of the proposed system will handle tasks pertaining to managing assigned firm assets and personnel. Admins will be able to assign corporate assets to various employees and add them to the system with this function. Maintaining an accurate record of the company's assets, their allocation, and their current state is beneficial. Admins will also be able to do all actions on newly added asset items, including adding, removing, editing, and searching through the objects.

The task management capabilities for managers and employees will be included in the work management system component of the proposed system. These features will allow the administrator to add, modify, and remove tasks from the system.

### III. SYSTEM MODULES

1. Registration
2. Admin Login
3. Employee login
4. Leave Management
5. Report Generation

6. Update Information
7. Task Management
8. Notification
9. Attendance

### IV. EMS FEATURES

1. Easy Workforce Management
2. Easy Data Management
3. Save time searching for a job
4. User-friendly interface Using productivity
5. Employee information
6. Getting there
7. Performance Analysis
8. Notifications and Warnings
9. Data Storage
10. Reporting and Analysis
11. Usability
12. Security Assessment

### V. OBJECTIVES

The goal of a workforce management system is to develop simple, cost-effective, reliable system with goal for making employee attendance our goal is to prevent employee fraud and develop a system to ensure we receive every penny for our hard work. The main purpose of developing this system is for solving problem that small factory or companies used pen and paper till now to keep personnel records.[1] The industry has many conflicts with its employee. The system saves employers a lot of time and takes the stress out of processing employee payroll. It allows you to focus on other things and grow your business.

### VI. FLOWCHART

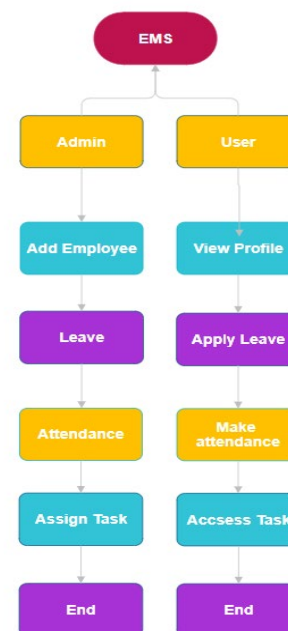


Fig. 1.

## VII. PROPOSED EMPLOYEE MANAGEMENT

### A. System View

#### 1) Employee Profile

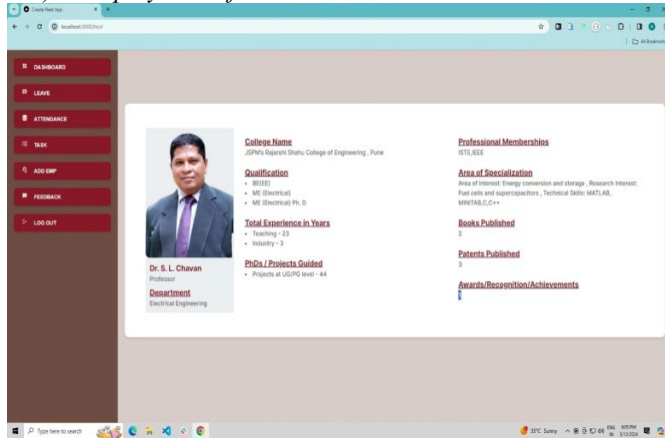


Fig. 2. Employee Profile

The Photo represents the employee information. How the employee career on going. Employee management system has involves all the profile & information related the employee. Emp also edit this information when his or her track or subject changes. It is very helpful to track all information related to EMP. But the editing access only for HOD or admin.

#### 2) Add Employee

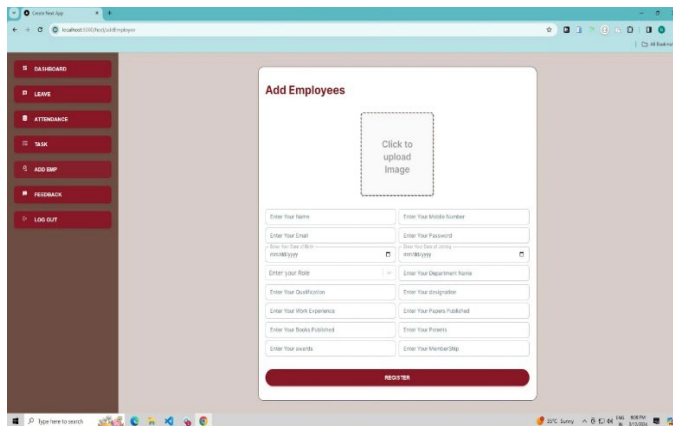


Fig. 3. Add Employee

Only authorized admins or HODs can access EMP information. The Add Employee section includes fields for name, contact details, education, and other pertinent information. Only authorized admins or HODs can access EMP information. The Add Employee section includes fields for name, contact details, education, and other pertinent information. "Only authorized admins or HODs can access EMP information. The Add Employee section includes fields for name, contact details, education, and any other relevant information. Upon addition, new employees' profiles are updated accordingly for easy reference.

#### 3) Attendance

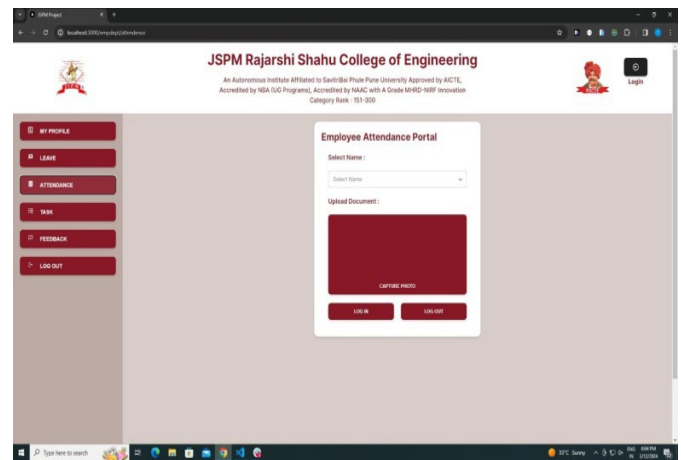


Fig. 4. Attendance

In the EMP Attendance Management System within EMS, a sophisticated feature is included for marking attendance when employees arrive at the college premises. This system utilizes advanced techniques within EMS, ensuring efficient tracking of attendance. As an employee enters, their attendance is marked with precision. The system not only captures a photo but also records the exact date and time, automatically submitting the information for accurate attendance management.

#### 4) Task

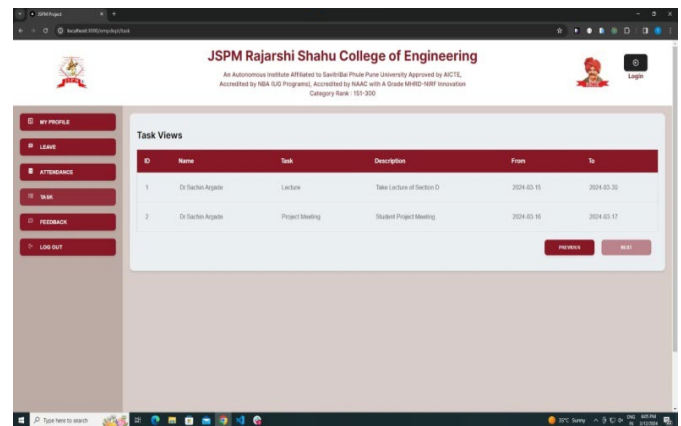


Fig. 5. Task

The task management system provided in the EMS Site operates by assigning tasks to employees. When an HOD or admin assigns a task, it is displayed on the user's profile. This system includes details such as the task name, submission date, and other relevant information for efficient management. Employees can easily track their tasks, deadlines, and progress through this streamlined process, enhancing overall productivity within the organization.

#### 5) Leave

ID	Name	Leave Type	From	To	Leave Reason	Status
1	Dr. Sachin Agadale	Sick Leave	2024-02-25	2024-02-27	Fever	Approved
2	Dr. Sachin Agadale	Personal Leave	2024-03-01	2024-03-02	Relocation	Pending
3	Dr. Sachin Agadale	Personal Leave	2024-03-05	2024-03-07	Family Matters	Pending
4	Dr. Sachin Agadale	Sick Leave	2024-03-11	2024-03-12	Cold	Pending

Fig. 6. Task

The Leave Management System is also integrated into EMS, where employees can apply for leave. The approval or rejection of leave requests is managed by the HOD or admin through the leave form, which requires details such as reason, start date, end date, and the option to upload necessary files. This system ensures a structured process for leave requests, providing transparency and efficiency in managing employee absences. Employees can easily track the status of their leave applications and plan accordingly, fostering a more organized work

## VII. ABOUT PAPER

Attendance duties in personnel management often include recording employee absences, managing leave requests and tracking holiday pay. This model allows employees to submit leave requests online, which can be reviewed and approved by managers. It also provides information about attendance patterns such as total absences, balances and reasons for absence. Integrated with the payroll, the holiday is calculated and confirmed that the payment has been made. Additionally, the system can generate reports for HR departments to analyze situations, identify potential problems, and make informed decisions about management and policies. Such tools support process management, transparency, and improve overall performance within an organization.

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Integrated with the payroll, the holiday is calculated and confirmed that the payment has been made. Additionally, the system can generate reports for HR departments to analyze situations, identify potential problems, and make informed decisions about management and policies. Such tools support process management, transparency, and improve overall performance within an organization. It makes it easier for the employee to request leave, see the balance of leave, and clearly see company policies. Additionally, this change encourages communication between team members, allowing for better planning and coordination when scheduling work or tasks

during the holidays. Overall, attendance and continuity in personnel management is an important factor in creating a positive and harmonious working environment while ensuring fairness and compliance with employment rules.

## VIII. CONCLUSION

Employee management and tracking system has acknowledged representing a significant advancement in performance management in organizations. Its simplicity and ease of use enable managers to track and measure personal performance, enabling it to adapt to the daily activities of employees from different backgrounds. The information now accessible allows management to provide timely feedback, thus supporting a culture of continuous improvement for employees.

This system provides a faster and more efficient way to measure performance. Managers can gain insight into employee productivity and growth areas by centralizing data storage and using data mining techniques. This not only improves individual performance but also helps improve organizational performance.

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