A Report

on

PAYROLL SYSTEM

Submitted in partial fulfillment of the
requirement for the award of the degree of

B.TECH

GALGOTIAS UNIVERSITY

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CANDIDATE'S DECLARATION

I/We hereby certify that the work which is being presented in the thesis/project/dissertation, entitled **"PAYROLL SYSTEM"** in partial fulfillment of the requirements for the award of the B.TECH submitted in the School of Computing Science and Engineering of Galgotias University, Greater Noida, is an original work carried out during the period of month, _____under the supervision of Dr. Kavita (Associate Professor), Department of Computer Science and Engineering, of School of Computing Science and Engineering , Galgotias University, Greater Noida

The matter presented in the thesis/project/dissertation has not been submitted by me/us for the award of any other degree of this or any other places.

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This is to certify that the above statement made by the candidates is correct to the best of my knowledge.

Dr. Kavita
Associate Professor

CERTIFICATE

The Final Thesis/Project/ Dissertation Viva-Voce examination of AKSHAT ANTAL: 18SCSE1010053 & ARNAV TYAGI :18SCSE1010037 has been held on _____ and his/her work is recommended for the award of B.TECH.

Signature of Examiner(s)   **Signature of Supervisor(s)**

Signature of Project Coordinator   **Signature of Dean**

Date: December, 2021
Place: Greater Noida

Acknowledgement

I would like to express my special thanks of gratitude to my guide Dr.Kavita who gave me the golden opportunity to do this wonderful project on the topic Payroll System , which also helped me in doing a lot of Research and I came to know about so many new things I am really thankful to her.
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Thanking you all.

Abstract

The actual problem is to maintain different database for an organization whose main purpose is to issue pay-slips for their employees every month working in various departments of the organization, and maintain details of all the departments, employees with various grades, their designations and address details. In the manual system it is difficult to maintain data and generating different reports according to requesting transaction. In present it is becoming difficult to issue pay-slip for all the employee every month by manually going through the various record of the organization.Payroll system is the heart of any Human Resource System of an organization. The solution has to take care of the calculation of salary as per rules of the company and various deductions to be done from the salary. It has to generate pay-slip, mark attendance. Managing thousands of odd papers, pay slips, payroll reports and salary details and so on can be tiresome. If we have a payroll processing system which will generate our pay slips and payroll reports within seconds would be very helpful and would save our time. The main objective of the payroll management system is to provide an easy way out to automate all the functionalities. It manages the details of the employees, calculates their salary, marks attendance. It will manage all the details of the employees and payments. The project is totally built at administrative end and thus only the administrator is guaranteed the access. The purpose of this project is to reduce the manual work.

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Acronyms

B.Tech.	Bachelor of Technology
M.Tech.	Master of Technology
BCA	Bachelor of Computer Applications
MCA	Master of Computer Applications
B.Sc. (CS)	Bachelor of Science in Computer Science
M.Sc. (CS)	Master of Science in Computer Science
SCSE	School of Computing Science and Engineering

CHAPTER-1 Introduction

1.1 Introduction

Payroll system is the heart of any Human Resource System of an organization. The solution has to take care of the calculation of salary as per rules of the company and various deductions to be done from the salary. It has to generate pay-slip, mark attendance. Managing thousands of odd papers, pay slips, payroll reports and salary details and so on can be tiresome. If we have a payroll processing system which will generate our pay slips and payroll reports within seconds would be very helpful and would save our time.

The payroll interaction ordinarily incorporates working out worker pay, recording finance exchanges and deciding and covering finance charges. An organization should have set up a timekeeping framework that precisely mirrors the hours put in by nonexempt representatives just as the standard compensation installments for absolved specialists. Bosses normally retain government personal duty from worker income; toward the year's end, they should report all wages, tips and other pay paid. Organizations additionally should retain Government backed retirement and Federal health care commitments from workers' wages and pay a coordinating with sum.

Some more modest organizations lead their finance utilizing a manual framework. While reasonable, this technique might build the odds of blunders and could demonstrate tedious for organizations with in excess of a couple of representatives. With an automated framework, the business can use finance programming to handle its finance nearby. Some bigger organizations can bear the cost of the PC frameworks and staff to deal with finance all alone. Since they spread their expenses over a huge labor force, they experience lower per-actually look at costs than more modest firms.

1.2 Problem Formulation

The main objective of the payroll management system is to provide an easy way out to automate all the functionalities. It manages the details of the employees, calculates their salary, marks attendance. It will manage all the details of the employees and payments. The project is totally built at administrative end and thus only the administrator is guaranteed the access. The purpose of this project is to reduce the manual work.

Our assignment is the formation of another payroll framework. The old framework is obsolete and presently don't enough deals with the payroll cycle and the section of worker time card data. In this manner, manual intercession is needed to deal with the finance. The actual problem is to maintain different database for an organization whose main purpose is to issue pay-slips for their employees every month working in various departments of the organization, and maintain details of all the departments, employees with various grades, their designations and address details. In the manual system it is hard to maintain data and generating different reports according to requesting transaction.

In the present it becoming difficult to issue pay-slip for all the employee every month by going through the various record of the organization. If we have a payroll processing system which will generate our pay slips and payroll reports within seconds would be very helpful and would save our time. The main objective of the payroll management system is to provide an easy way out to automate all the functionalities. It manages the details of the employees, calculates their salary, marks attendance. It will manage all the details of the employees and payments. The project is totally built at administrative end and thus only the administrator is guaranteed the access. The purpose of this project is to reduce the manual work.

1.2.1 Tools Used For Implementation

- **Apache Netbeans**

- **Wamp Server**

- **JDBC Driver**

- **My SQL Console**

- **Java Core**

CHAPTER-2 Literature Survey

2.1 Payroll System over the years

Fundamentally, Payroll can follow its underlying foundations back to accounting in most Industrialized countries. In the primary occurrence accounting was a way for shippers to monitor their deals and outgoings, however over the long run as exchange and business has created for an enormous scope it has formed into something significantly more complicated.

Nowadays organizations need to monitor their workers' compensation just as their own purchasing and selling, and with assessment and enactment truly transforming it the requirement for precise and productive finance arrangements has become paramount. These days organizations at this point don't have to deal with their own finance as there are organizations that spend significant time in finance the board who can deal with it for you.

In the present working environment any business which utilizes staff needs a familiar and viable payroll framework. It empowers you to agree with legitimate commitments and to guarantee that you are deducting the perfect measure of personal duty and public protection commitments.

Companies must keep on top of this as inability to go along can land organizations in a tough situation – and wind up setting them back huge load of cash, and the bigger your organization is the more troublesome it will be to deal with your finance.

Payroll Framework is an adaptable remuneration organization arrangement. It is intended to help human asset experts just as money and bookkeeping work force to oversee worker

pay, derivations, recompenses, and advantages in an association. The framework is incorporated with the Representative Data Framework, offers productive provisions and usefulness to oversee organization 's costs.

Payroll preparing is pivotal in an association since it includes the installment of the association's labor forces and security of its standing by guaranteeing that the association agrees with the public authority specialists' business enactments. It ascertains compensation, stipend, extra time, commitments and derivations of representatives that changes across assignments.

The Payroll interaction must receptive to changes in work status, most recent standards or acts by the public authority specialists like redistribution of worker's commitment in Representatives Fortunate Asset (EPF) and expenses enactment. Not with standing, an association might confront a few difficulties in finance preparing, for example, to pay representatives with perfect timing, meet commitments among workers and bosses and maintain other authoritative obligations. Dreary, tedious and expanded work to handle the finance, especially in huge associations with tremendous number of representatives, are normal issues in manual finance preparing. As the interest to deliver opportune, precise and proficient finance escalate, it prompts expanding needs for mechanized or computerized finance preparing framework.

2.2 Netbeans

NetBeans is an incorporated improvement climate (IDE) for Java. NetBeans permits applications to be created from a bunch of particular programming parts called modules. NetBeans runs on Windows, macOS, Linux and Solaris. Notwithstanding Java improvement, it has augmentations for different dialects like PHP, C, C++, HTML5, and JavaScript. Applications dependent on NetBeans, including the NetBeans IDE, can be reached out by outsider engineers
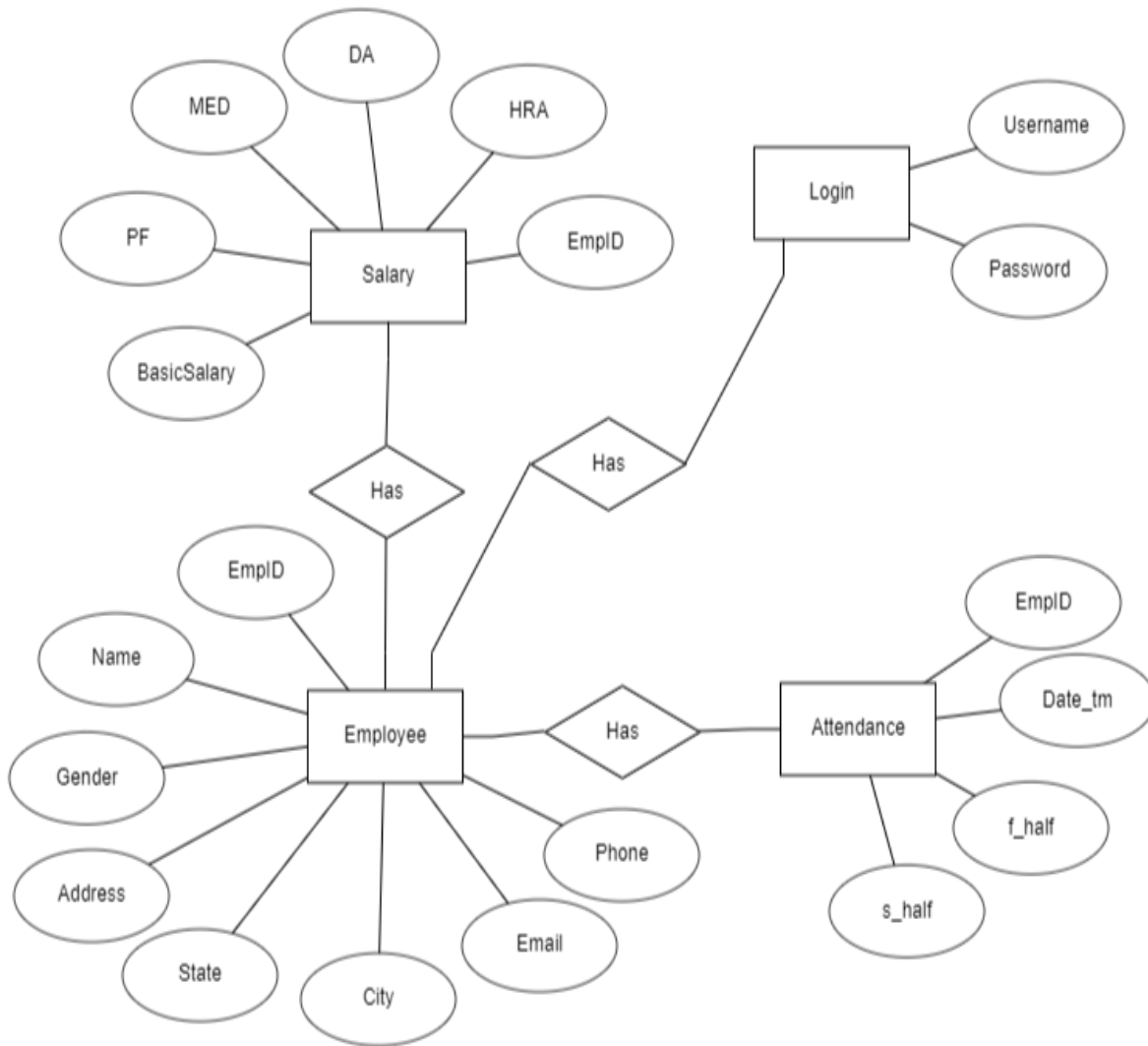
2.3 Wampserver

WampServer alludes to an answer stack for the Microsoft Windows working framework, made by Romain Bourdon and comprising of the Apache web server, OpenSSL for SSL support, MySQL data set and PHP programming language
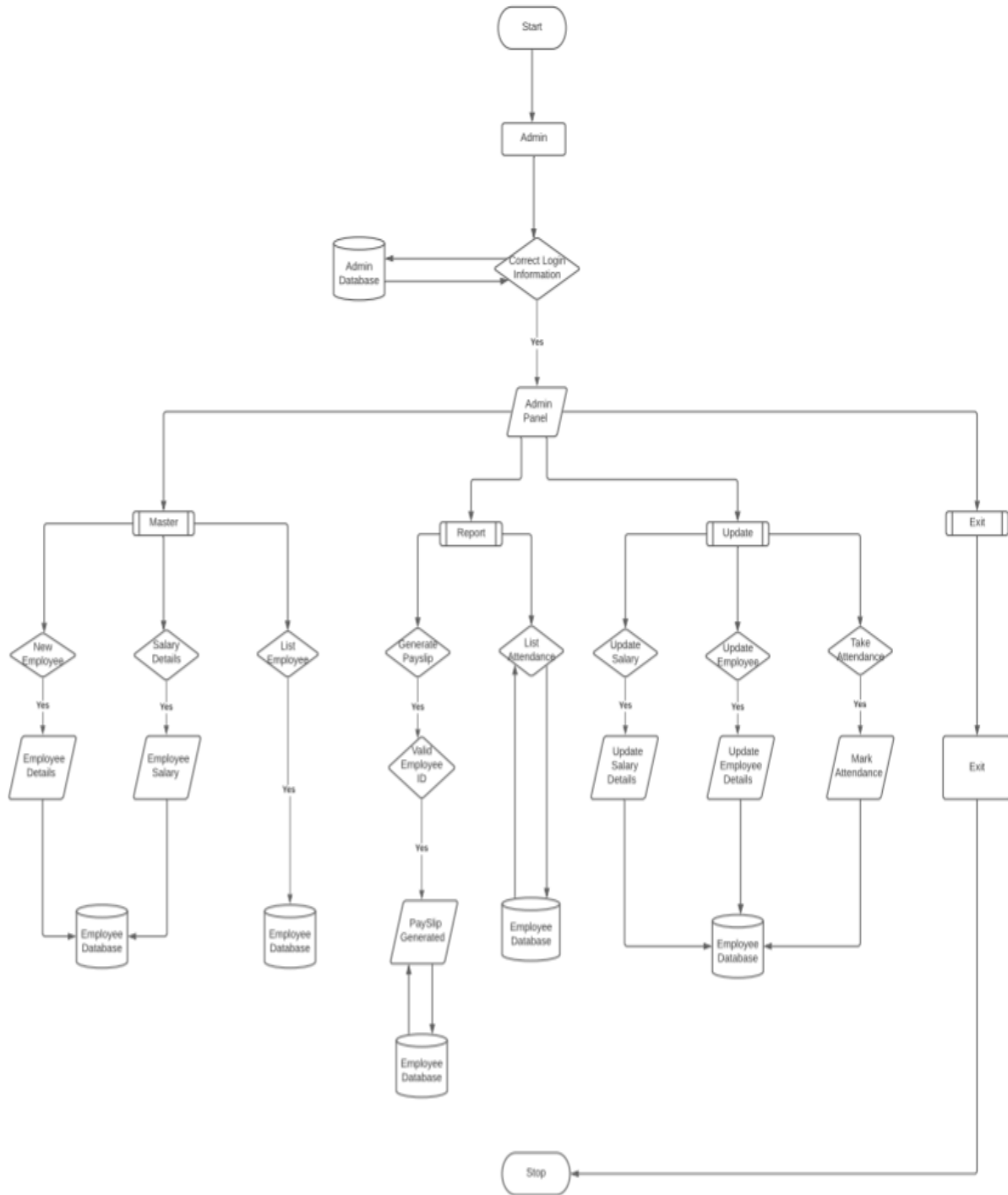
2.4 MySQL

MySQL is a Relational Database Management System ("RDBMS"). It is used by most modern websites and web-based services as a convenient and fast-access storage and retrieval solution for large volumes of data. A simple example of items which might be stored in a MySQL database would be a site-registered user's name with associated password (encrypted for security), the user registration date, and number of times visited, etc.
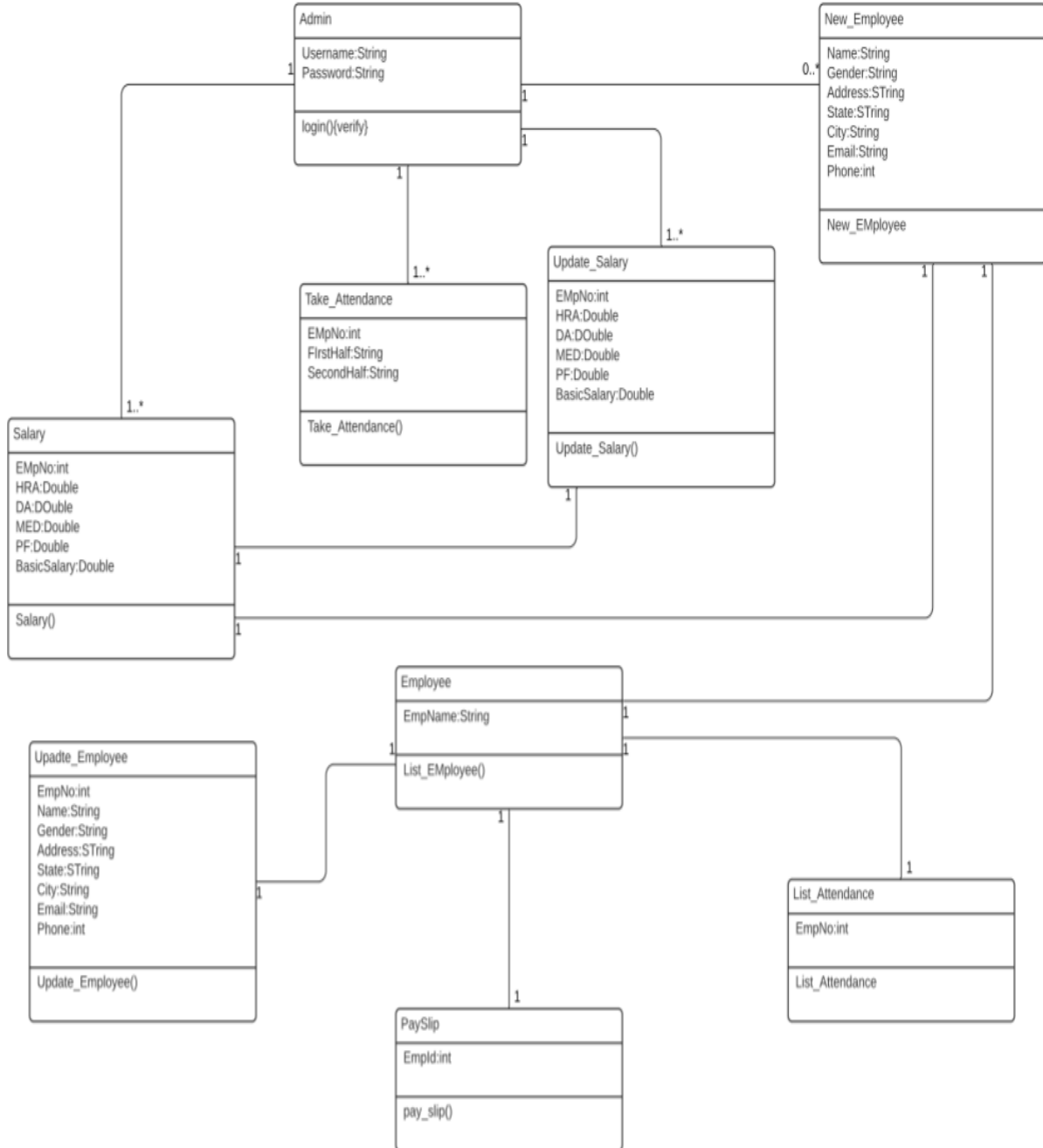
2.5 Project design

2.5.1 ER Diagram

2.5.2 Flow chart

2.5.2 Class Diagram

Admin

Username:String
Password:String

login(){verify}

New_Employee

Name:String
Gender:String
Address:STring
State:STring
City:String
Email:String
Phone:int

New_EMployee

Take_Attendance

EMpNo:int
FlrstHalf:String
SecondHalf:String

Take_Attendance()

Update_Salary

EMpNo:int
HRA:Double
DA:DOuble
MED:Double
PF:Double
BasicSalary:Double

Update_Salary()

Salary

EMpNo:int
HRA:Double
DA:DOuble
MED:Double
PF:Double
BasicSalary:Double

Salary()

Employee

EmpName:String

List_EMployee()

Upadte_Employee

EmpNo:int
Name:String
Gender:String
Address:STring
State:STring
City:String
Email:String
Phone:int

Update_Employee()

List_Attendance

EmpNo:int

List_Attendance

PaySlip

EmpId:int

pay_slip()

CHAPTER -3 Functionality

3.1 Requirement Specification

For the development of this project both hardware and software were required. The hard required is any machine compatible for running the softwares and resources required.

Software Requirements

- Operating System   Windows 10
- Front End   Java, NetBeans
- Back End   MySQL

Hardware Requirements

- Desktop PC or a Laptop
- Printer
- Operating System – Windows 10
- Intel® CoreTM i3-6006U CPU @ 2.00GHz
- 4.00 GB RAM
- 64-bit operating system, x64 based processor
- 1024 x 768 monitor resolution
- Keyboard and Mouse

3.2 Feasibilty Study

To analyze whether the software will meet organizational requirements Feasibility is defined as the practical extent to which a project can be performed successfully. To evaluate feasibility, a feasibility study is performed.To determine whether the software can be implemented using the current technology and within the specified budget and schedule A feasibility study is a preliminary investigation of a proposed system to decide whether the system can run smoothly with the organization.To determine whether the software can be integrated with other existing software. Benefits that are expected and to decide will the organization go for it.

Three Types of feasibility study

1. *Technical Feasibility.*

Ascertains that the technology chosen for software development has a large number of users so that they can be consulted when problems arise or improvements are required

2. *Operational Feasibility.*

Analyzes whether users will adapt to a new software. Determines whether the organization is satisfied by the alternative solutions proposed by the software development team

3. *Economical Feasibility*

Cost of hardware, software, development team, and training. Feasible only if tangible and intangible benefits outweigh the cost. The cost for proposed online shopping system is outweighing the cost and efforts involved

3.3 Module Implemenatation And Working:

App module is divided in two parts:

1. Database
2. Functionality

Database Module is implemented using MySQL console and DB Browser database storage. They provide both online and offline handling of data.Functionality is implemented using Apache netbeans which provided the platform for JAVA core coding and we installed Wampserver to connect our database to the netbeans.

The system uses Java and Netbeans as front end and MySQL as a backend for the database. The system is strong enough to withstand regressive daily operations under conditions where the database is maintained and cleared over a certain time of span. The implementation of the system in the organization will considerably reduce data entry, time and also provide readily calculated reports. Payroll is the process by which employers pay an employee for the work they have completed. Any business with employees should have a payroll process established; payroll is often the largest expense for a business. An effective and efficient payroll process will ensure that employees are paid accurately and consistently, keeping them satisfied with this aspect of employment and allowing HR to focus on other areas Payroll seems simple at its core, but becomes complicated because of the various deductions that come into play. Employers must withhold taxes from each pay check and make sure accurate funds are paid to the correct government agency. Employers may also be responsible for deducting and paying premiums for insurance and depositing funds into retirement accounts or to selected charities.Payroll processing duties can create a huge burden and unwanted stress for small business owners and can be overwhelming for large businesses. A missed deadline or incorrect filing of taxes can result in fines or jail time. To avoid these issues, small,

middle-sized, and large businesses can all benefit from using payroll systems.For small businesses, payroll system software can mitigate errors in the payroll process and reduce the amount of effort involved in calculating employee hours, wages, and tax withholdings.

3.3 Testing

Unit Testing

Unit testing is a testing technique in which modules are tested individually. Small individual units of source code are tested to determine whether it is fit to use or not. Different modules of games are put to test while the modules are being developed. Here modules refer to individual levels, players, scenes.

Integration Testing

Integration testing is the technique in which individual components or modules are grouped together and tested. It occurs after testing. The input for the integrated testing, are the modules that have already been unit tested.

System Testing

System testing is conducted on the entire system as a whole to check whether the system meets its requirements or not. 'Valar Morghulis' was installed on different systems and any errors or bugs that occurred were fixed.

Acceptance Testing

User Acceptance is defined as a type of testing performed by the Client to certify the system with respect to the requirements that was agreed upon. This testing happens in the final phase of testing before moving the software application to the Market or Production environment.

CHAPTER-4 Results and Discussions
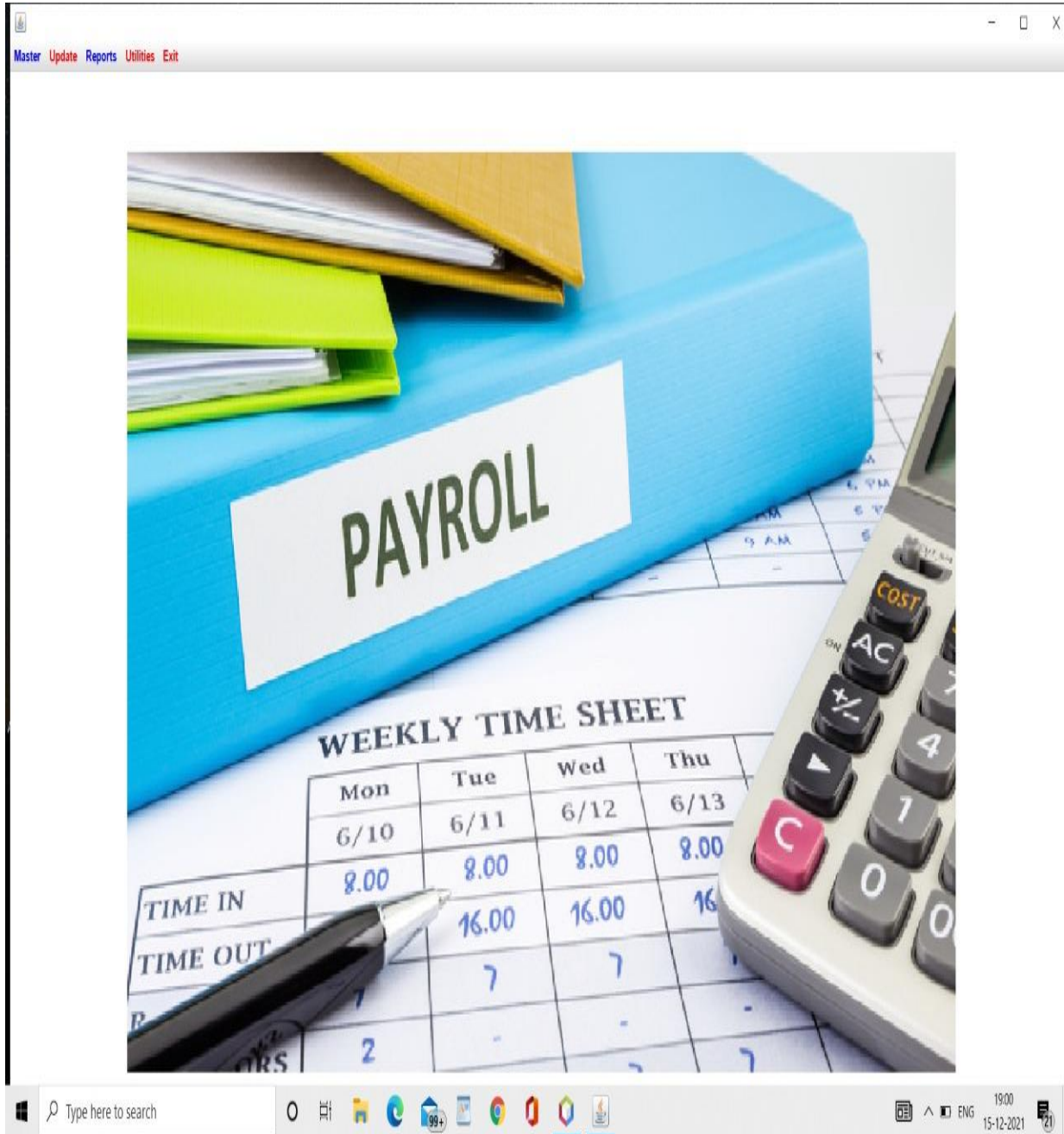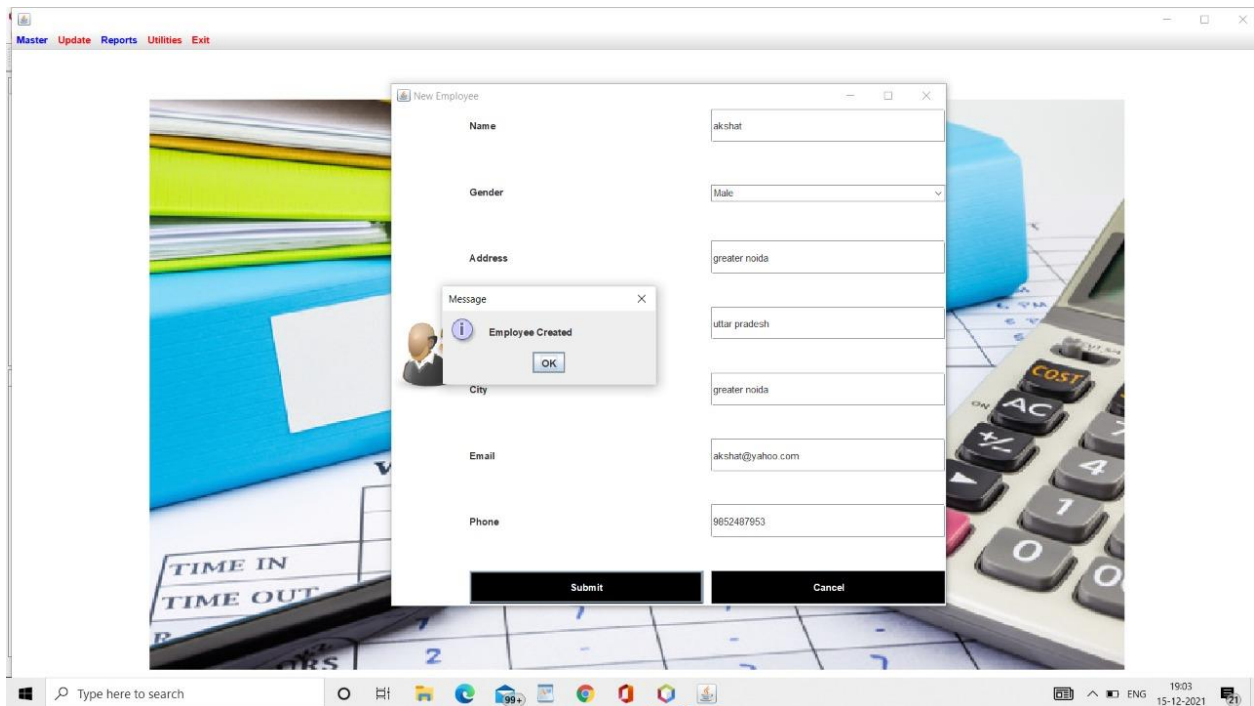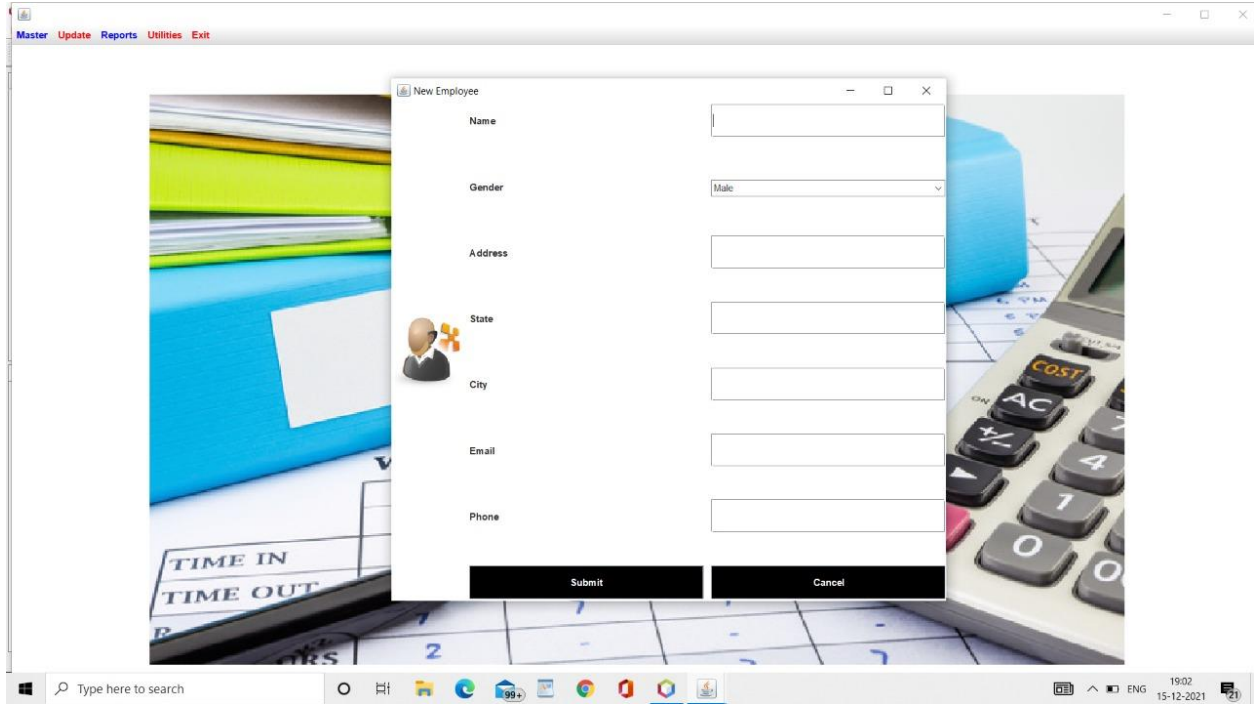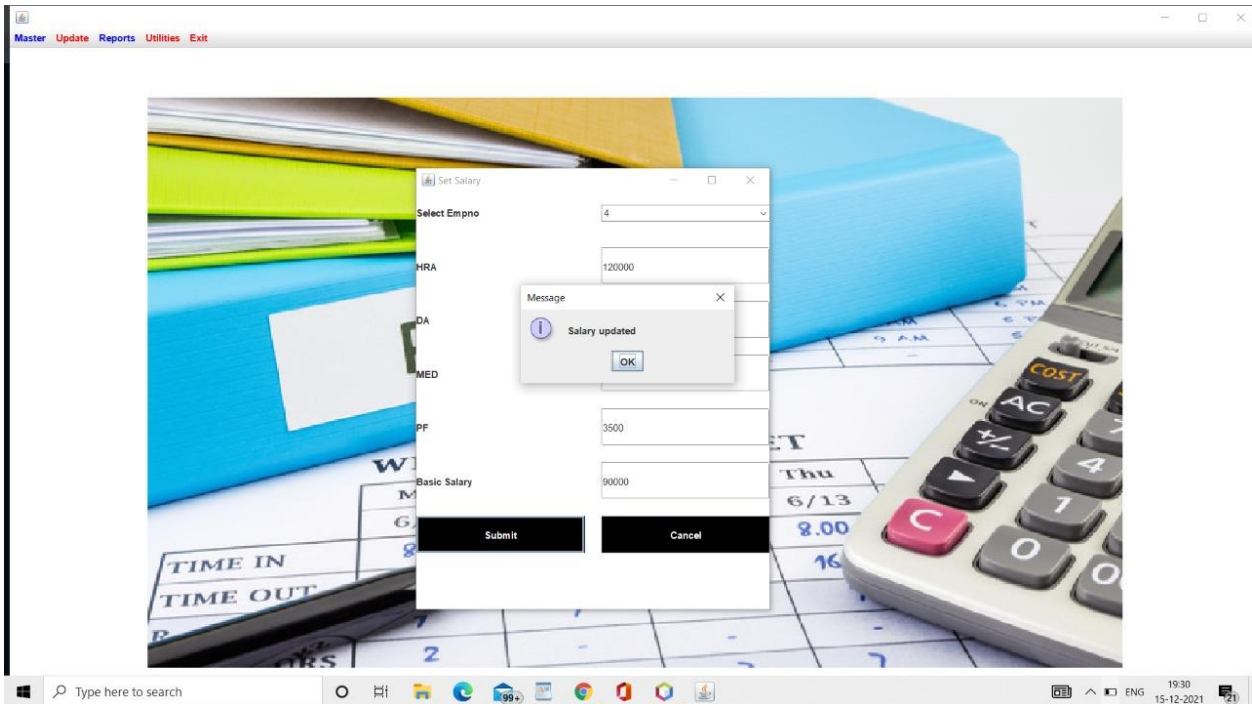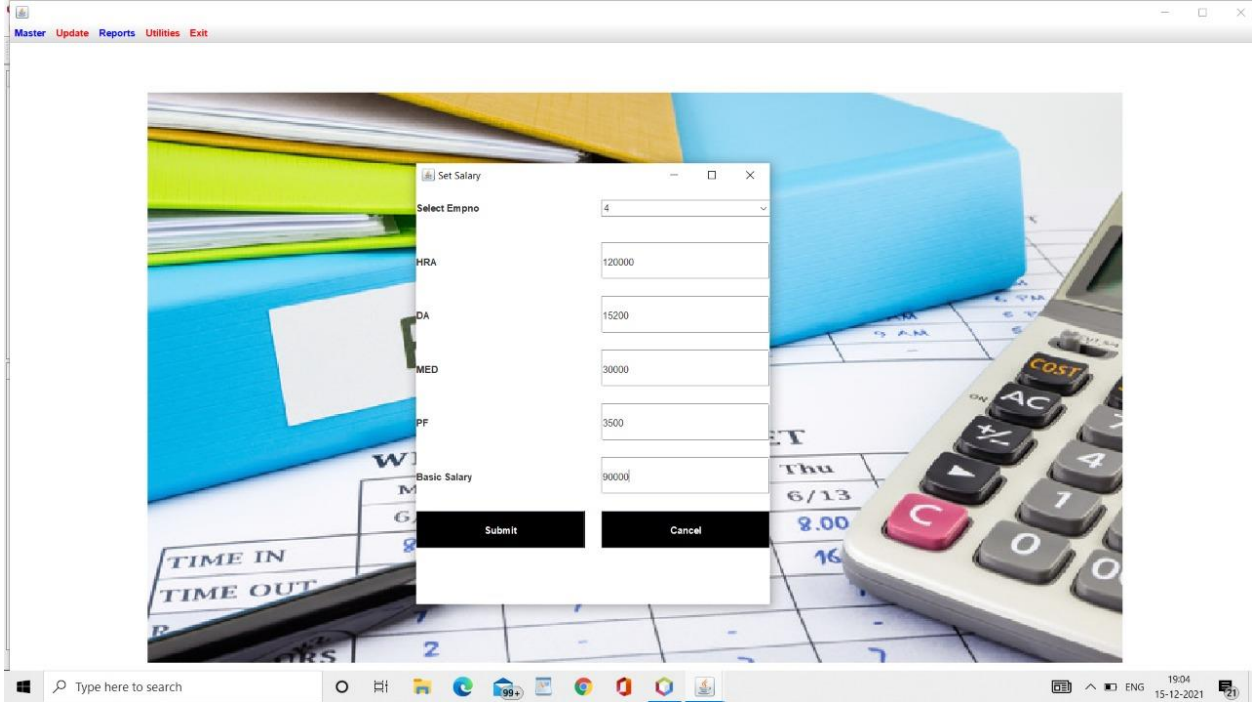
4.1 Final Output:

SPLASH WINDOW
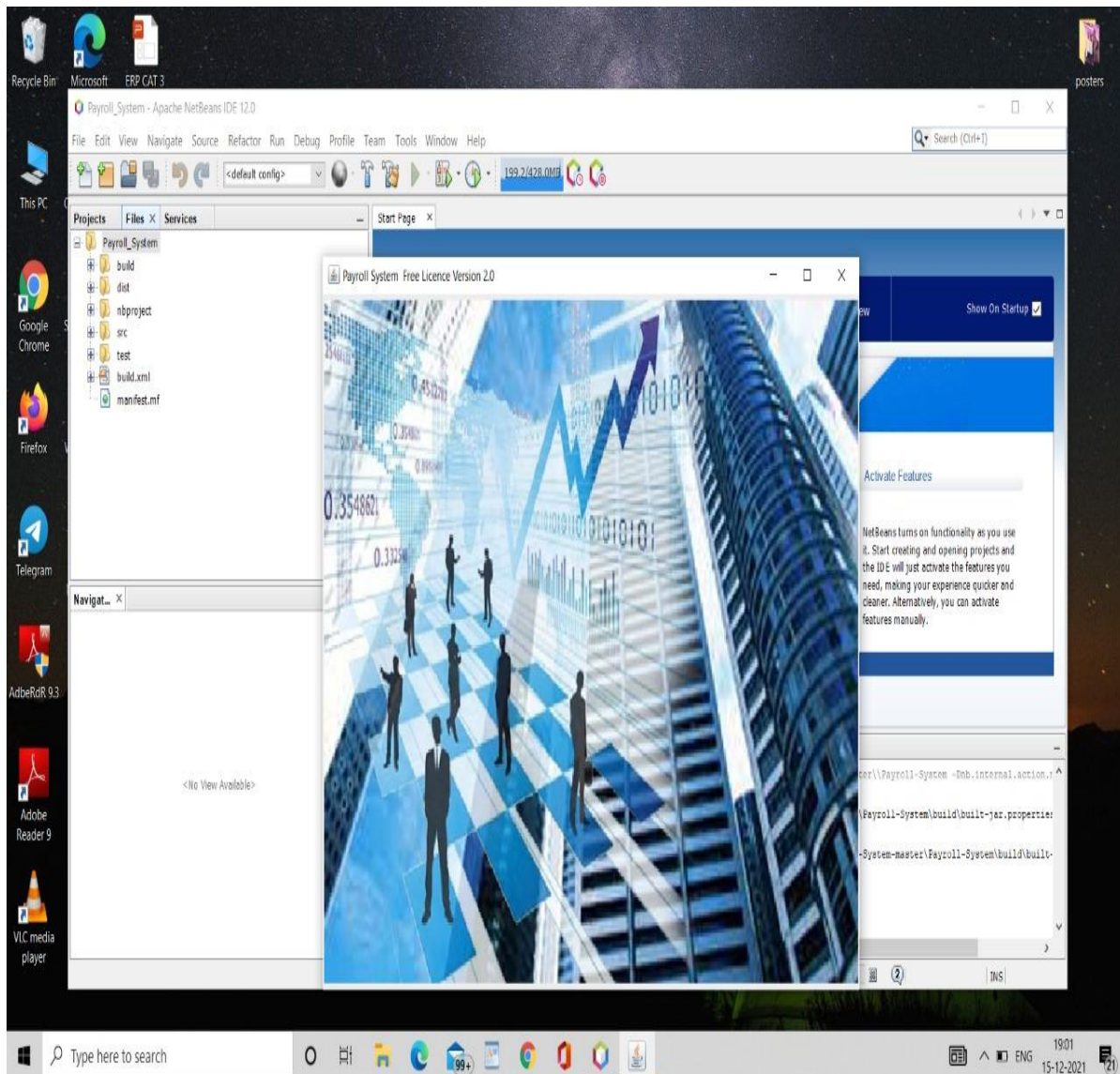
LOGIN WINDOW
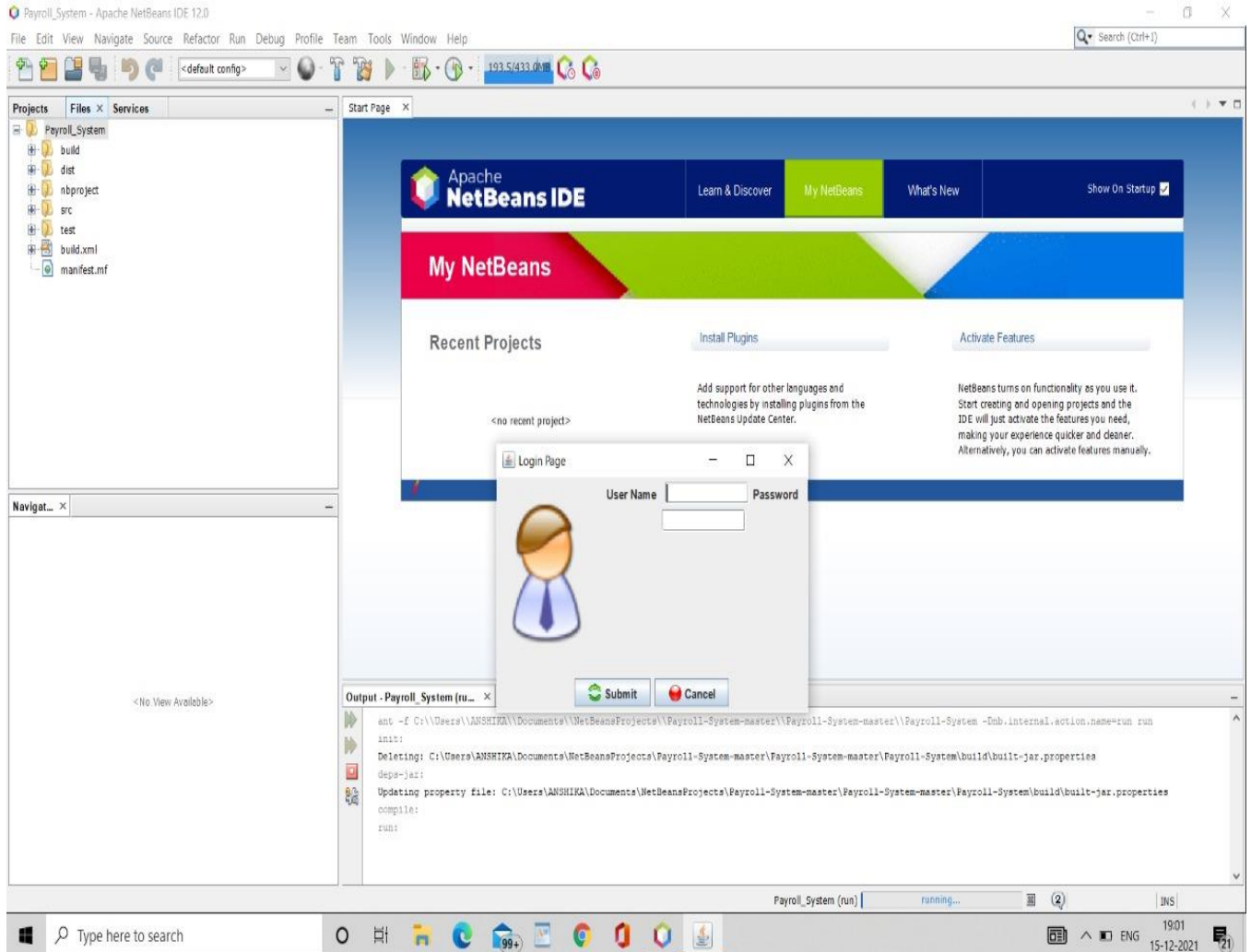
MAIN SCREEN

NEW EMPLOYEE CREATED

SET SALARY

UPDATE SALARY

VIEW EMPLOYEE

Emp id	Name	Gender	Address	State	City	Email id	Phone
4	Mayank	Male	Ab hostel	UP	Noida	mayank@yahoo.com	9896523210
5	Akshat	Male	Ab hostel	UP	Noida	akshat@gmail.com	9690730100
6	Arnav	Male	Ab hostel	UP	Noida	arnav@gmail.com	7017249328
7		Male					
8	akshat	Male	greater noida	uttar pradesh	greater noida	akshat@yahoo.com	9852487953

Print
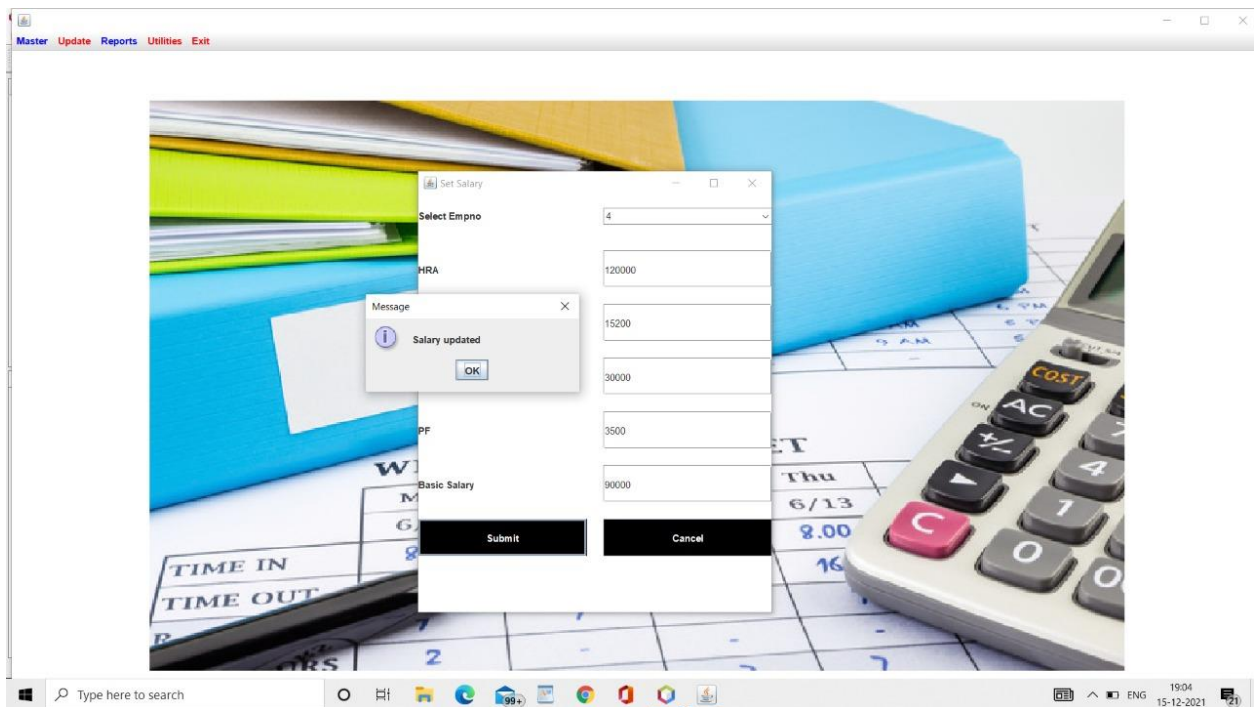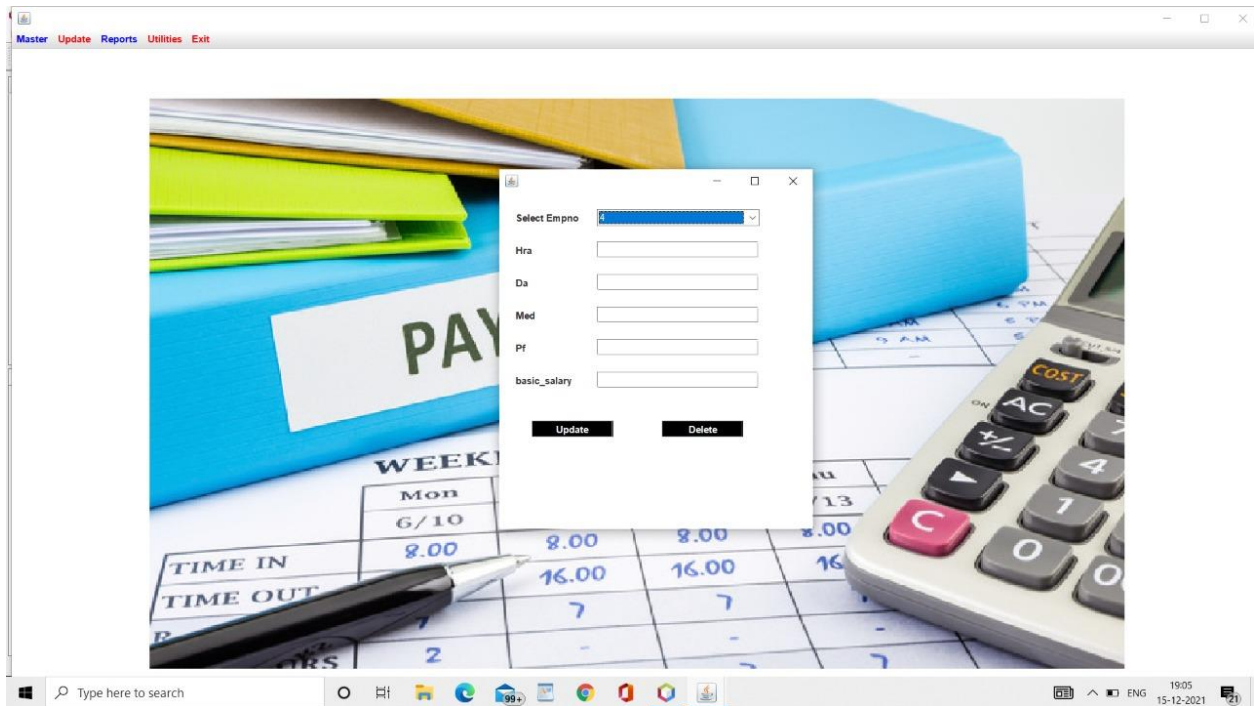
ATTENDANCE

EMPLOYEES ATTENDANCE

PAY SLIP GENERATED

4.2 Contribution

Payroll Software is programmed to enable HR professionals for managing the data and information of the company's employees on the regular basis. The easy information regarding the employees is including contact details, investment details, attendance, salary data and much more.

Accuracy:

Your payroll system must be able to accommodate your employees and their various working hours. Once a good system is in place, you will have an accurate record of the working hours of your employees. An automated system minimizes the possibility of human error, as the only real factor is whether employees remember to clock in and out.

Record-Keeping:

Another feature of a payroll system is that it can be used to keep detailed and accurate records. These records can be stored in a main database on site,online or in an outside record-keeping facility. Record-keeping can help you monitor trends such as how much overtime you're paying and how many employees participate in your company retirement plans

➢ Many businesses choose to use payroll software over manual processing, as it can help them to:

- work out payroll calculations and deductions quicker
- generate accurate payslips
- calculate bonuses, expenses, holiday pay, etc with minimum effort
- automate certain tasks, such as year-end reporting
- reduce the burden of compliance
- remove the need to understand complex tax legislation
- store data such as payslips and annual reports in a secure, easily accessible system.

CHAPTER-5 Conclusion And Future Scope

CONCLUSION:

This project is built keeping in mind that it is to be used by only one user that is the admin. It is built for use in small scale organization where the number of employees is limited. According to the requested requirement the admin can add, manipulate, update and delete all employee data in his organization. The admin can add new departments and delete them. The Admin can also add predefined pay grades for the employees. The required records can be easily viewed by the admin anytime time he wants in an instant. The payment of the employee is based on monthly basis. Numerous validations implemented would enable the admin to enter accurate data. The main objective of this framework is to save time, make the system cost effective and management of records efficiently.

FUTURE SCOPE :

As small as well as large scale industries are coming more into action with it comes the effort to maintain employee details and generate their payslip. These industrial people have employees work on an hourly basis as per their project requirement. Pocket Muster gives you a very easy way to calculate your employees salary based on the number of hours they have worked. It reduces paperwork as everything you won't have to write down the entry and exit time of an employee. Also saves you the hassle of sitting for hours to calculate an employee's salary.And in future it can be a decentralized application that can be accessed by anyone which is the part of the system which will enable it to work more efficiently .

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