

A  
Mini-Project Report on

# **PAYROLL MANAGEMENT SYSTEM**

Submitted in partial fulfillment of the requirements  
for the degree of  
**BACHELOR OF ENGINEERING**  
IN

**Computer Science & Engineering**  
Artificial Intelligence & Machine Learning

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# A. P. SHAH INSTITUTE OF TECHNOLOGY

## CERTIFICATE

This is to certify that the project entitled “**Payroll Management System**” is a bonafide work of Pranet Pednekar (22106098), Aditya Rawat (22106022), Pratik Redekar (22106029), Raj Patil (22106123) submitted to the University of Mumbai in partial fulfillment of the requirement for the award of **Bachelor of Engineering in Computer Science & Engineering (Artificial Intelligence & Machine Learning)**.

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# A. P. SHAH INSTITUTE OF TECHNOLOGY

## Project Report Approval

This Mini project report entitled “**Payroll Management System**” by **Pranet Pednekar, Aditya Rawat, Pratik Redekar and Raj Patil** is approved for the degree of *Bachelor of Engineering in Computer Science & Engineering*, (AIML) **2023-24**.

External Examiner: \_\_\_\_\_

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Place: APSIT, Thane

Date:

## **Declaration**

We declare that this written submission represents my ideas in my own words and where others' ideas or words have been included, I have adequately cited and referenced the original sources. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in my submission. I understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

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## **ABSTRACT**

**“Payroll Management System”** is designed to make the existing manual system automatic with the help of computerised equipment and full-edged computer software, fulfilling their requirements, so that their valuable data and information can be stored for a longer period with easy access and manipulation of the same. The required software is easily available and easy to work with. This web application can maintain and view computerised records without getting redundant entries. The project describes how to manage user data for good performance and provide better services for the client.

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# **CHAPTER 1**

## **INTRODUCTION**

## INTRODUCTION

The proposed project “Employee Database and Payroll Management System” has been developed to overcome the problems faced in the practicing of manual system. This software is built to eliminate and, in some cases, reduce the hardships faced by the existing system. Moreover, this system is designed for particular need of the company to carry out its operations in a smooth and effective manner. This web application is reduced as much as possible to avoid errors while entering data. It also provides error message while entering invalid data. It is user-friendly as no formal knowledge is required to use the system. Human resource challenges are faced by every organization which has to be overcome by the organization. Every organization has different employee and payroll management needs. Therefore, I have design exclusive Employee and payroll Management System that are adapted to the organization’s Managerial Requirements.

Employee Payroll Management System revolutionizes the way organizations handle their payroll processes, offering a streamlined and efficient solution to manage employee compensation. At its core, EPMS encompasses a suite of tools and functionalities designed to automate and optimize payroll administration, ensuring accuracy, compliance, and timeliness in salary disbursements. In today's dynamic business landscape, where regulatory requirements are constantly evolving, and workforce management is increasingly complex, EPMS emerges as an indispensable asset for businesses of all sizes. Central to EPMS is the comprehensive management of employee data, encompassing personal information, salary structures, tax details, and other relevant particulars. This centralized repository serves as the foundation for accurate payroll computations and regulatory compliance.



# **CHAPTER 2**

## **LITERATURE SURVEY**

## 2.1-HISTORY

The history of Employee Payroll Management Systems (EPMS) can be traced back to the early 20th century when manual payroll processing was the norm. Before the advent of computers and digital technology, businesses managed their employee payroll through handwritten ledgers and manual calculations. This process was labour-intensive, prone to errors, and often resulted in inefficiencies in payroll administration.

**Manual Systems (Early 20th Century):** In the early 1900s, businesses relied heavily on manual payroll systems, where payroll clerks manually recorded employee work hours, wages, deductions, and tax withholdings using pen and paper.

**Emergence of Computerized Systems (1950s-1970s):** The introduction of computers in the mid-20th century revolutionized payroll management. Early computerized payroll systems began to emerge in the 1950s and 1960s, enabling businesses to automate payroll calculations and streamline administrative tasks.

**Evolution of Software Solutions (1980s-1990s):** The 1980s and 1990s saw the rise of software-based payroll management solutions, offering greater flexibility, scalability, and user-friendliness compared to earlier mainframe systems.

**Internet and Cloud-Based Systems (2000s-Present):** With the widespread adoption of the internet and advancements in cloud computing technology, payroll management systems transitioned to web-based and cloud-based platforms. These systems offered anytime, anywhere access to payroll data, enhanced security, and scalability, catering to the needs of distributed workforces and global organizations.

## **2.2-LITERATURE REVIEW**

Based on the literature survey on payroll, it is evident that there is a significant body of research and analysis in this field. The studies cover various aspects of payroll management systems, including the importance of computerized payroll processing, the correlation between user-friendly budget documents and citizen participation, the advantages of outsourcing payroll management, and the features and benefits of automated payroll systems. The literature emphasizes the importance of payroll management systems in administering employees' salaries, calculating taxes and social security, maintaining financial records, and ensuring that employees receive the appropriate amount of pay. It also highlights the integration of data between human resources and finance, the need for a user-friendly environment, and the potential for minimizing human calculation errors. Furthermore, the literature survey provides insights into the features of payroll management systems, such as maintaining details of allowances and deductions, generating salary reports, processing computations rapidly, and providing a user-friendly interface. The studies also discuss the advantages of cloud-based payroll management systems, including increased security and the minimization of human calculation errors.

Payroll processing is crucial in an organization because it involves the payment of the organization's work forces and protection of its reputation by ensuring that the organization complies with the government authorities' employment legislations. It calculates salary, allowance, over time, contributions and deductions of employees that varies across designations. The payroll process must be responsive to changes in employment status, latest rules or acts by the government authorities such as re-allocation of employee's contribution in employees' provident fund and taxes legislation. However, an organization may face several challenges in payroll processing such as to pay employees accurately on time, meet obligations between employees and employers and uphold other legislative responsibilities.

# **CHAPTER 3**

## **Problem Statement**

**Problem Statement:**

The task is the creation of a new payroll system. The old system is outdated and no longer adequately manages the payroll process and the entry of employee time card information. Therefore, manual intervention is required to process the payroll. In addition to the preexisting category of salaried employee, which the current payroll process does support, our organization now accommodates two new types of employees: those employees working on commission, and those employees working on an hourly basis. The current payroll process doesn't support these two new employee types, which are described in detail later in this problem statement. In addition to accommodating all employee types, as well as ensuring that our system can accommodate newly created categories of employees in the future, the system must also allow each of these employees to enter his or her time information via a corporate intranet using a standard Web browser. Because employees can manage only their individual time card information, a user ID and password is required of each employee prior to gaining access to this section of the corporate intranet. The payroll process can process only "signed" time cards, which are those time cards that the employee has identified as accurate.

# **CHAPTER 4**

## **Experimental Setup**

## 4.Experimental Setup

### 4.1 Hardware Setup:

The hardware setup for the experimental environment involves the configuration of essential physical components to support the functionality of the file-sharing platform. This includes servers, storage devices, and networking equipment. The servers should be equipped with sufficient processing power, memory, and storage capacity to handle concurrent file uploads, downloads, and collaborative activities. Storage devices must provide efficient and secure data storage, ensuring the integrity and accessibility of shared files. Networking equipment, such as routers and switches, is essential for seamless communication between users and the platform.

The specific hardware setup may vary depending on the scale and requirements of the file-sharing platform. For smaller-scale deployments, a single server with adequate resources may suffice. In contrast, larger-scale implementations may involve distributed server architectures, load balancers, and redundant storage solutions to enhance performance and reliability.

### 4.2 Software Setup:

The software setup encompasses the configuration and deployment of the necessary software components to enable the file-sharing platform's functionality. This involves the installation and configuration of the operating system, web server, database management system, and any additional software dependencies.

- **Operating System:** Choose a suitable operating system that aligns with the platform's requirements. Common choices include Linux distributions (e.g., Ubuntu, CentOS) or Windows Server.
- **Web Server:** Install and configure a web server to handle HTTP requests. Popular options include Apache, Nginx, or Microsoft Internet Information Services (IIS).
- **Database Management System (DBMS):** Set up a database system to manage and store user data, file metadata, and other relevant information. MySQL, PostgreSQL, or MongoDB are commonly used DBMS options.

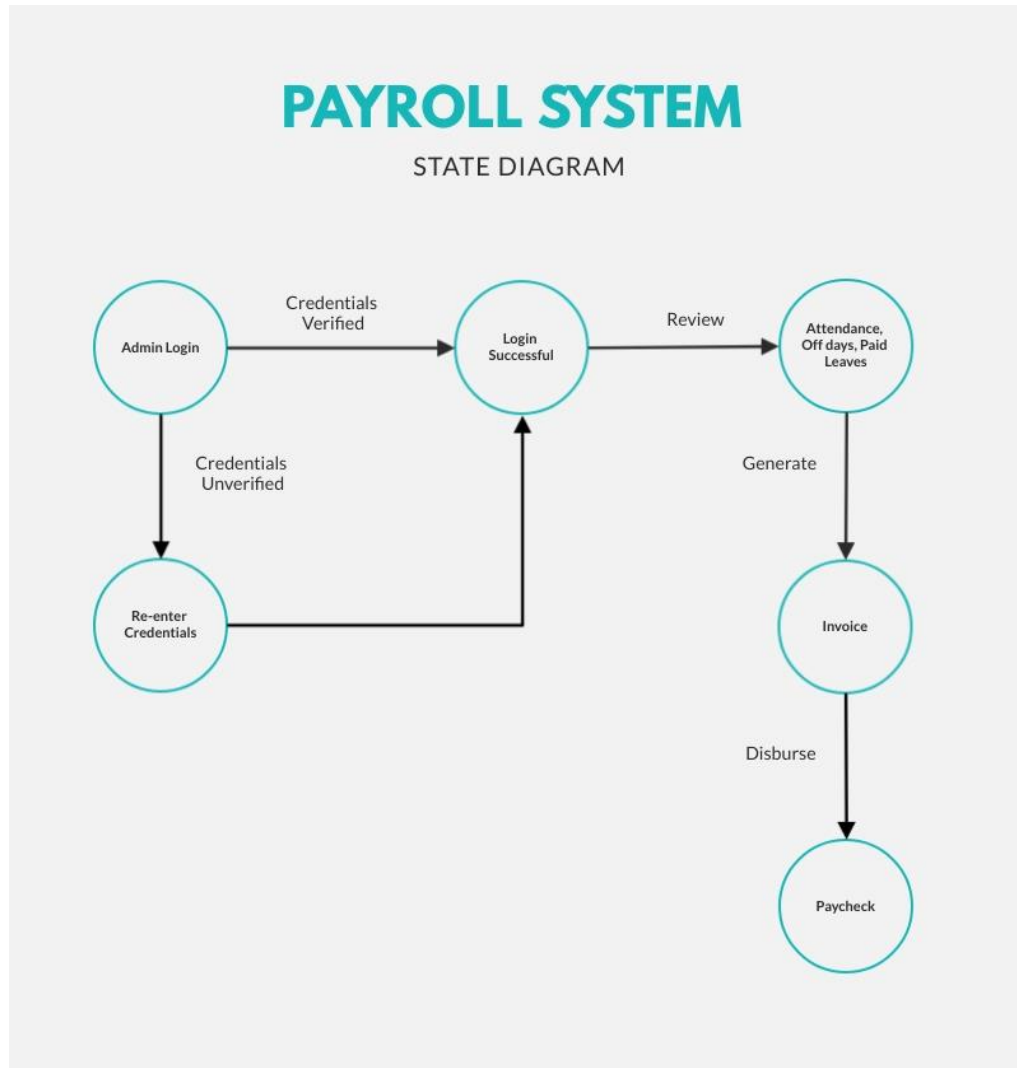
# **CHAPTER 5**

## **Proposed System & Implementation**



## Proposed system & Implementation

### 5.1 Block diagram of proposed system



**Fig: 5.1 Payroll block diagram**

### 5.2 Description of block diagram

It starts with an admin login, where the credentials are either verified or unverified. If verified, it leads to a successful login, followed by a review of attendance, off days, paid leaves, and other relevant data. This review generates an invoice, which is then disbursed as a paycheck. If the credentials are unverified, the admin needs to re-enter them. The diagram provides a clear overview of the different states and transitions involved in the payroll process.

## 5.3 Implementation

Employee Management System   Home   Employees ▾   Attendance & Leaves ▾   Salary ▾   Logout								
Manage Leaves								
Leave ID	Date of Application	Employee Name	Leave Subject	Leave Dates	Leave Type	Leave Message	Status	Action
1	2024-04-11 15:48:02	Pratik Redekar	leave for 2 days	2024/04/12 , 2024/04/13	Sick Leave	i'm sick plz give leave	rejected	<button>Approve</button> <button>Reject</button>
2	2024-04-11 16:18:46	Harsh Salunkhe	leave for 2 days	2024/04/15	Sick Leave	t4tytrhhy64uy64uy64u	approved	<button>Approve</button> <button>Reject</button>
3	2024-04-12 10:31:49	Pratik Redekar	aeff	2024/04/16	Vacation Leave	woueriwrjqwifj	approved	<button>Approve</button> <button>Reject</button>

**Fig: 5.3.1 Employee Status**

Employee Management System   Home   Employees ▾   Attendance & Leaves ▾   Salary ▾   Logout		
<b>Employee Details</b> Emp ID: 22106000 Full Name: Pratik Redekar Department: Sales and Marketing Designation: Marketing Manager Phone No: 9987810834	<b>Bank Details</b> Bank Name: HDFC Bank Account No: 1357924680 IFSC Code: HDFC900 PAN Number: ABC223883D	<b>Attendance for 03 2024</b> Total Present: 26 Total Absent: 3 Total On Leave: 1
<b>Earnings</b> Basic Salary: 15000.00 Housing Allowance: 4500.00 Total Earnings: 19500.00	<b>Deductions</b> Tax Amount: 450 PF Amount: 1800 Absence Deduction: 300 Total Deduction: 2550.00	<b>Net Salary</b> Net Salary: 16950.00
<button>Generate pdf</button>		

**Fig: 5.3.2 Employee Details**

Employee Management System   Home   Employees ▾   Attendance & Leaves ▾   Salary ▾   Logout				
Manage Employees				
Employee ID	First Name	Last Name	Department	
22106000	Pratik	Redekar	Sales and Marketing	<a href="#">Edit</a>
22106005	Harsh	Salunkhe	IT	<a href="#">Edit</a>
22106006	Raj	Patil	Finance	<a href="#">Edit</a>

**Fig: 5.3.3 Managing Employees**

Employee Management System   Home   Employees ▾   Attendance & Leaves ▾   Salary ▾   Logout				
Delete Employees				
Employee ID	Full Name	Department	Designation	Action
22106000	Pratik Redekar	Sales and Marketing	Marketing Manager	<a href="#">Delete</a>
22106005	Harsh Salunkhe	IT	Data Analyst	<a href="#">Delete</a>
22106006	Raj Patil	Finance	Accountant	<a href="#">Delete</a>

**Fig: 5.3.4 Deletion of Employees**

Employee Management System

[Home](#) [Employees](#) [Attendance & Leaves](#) [Salary](#) [Logout](#)

### Select Date to View Attendance

Select Date:

dd-mm-yyyy

View Attendance

### Select Employee and Month to View Monthly Attendance

Employee Name:

Select Employee

Month:

-----,----

View Monthly Attendance

Fig: 5.3.5 Viewing Employee Attendance

Employee Management System

[Home](#) [Employees](#) [Attendance & Leaves](#) [Salary](#) [Logout](#)

### Monthly Attendance for Harsh Salunkhe - 2024-03

Date	Status
2024-03-01	Absent
2024-03-02	Present
2024-03-03	Present
2024-03-04	Present
2024-03-05	Present
2024-03-06	Present
2024-03-07	Present
2024-03-08	Present
2024-03-09	Present
2024-03-11	Absent
2024-03-12	Present

Fig: 5.3.6 Monthly Attendance of Employee

# **CHAPTER 6**

## **Conclusion**

## **6. CONCLUSION**

A payroll management system is an essential tool for organizations of all sizes to streamline and automate the process of managing employee salaries, wages, deductions, taxes, and other payroll-related activities. By implementing a robust and efficient payroll management system, organizations can achieve several key benefits.

First and foremost, a payroll management system ensures accurate and timely payment of employees, minimizing the risk of errors and compliance issues. With automated calculations and integrations with relevant systems, such as time tracking and attendance management, the system reduces the likelihood of manual errors and ensures compliance with labor laws and regulations.

Another significant advantage of a payroll management system is increased efficiency and productivity. By automating tedious and time-consuming tasks, such as data entry, calculations, and report generation, the system frees up valuable time for payroll professionals to focus on more strategic tasks and initiatives. Additionally, the system provides real-time access to payroll data and records, enabling better decision-making and analysis.

The system also enhances data security and confidentiality by implementing robust access controls and encryption mechanisms. This ensures that sensitive employee information, such as bank account details and personal identification numbers, is protected from unauthorized access and potential data breaches.

Furthermore, a payroll management system facilitates better communication and transparency with employees. Employees can easily access their payroll information, view pay stubs, and track deductions and contributions, fostering trust and clarity in the organization.

In conclusion, a well-designed and implemented payroll management system is a valuable investment for any organization. By streamlining processes, ensuring compliance, enhancing data security, and promoting transparency, the system not only improves operational efficiency but also contributes to a positive employee experience and overall organizational success.

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