# Payroll Management System

SUBMITTED IN PARTIAL FULFILLMENT FOR THE AWARD OF THE DEGREE OF

**BACHELOR OF ENGINEERING IN COMPUTER SCIENCE & ENGINEERING**

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# CERTIFICATE

I hereby certify that the work which is being presented in the Project entitled **"Payroll Management System"**, in partial fulfillment of the requirements for the award of the **Bachelor of Engineering in Computer Science & Engineering** and submitted to the Department of Computer Science & Engineering of Ramaiah Institute of Technology an authentic record of my own work carried out during a period from **August 2018 to December 2018** ($5^{th}$ semester) under the supervision of Mrs. Darshana A. Naik and Mrs. Aparna R. who are Assistant Professors of **CSE Department.**

**This is to certify that the above statement made by the student(s) is correct to the best of my knowledge.**

Signature of Supervisor:

Date:

Name and Designation:

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# ACKNOWLEDGEMENT

I express my sincere gratitude to Prof Darshana A. Naik and Prof Aparna R., Department of Computer Science and Engineering, RIT, for her simulating guidance, continuous encouragement and supervision throughout the course of present work.

**Signature of Students**

Sashank Agarwal

Shivdutt Tripathi

Anshul Gupta

# ABSTRACT

The objective of our database is to create an optimal relational scheme and perform the CRUD (Create, Read, Update, Delete) operations on our real world application. Also, retrieval of data based on specific conditions using complex queries has been illustrated. The ACID (atomicity, consistency, isolation, durability) properties of a successful Database Transaction is illustrated.

Employee information and payroll system is aimed at efficient management of employee information, emoluments, expenses, net payouts, DA, HRA etc.
This web application is implemented using Node.js and Mysql. All the employee data is stored in a centralized database. Pay slips are generated at the comfort of a single mouse click.

# INTRODUCTION

## Overview

The entire project has been developed keeping in view of the distributed client server computing technology, in mind. The specifications have been normalized up to 3NF to eliminate all the anomalies that may arise due to the database transaction that are executed by the general users and the organizational administration. The user interfaces are browser specific to give distributed accessibility for the overall system. At all proper levels high care was taken to check that the system manages the data consistency with proper business rules or validations. The authentication and authorization was crosschecked at all the relevant stages. The user level accessibility has been restricted into two zones namely: The manager zone and the employee zone.

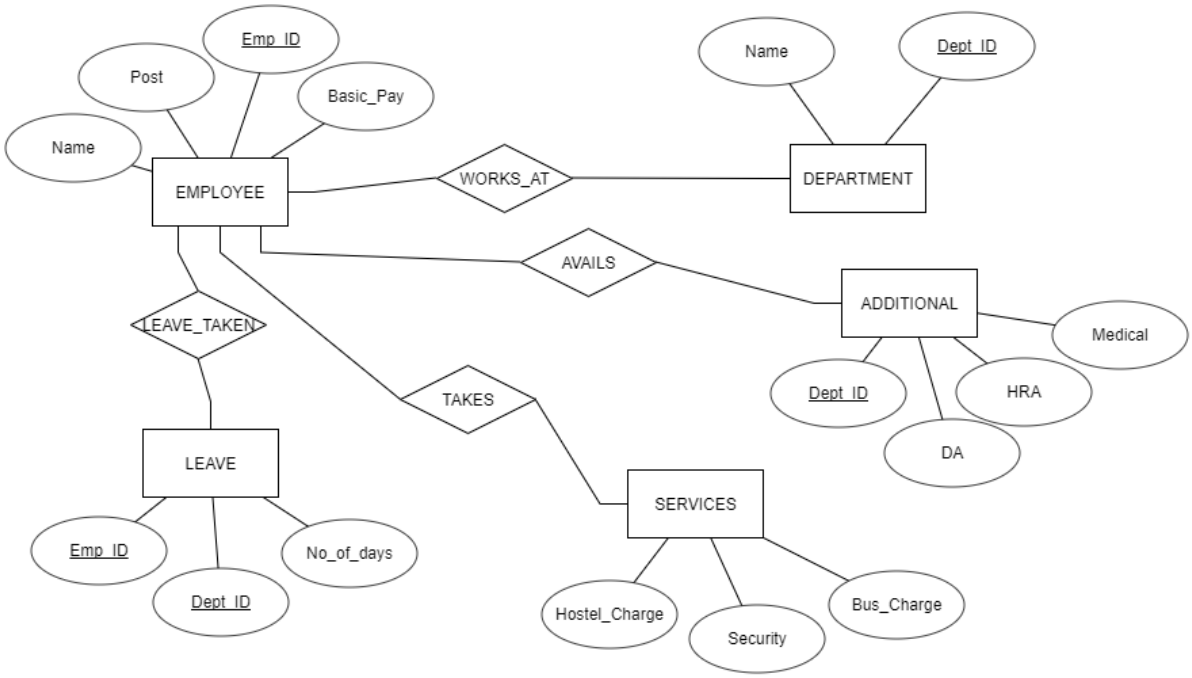
## Objective

The objective of the project is to replace the existing system so as to increase the efficiency of an organization. Employee details are saved to the database and each employee salary is calculated depending on his working days. Other emoluments and expenses are also calculated automatically and pay slips can be generated for all the employees at a time.

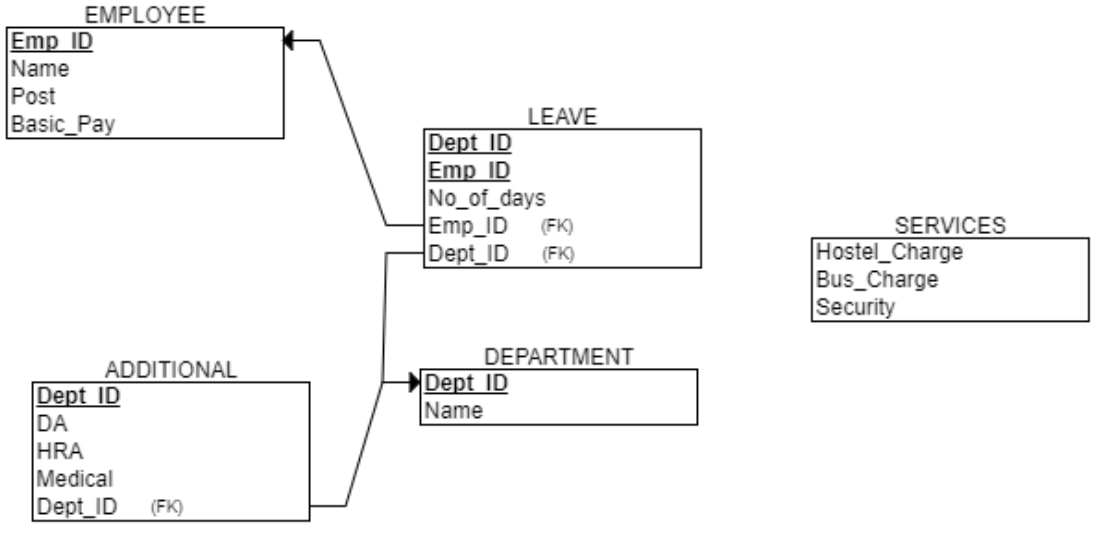
Customized reports can be generated for analysing the work pay patterns.

# PRESENT WORK

## ER DIAGRAM




## RELATION SCHEMA WITH PK AND FK CONSTRAINTS



## TECHNOLOGIES USED

- XAMPP Server
- Node.js
- ERD Plus
- Apache Tomcat v8.0
- MySQL
- Sublime Text

## QUERIES

- For inserting a new employee to the database:

  INSERT INTO EMPLOYEE VALUES (EID, NAME, POST, BASIC);

- For inserting a new Department associated with the current newly entered user:

  INSERT INTO DEPARTMENT VALUES (DEPT_NAME, DID);

- For inserting the no. of leaves associate with a new user and the department he belongs to:

  INSERT INTO LEAVES VALUES (DID, EID, NO_OF_LEAVES);

- For getting the basic pay of the employee:

  SELECT BASIC
  FROM EMPLOYEE
  WHERE EID = REQ.BODY.EID;

- For querying the database for the appropriate additions to basic:

  SELECT MED, HRA, DA
  FROM ADDITIONAL
  WHERE DID = REQ.BODY.DID;

- For querying the database for the appropriate deductions:

  SELECT MEDICAL, SECURITY, HOSTEL
  FROM SERVICES
  WHERE DID=REQ.BODY.DID;

- For getting the no. of leaves taken by the employee:

  SELECT NO_OF_LEAVES
  FROM LEAVES
  WHERE DID=REQ.BODY.DID;

# MODULES

**Login Module**

- The user has to login to access the information of an employee or to add an employee details.
- Username and Password is needed to enter into the Database.

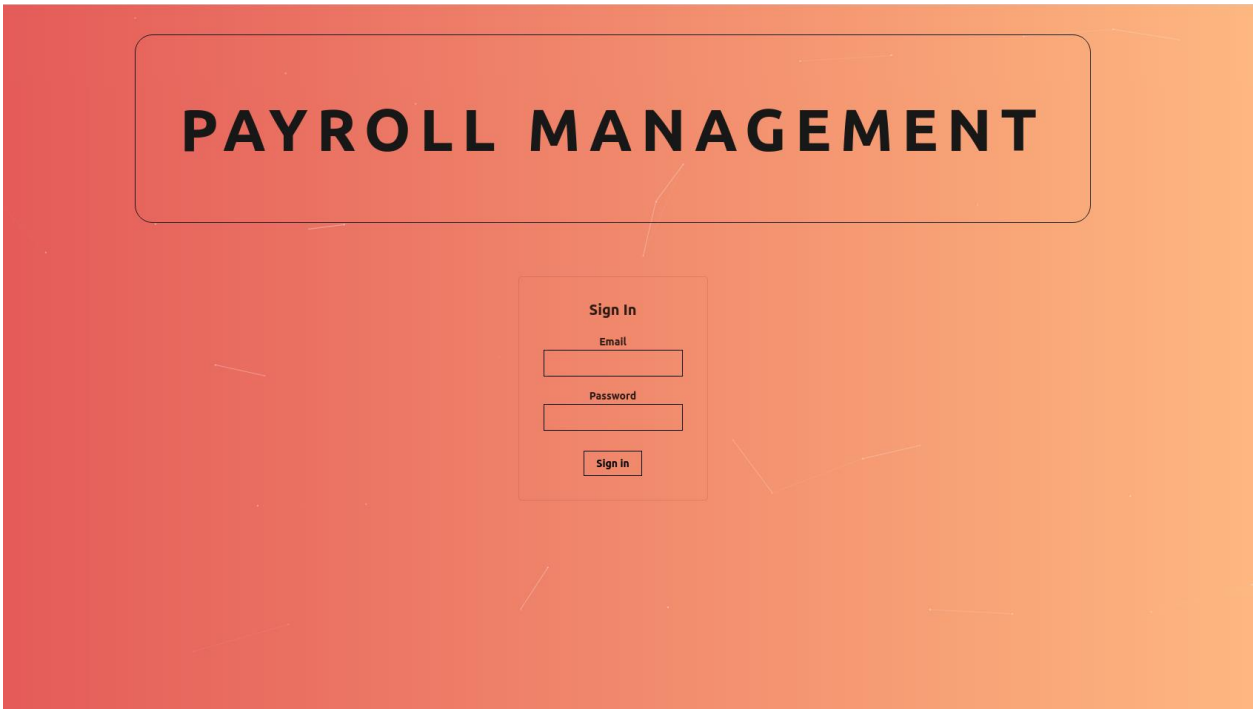
**Manager Module**

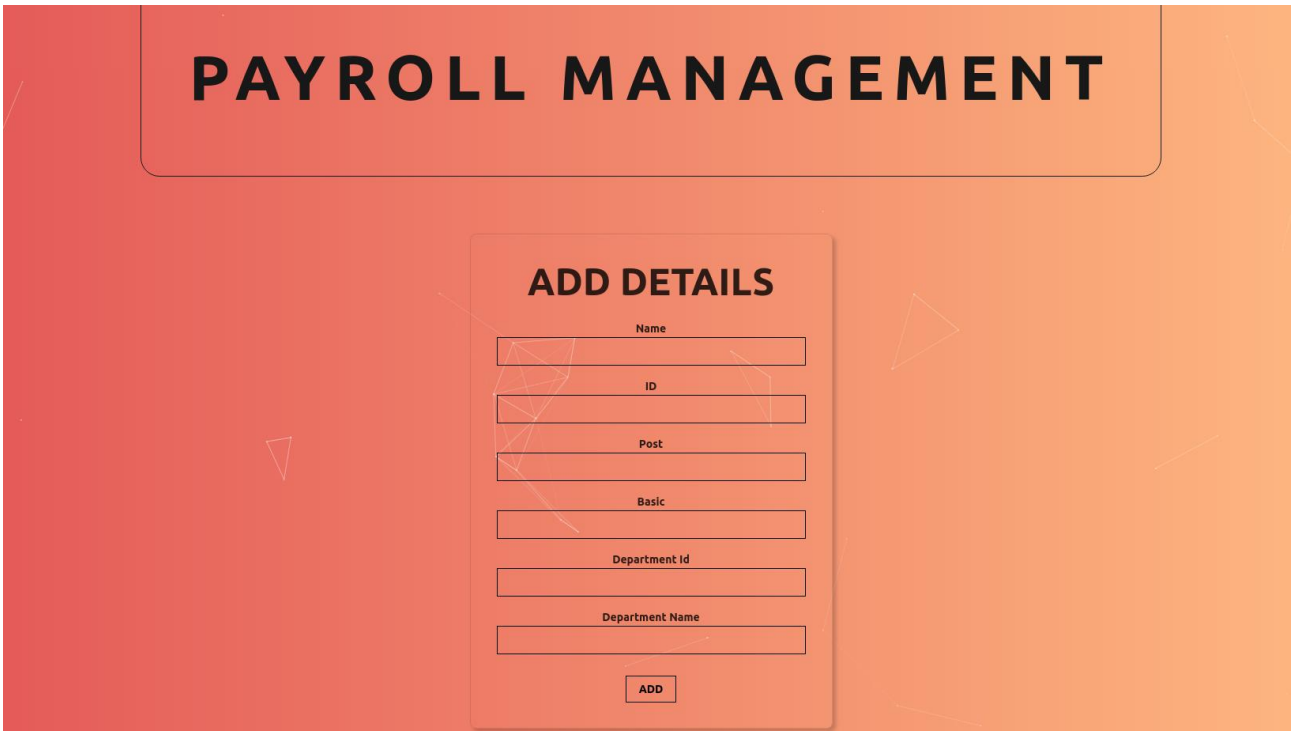
- Manager has to enter employee id, name and other details.
- The payroll of that employee will be shown on the screen instantly.

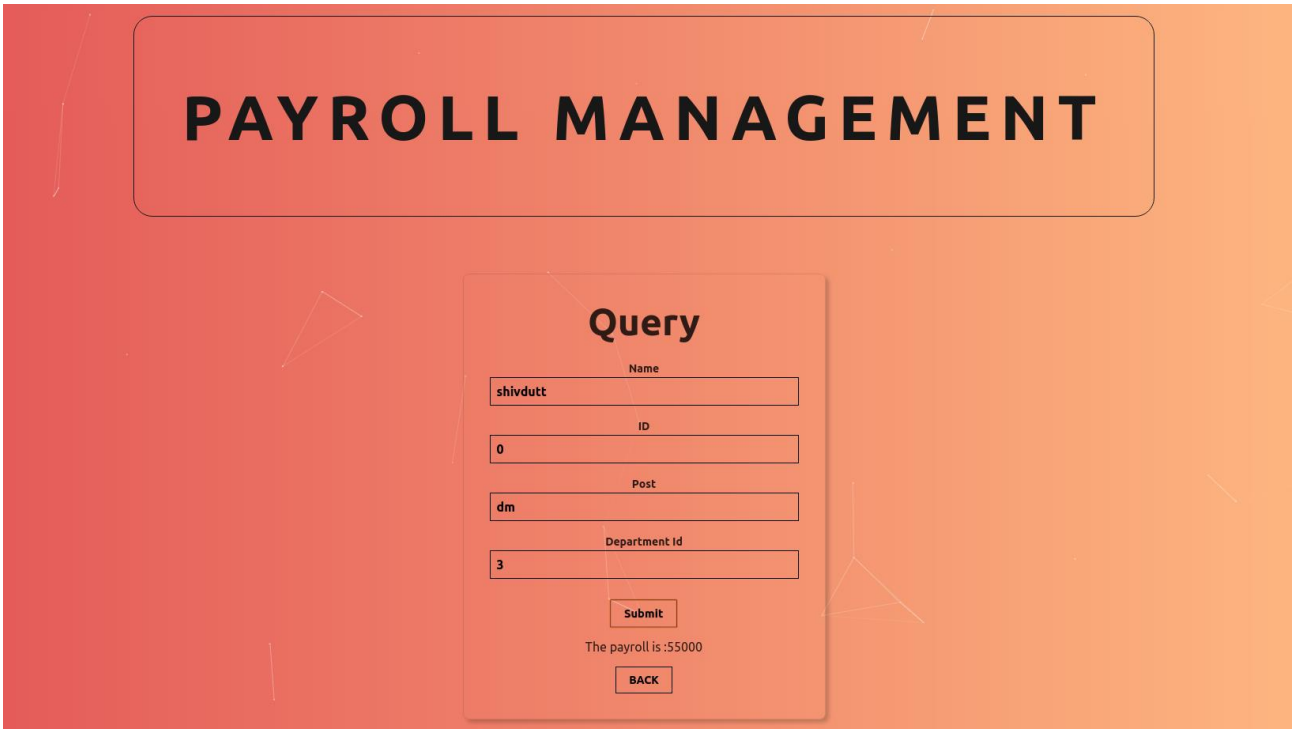
**Employee Module**

- The employee has to enter his details after joining the office.
- The basic pay of the employee is determined by the department he/she is working in.
- The various departments provides various emoluments to its employees.

# RESULTS AND DISCUSSION





PAYROLL MANAGEMENT
ADD DETAILS
Name
ID
Post
Basic
Department Id
Department Name
ADD


PAYROLL MANAGEMENT
Query
Name
shivdutt
ID
0
Post
dm
Department Id
3
Submit
The payroll is :55000
BACK

# CONCLUSION

This project implements a computerized database system which keeps and manages records. It also reduces drudgery, saves time, secures data and avoids data manipulation, facilitates powerful searching and generates reports. The scope of the project provides maximum services to the user, elimination of duplication and inconsistent record keeping, faster response, facilitate for maintenance of details of employees, his/her payroll including all emoluments, introducing element of transparency in the working of the company's manager. Future enhancements could include expansion of the database system to all the companies in the world with a more user friendly interface.

# REFERENCES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- Database System Concepts, Abraham Silberchatz, Henry F Korth, S Sudarshan, 6th Edition
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