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Report file

on

Digital payroll system for Employees

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

B.TECH (COMPUTER SCIENCE)

Under The Supervision of

Dr. R Vijay

Submitted By

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CANDIDATE’S DECLARATION

I/We hereby certify that the work which is being presented in project, entitled “Digital payroll system for Employees” in partial fulfillment of the requirements for the award of the B.tech(Computer Science) submitted in the School of Computing Science and Engineering of Galgotias University, Greater Noida, is an original work carried out during the period of 2021 to October and 2021, under the supervision of Name Dr. R Vijay Designation, Department of Computer Science and Engineering/Computer Application and Information and Science, of School of Computing Science and Engineering , Galgotias University, Greater Noida

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

Vishal Kumar (19SCSE1010126)

Mayank Ahuja (19SCSE1010595)

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

Supervisor Name
Designation

Acknowledgement

We are grateful to Vishal Kumar and Asst. Prof. Dr. R Vijay, whose guidance, inspiration and constructive suggestions throughout the project has resulted in a successful completion of this project. Without their willing disposition, cooperation this project could not have been completed in due time. We are also thankful Dr. R virk and all the faculty members of B.tech department for their cooperation and support in their own way.

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Abstract

Since employee payments is often the biggest expense for a companies, processing payroll needs to be done with pinpoint accuracy. Even the smallest mistakes can be costly and take time to fix. In this lesson, we'll go over the most common payroll issues and explain how each one can impact employee pay.

Maintain accurate records. Paper timesheets are a recipe for disaste. Account for overtime. Payroll is complicated enough, even without adding in overtime calculations. Brush up on local employment regulations..Integrate scheduling. Automate payroll taxes.

“Employee Database And Payroll Management System” is designed to make the existing manual system automatic with the help of compute rised 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 computer rised records without getting redundant entries. The project describes how to manage user data for good performance and provide better services for the client.

HTML Page layout has been designed in HTML.CSS CSS has been used for all the desigining part JavaScript: All the validation task and animations has been developed by .Java: All the business logic has been implemented in Java.

JSP: All the front end logic has been written in JSP

MySQL My SQL database has been used as database for the project

Tomcat: Project will be run over the tomcat server

J Connector : J Connector is Java-MySQL driver, we have used for connecting the database from java

Editor Used: Dreamweaver for PHP, WAMP server for MySQL

Operating System: Windows 10

The option to print the records In future.

I intend to add a leave structure in the future.

I would like to implement a regular backup mechanism to back up the employee database to avoid disasters.

The system can be developed in such a way that its existing features can be modified to better versions.

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 records efficiently.

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CHAPTER-1

INTRODUCTION

As technology has revolutionized every industry has massively improved its efficiency but improve the management of the systems in every way. The payroll management system is the core system for any organization.

It will take care of the calculation of the salary with rules which are implied by the industry differently for every employee of the company. It obviously reduces the manual work which is required to manage the paperwork and improve the reliability of the system. This payroll management system has improvised all the basic exercises to manage the salary of the employees.

This automated the whole of salary management which was previously done manually. It will be a more efficient system to rely on for the industry as it reduces the time of the operations which will basically take more time manually.

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.

Objectives of the project :-

The primary objective of the Payroll System (PR System) by Léger Systems is to process payroll information in an online environment, so specific online procedures can be performed in seconds rather than the hours required by traditional batch methods of computer processing. This PR system performs the basic payroll objectives by providing a complete and accurate record of all payroll transactions affecting each hourly and salaried employee. Specific employee payroll features and objectives of this business software application are highlighted below:

1. Maintain a Labor Detail Record on the number of hours worked and the types of work done by hourly employees during a payroll period, as well as the associated general ledger account distribution information for labor expense.
2. Calculate gross pay for hourly employees based on the hours worked including overtime, if any. The gross pay for salaried employees is predefined for each payroll period in their Employee Master Record.
3. Automatically calculate required federal and state payroll taxes, such as income tax withholding, Medicare, FICA and unemployment tax, for both employee and employer. The results are stored in a Payroll Period Record for each pay period.
4. Print payroll checks with stubs on preprinted forms showing current period and year-to-date (YTD) dollar earnings and deductions. These same multi-purpose check forms can be used by the Accounts Payable System. Pay checks can be printed for a single employee or for a specified group of employees.
5. Print payroll reports, such as Labor Edit Report, Hours Distribution Report and Payroll Register, to provide an audit trail of payroll data entered into the system, so adequate audit control is maintained.
6. Print generalized payroll reports with the capability to extract specific payroll information from the online database, such as "List the total FICA withheld this quarter for each employee".
7. Enable the user to change the federal and state tax rates used in calculating payroll withholding and deductions by storing payroll tax rates in separate Payroll Rates Records by calendar year.
8. Define an Active-Flag to prohibit the current online entry of labor transactions for an inactive employee, yet keep that old code for historical reporting purposes.

The main modules of the system:

Administration

Employee

Departments

Salary

Now to understand the working of the system properly we are required to understand what does each module does that way integration of the modules will be easy to understand the working of the whole system. It is a good practice to make the system's module loosely coupled and more cohesive that is because then it makes it easy for the modification and changes at any single or multiple modules and not the whole system.

Making the database centralized in the company so that each authorized device can access the required information. It will also enable the industry to save the previous record easily if required in the future

Purpose

The purpose of this document is to describe the functionality and specifications of the design of a web application for Managing Employees and their payroll. The expected audiences of this document are the developers and the admin of the web application. Now with the help of this system the admin has the information on his finger tips and can easily prepare a good record based on their requirements.

Finally, we can say that this system will not only automate the process but save the valuable time of the manager or the admin, which can be well utilized by his institute. This will be an additional advantage and management of power based on their free time from his normal duty.

Modules:-

Admin :-

The Admin gets logged in by valid username and password. Admin can add new Employee, add new Department, add new Pay Grade for the employees. Admin can set the 'from' and 'to' date worked by an employee in a department with specific pay grade. The Admin can generate an automated monthly salary of an employee. The admin can view all the past records of any recorded employee.

Advantages

- It is cost effective as the user control the web application himself and does not go for professional service.
- It saves time as it speeds up every aspect of the employee database management and payroll process with a range of automated features.
- It is secure as the employee database and the payroll process is managed by the admin in house rather than sending private information to a third party.
- Validating procedures and checks restrict user from making mistakes.
- The software is easy to use and is user friendly so no expertise is required.
- The calculations are automated so no chance of error.

Disadvantages

- It requires an internet connection.
- It requires large database.

FEASIBILITY STUDY

After identifying the scope of the project, the feasibility study is needed to be carried out. It is basically keeping the following points in mind.

Building the software for meeting the scope: This software has met the scope. As there is no data involved in the system, processing on the file, and the behaviour of this project is already identified and bundled in quantitative manner.

The processing of this software is very simple as it has been designed in php and it has been well divided into several functions according to the need.

Technically feasible: This software is very much technically feasible. This software is very much concerned with specifying equipment and the software will successfully satisfy almost all the admin's requirements. The technical need for this system may vary considerably but might include:

- a. The facility to produce output in a given time.
- b. Response time under certain conditions.
- c. Ability to process data at a particular speed.

Therefore, the basic input/output of data is identified. So, the project can easily be build up and it will also be technically feasible.

State of Art: The project is very much within the state of art since the project is a WINDOWS based; it uses very modern and common technique.

Beside it is very much modern and user friendly. It also works as middleware i.e. only in between the user and the file. So, it is completely a state of art project.

Financially Feasible: The project is very much financially feasible. The implementation and development cost of this software under the reach of any college.

Moreover, it requires some training for the use. So, training cost can be neglected and the resources of this software are very much available. It also reduces the labour and extra cost to be paid for labour. So indeed, it is financially feasible.

Resources: As motioned earlier that the resources are easily available and the cost of training is almost negligible. Sometimes situations may arise when it may not be so much easy. For a person completely unaware of using a computer system could result in a training cost or for a very small organization the purchase of a computer, instalment of the system and other charges may lead to a difficult matter.

Types of payroll reports :-

How many payroll report types are there? To borrow a line from Lindsay Lohan's character in *Mean Girls*, the limit does not exist.

Here is a rough grouping of the most common payroll report types.

1. Company-wide payroll reports :-

A payroll register gives an employer a bird's-eye view of its payroll expenses. It breaks down compensation, deductions, and taxes into their smallest components. It's the go-to report if you're wondering how many hours all of your employees worked in the last pay period or how much your business incurred in Federal Insurance Contributions Act (FICA) taxes in the previous quarter.

Since payroll registers contain a plethora of information, it's unlikely you'd want to share it in its entirety with a third party, such as a lender. Redact employees' personal information before sending it outside your four walls.

Not all payroll solutions call company-wide payroll reports by the same name. Payroll journal is a common synonym for payroll register.

2. Employee-specific reports :-

Pay stubs, or employee earnings reports, detail compensation, taxes, and deductions for individual employees. Unlike a payroll register that shows every employee's earnings, pay stubs go one by one, giving you a more granular view of your business' payroll activities.

The FLSA requires that employees have access to their pay stubs. They help employees understand how their paychecks were calculated, and they're often used to prove income when applying for leases and loans.

3. Employee time reports :-

How many hours did Dave get last week? How about Lila? Time to check your employee time report.

Small business owners use employee time reports to see how many hours their employees worked in a specified period. Depending on the report you create, it may list what the employee worked on while on the clock.

Manufacturing business owners should pull their employee time reports when calculating employee productivity payroll analytics. Comparing your employees' working hours to the number of finished goods made over the same time reveals how productive your employees were.

4. Cash requirements reports :-

A cash requirements report tells business owners how much cash they need to process payroll. It explains how the money is split among direct deposit, taxes, and other deductions. Make checking this report part of your payroll management procedures.

5. Payroll tax reports

Payroll tax reports are the annual and quarterly payroll reports that business owners produce to communicate payroll liabilities and employee compensation to federal, state, and local governments.

The most common federal payroll tax reports are:

- **Form 940:** An annual report for Federal Unemployment Tax Act (FUTA) tax
- **Form 941:** A quarterly report for FICA taxes and federal income tax withholding
- **Form W-2:** An annual report for employee compensation and tax withholding

For every federal payroll tax report, there's probably a state equivalent. Check with your state tax authority to make sure you don't miss a state quarterly wage report.

6. Paycheck Protection Program (PPP) reports :-

Small businesses need to meet certain conditions to qualify for forgivable PPP loans. Payroll software solutions can automatically generate PPP reports containing the information you need to apply for the PPP loan and forgiveness.

PPP reports help business owners calculate their loan amount by looking at your payroll data from 2019 or 2020. When it's time to apply for forgiveness, payroll software will create another report that shows how much you spent on payroll during the loan's covered period of eight or 24 weeks.

7. Certified payroll reports :-

Contractors and subcontractors of government construction projects need to submit certified payroll reports weekly. Most governments have created blank forms for you to fill out and sign. The federal certified payroll report form is WH-347.

Follow the Department of Labor instructions closely when filling out a federal certified payroll report. Since payroll reporting compliance is paramount here, seek out an accountant's help the first time you're asked to submit a certified payroll report.

Available Technologies:

Languages: HTML, Java, JavaScript

RDBMS: Online MySQL Web Server:

WAMP server Development Platform: Adobe Dreamweaver

Tools Used:

Editor Used: Dreamweaver for Java, WAMP server for MySQL

Operating System: Windows 10

CODE:-

```
import java.text.DecimalFormat;

import java.util.Scanner;

public class Employees_Payroll_System
{
    private static DecimalFormat df2 = new DecimalFormat("#.##");

    public static void main(String[] args)
    {
        // TODO Auto-generated method stub

        Scanner input = new Scanner(System.in);

        System.out.println("\n");

        System.out.print("\tEmployees Payroll System in Java");

        System.out.println("\n");

        System.out.print("\tEnter Employees Name : ");

        String emp_name =input.nextLine();

        System.out.print("\tPress F for Full Time or P for Part Time : ");

        char job_criteria =input.next().charAt(0);

        char select = Character.toUpperCase(job_criteria);

        System.out.println();

        if (select == 'F')
```

```

{
    System.out.print("\t----- Full Time Employee ----- ");
    System.out.println();
    System.out.print("\tEnter Basic Pay : ");
    double basic_pay = input.nextDouble();
    System.out.println("\n");
    System.out.println("\t-----\n");
    System.out.println("\tEmployees Name : " + emp_name );
    System.out.println("\tBasic Pay    : " + df2.format(basic_pay));
    System.out.println();
    System.out.print("\t-----\n");
    System.out.print("\tGross Pay    : " + df2.format(basic_pay));
    System.out.println("\n");
}

```

```

else if (select == 'P')

```

```

{
    System.out.print("\t----- Part Time Employee ----- ");
    System.out.println("\n");
    System.out.print("\tEnter Rate Per Hour    : ");
    double rate_per_hour = input.nextDouble();

```

```

System.out.print("\tEnter No. of Hour(s) Work : ");

double no_hours_work2 = input.nextDouble();

System.out.print("\tEnter No. of Overtime   : ");

double no_overtime = input.nextDouble();

double basic_pay2 = (rate_per_hour * no_hours_work2);

double overtime_pay = (no_overtime * rate_per_hour * 1.25);

double gross_pay = (basic_pay2 + overtime_pay);

System.out.println("\n");

System.out.println("\t-----");

System.out.println("\tEmployees Name : " + emp_name );

System.out.println("\tBasic Pay   : " + df2.format(basic_pay2));

System.out.println("\tOvertime Pay : " + df2.format(overtime_pay));

System.out.print("\t-----\n");

System.out.println("\tGross Pay   : " + df2.format(gross_pay));

System.out.println("\n");
}

Else
{

System.out.println("\n");

```

```
        System.out.print("\tInvalid Option. Please Try Again");  
    }  
    System.out.print("\tEnd of Program");  
    System.out.println("\n");  
}  
}
```

OUTPUT:-

```
Employees_Payroll_System x
"C:\Program Files\Java\jdk-14.0.2\bin\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Communi
|
Employees Payroll System in Java

Enter Employees Name : Uttam kumar singh
Press F for Full Time or P for Part Time : p

----- Part Time Employee -----

Enter Rate Per Hour      : 500
Enter No. of Hour(s) Work : 6
Enter No. of Overtime    : 2

-----
Employees Name : Uttam kumar singh
Basic Pay      : 3000
Overtime Pay   : 1250
-----

Gross Pay      : 4250

End of Program

Process finished with exit code 0
```

Run: Employees_Payroll_System X

"C:\Program Files\Java\jdk-14.0.2\bin\bin\java.exe" "-javaagent:C:\Program Files\Jet



Employees Payroll System in Java

Enter Employees Name : Mahima Devi

Press F for Full Time or P for Part Time : f

----- Full Time Employee -----

Enter Basic Pay : 1000

Employees Name : Mahima Devi

Basic Pay : 1000

Gross Pay : 1000

End of Program

Process finished with exit code 0

CHAPTER-2

Literature Survey

Payroll processing is crucial in an organization because it involves the payment of the organization's workforces and protection of its reputation by ensuring that the organization complies with the government authorities' employment legislations. It calculates salary, allowance, overtime, contributions and deductions of employees that varies across designations. The payroll process must responsive to changes in employment status, latest rules acts by the government authorities such as re-allocation of employee's contribution in Employees Provident Fund or (EPF) 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. Tedious, time consuming and increased effort to process the payroll, particularly in large organizations with huge number of employees, are common issues in manual payroll processing. As the demand to produce timely, accurate and efficient payroll intensify, it leads to increasing needs for computerized or automated payroll processing system.

Employee this is the employee's information in the company. It consists of the employee identification number, employee name, designation, project name, date of joining, experience, phone number, sex, and date of birth. These details are given by the new user through webpage.

- **Salary :-**

It consists of attributes such as Basic Pay, DA, HRA, Welfare Fund, A feedback Form manages to give feedback to their employee.

- The final salary of employee shall be computed taking into account the basic pay, various allowances, leaves and takes.

- A feedback Form manages to give feedback to their employee.

Figure:-

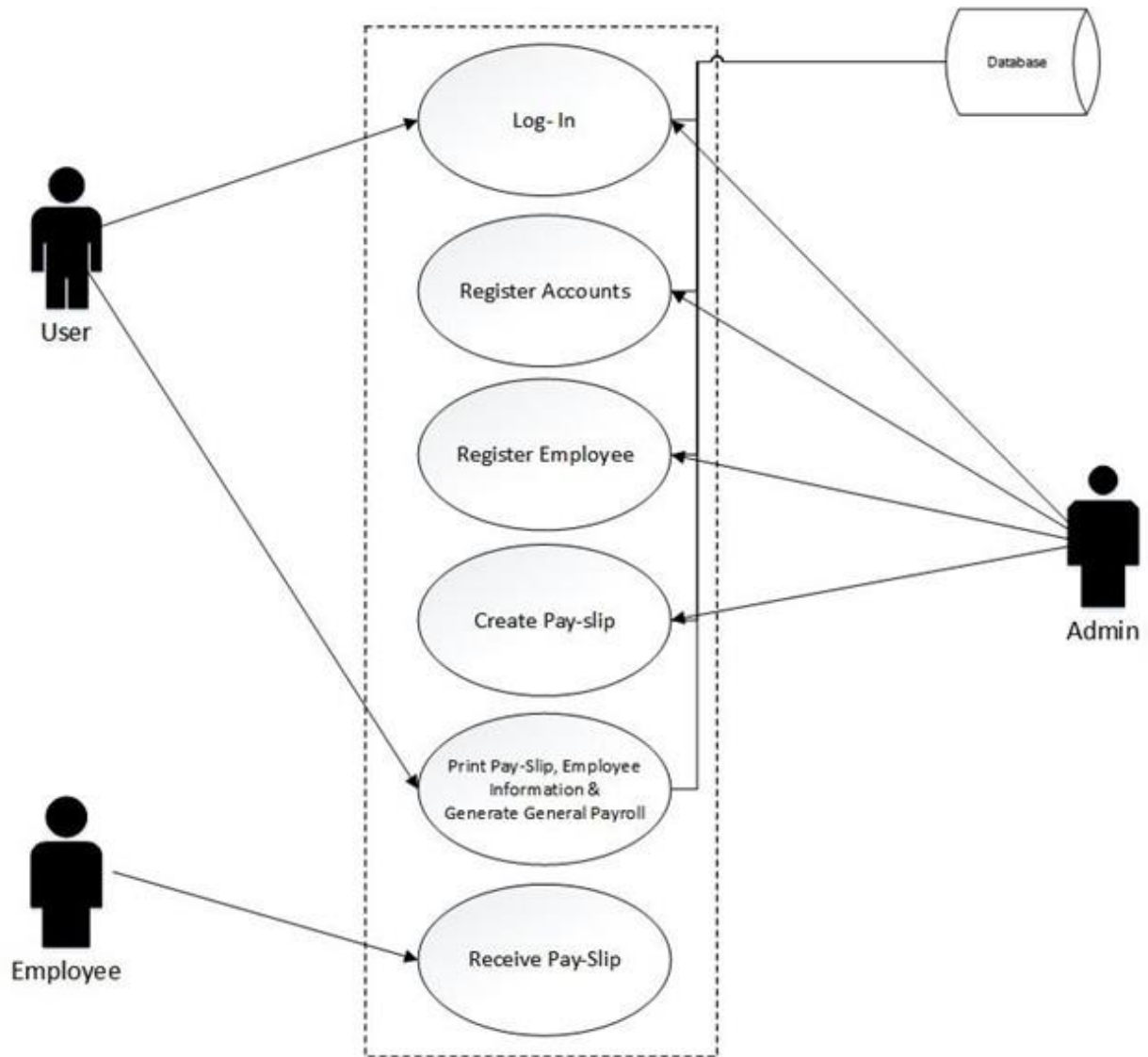


Fig 1.Use Case Diagram

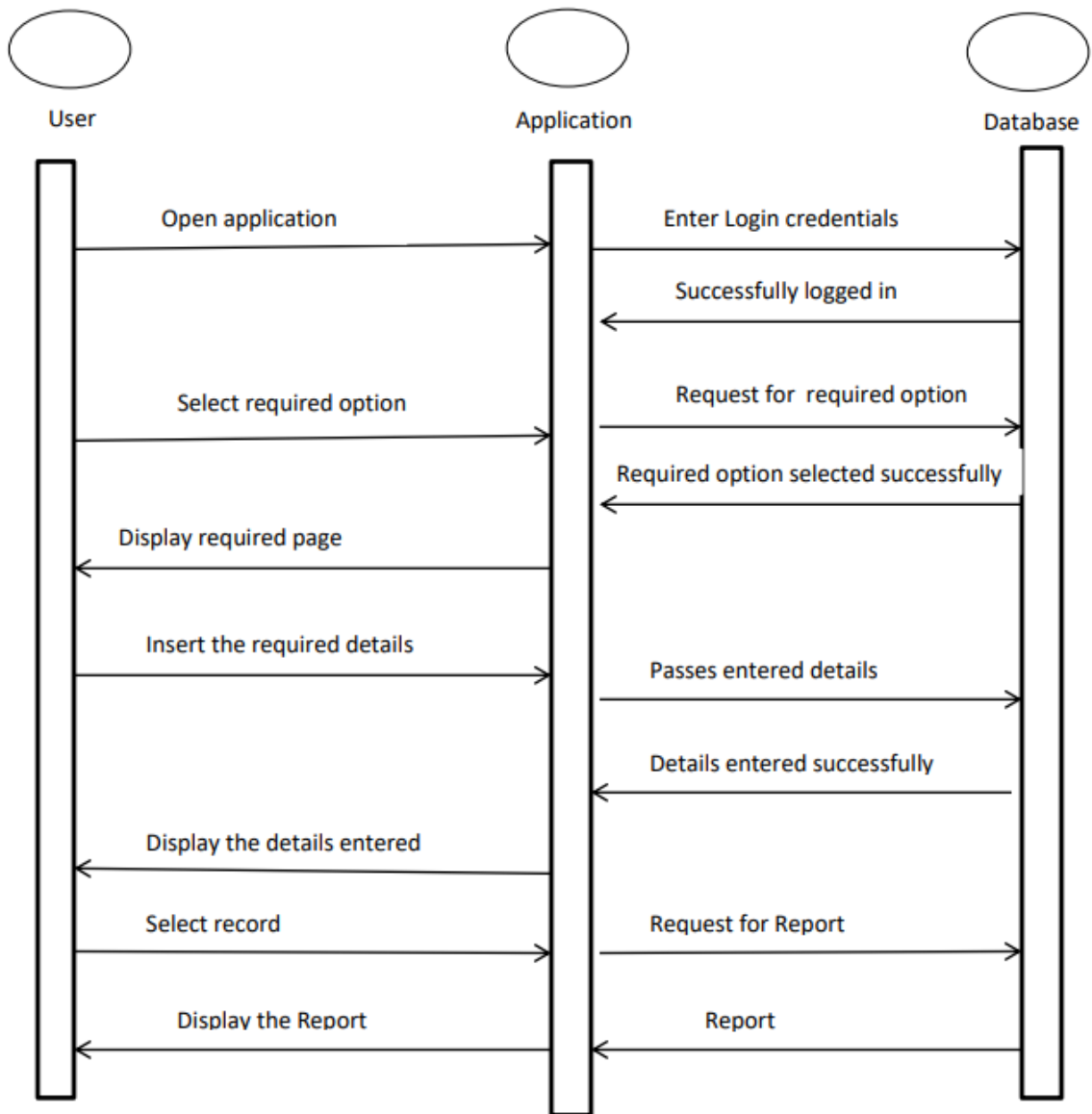


Fig 2.Sequence Diagram

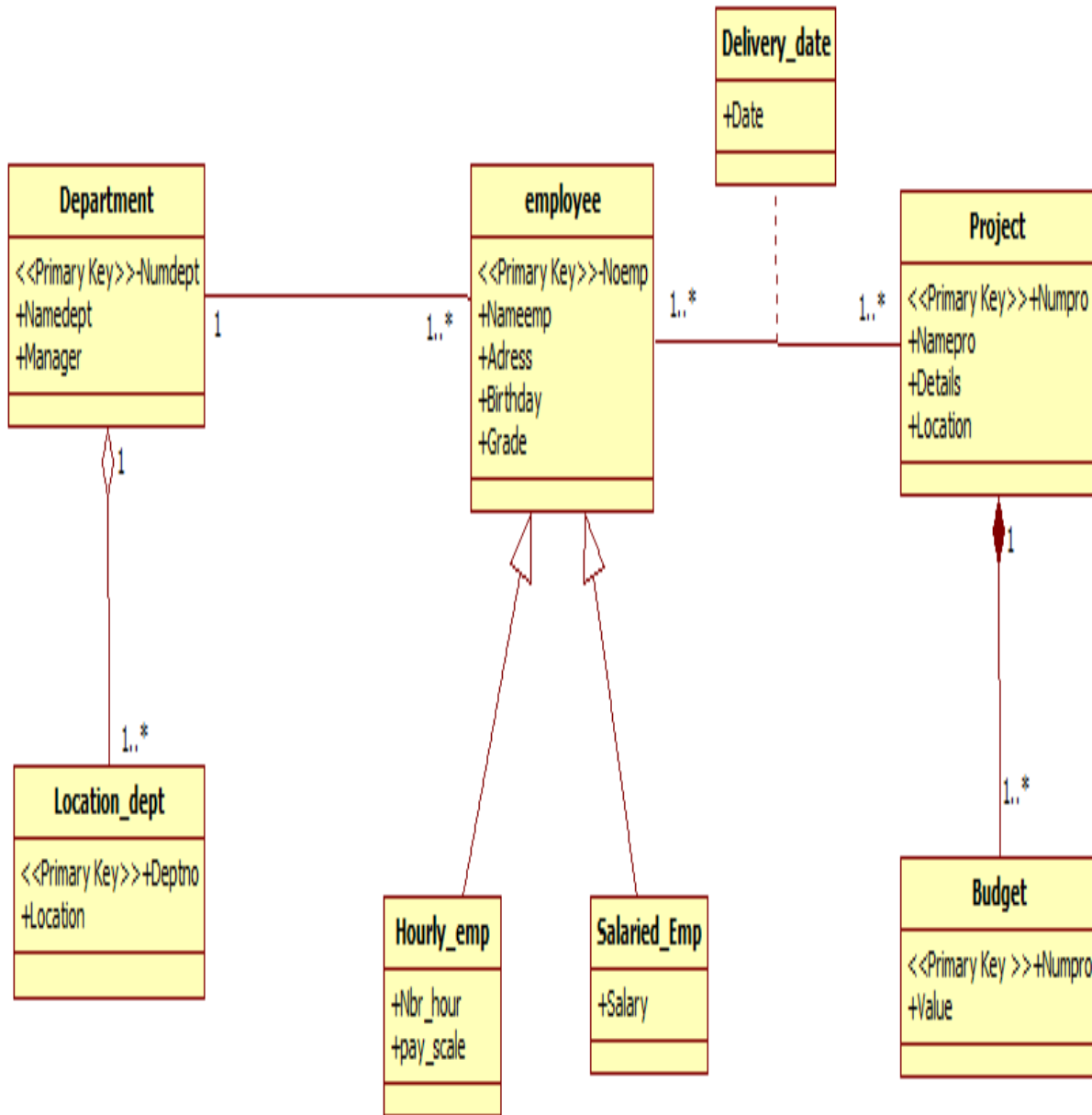


Fig 3. Class Diagram

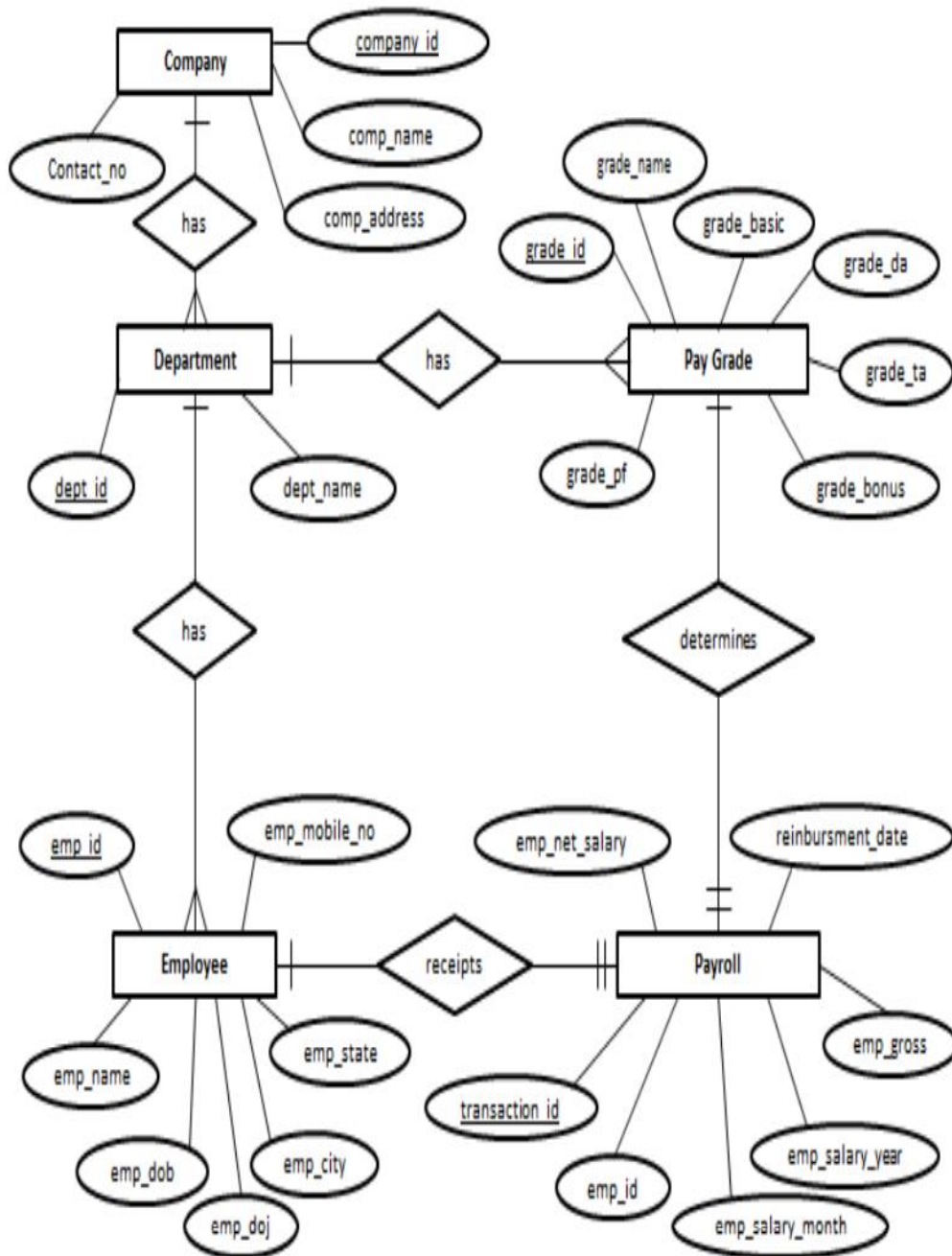
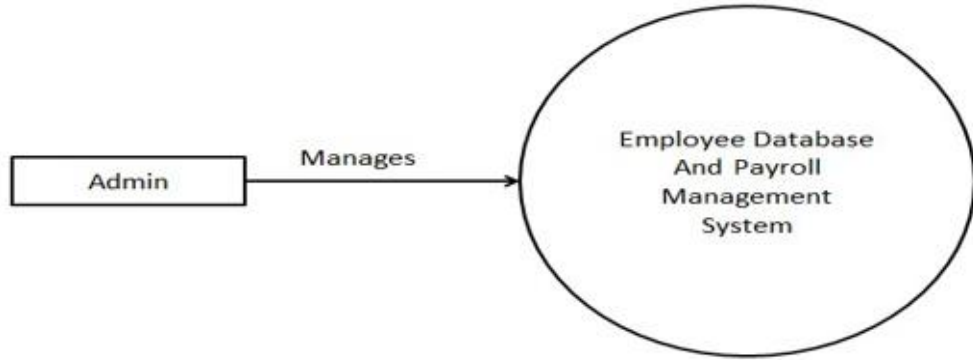
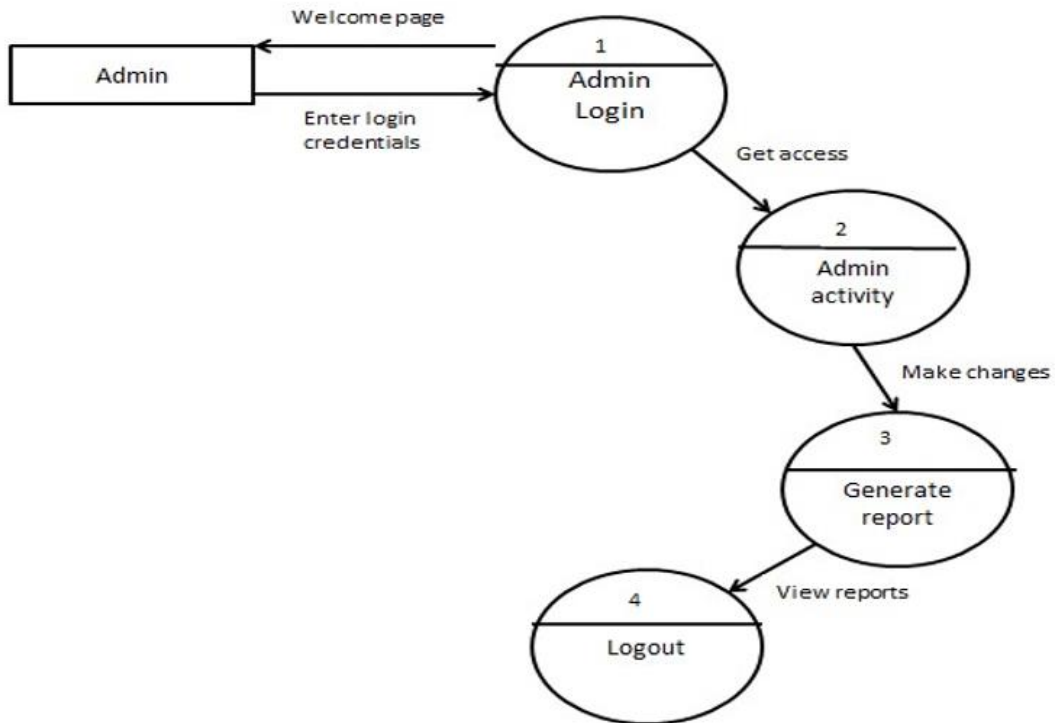


Fig 4.ER Diagram

DFD(Data Flow Diagram) :-



Level 0



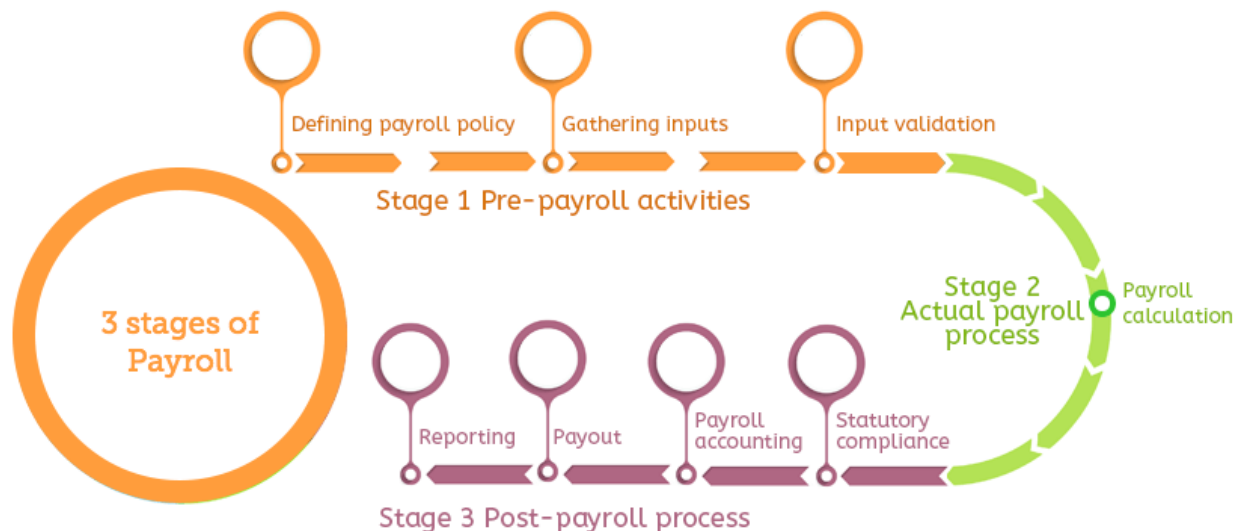
Level 1

Chapter 3 Functionality/Working of Project

What Is the Payroll Process?

A payroll administrator needs to do detailed planning of the whole payroll process. There is always work managing ongoing tasks that need attention and constant monitoring of changes to tax withholding, contribution and other things to consider in the process.

The payroll process can be split into three stages — pre-payroll, actual payroll and post payroll activities.



Pre-payroll Activities

Defining policy: In these beginning stages, it is important to establish a company's policies such as a pay policy, leave and benefits policy and attendance policy.

Ensure that these policies are well-defined and signed off by your company's management so that standard payroll processing can be established.

Gathering input data: Interacting with multiple departments and payroll is often an integral part of the payroll process. These are the people who can give you more access to important information like mid-year salary revisions and attendance data.

The process might be more consolidated in smaller organizations and more robust in larger companies. Gathering this data can be overwhelming but payroll software has integrated features like leave and attendance management and employee self-service portals to make the job easier.

Input validation: The next step in the process is checking the validity of the input data and whether it adheres to company policy. This is the time to make sure no active employee has been missed and no inactive employee has been included in salary payment.

Actual Payroll Process :-

Payroll calculation: This is the stage in the payroll process where input data is put into the payroll system to actually process the payroll. This process results in net pay being generated after adjusting necessary taxes and deductions.

After this process is complete, it is best practice to reconcile the values and verify accuracy to avoid errors.

Post-payroll Process

Statutory compliance: At the time of processing all statutory deductions like EPF (Employee Provident Fund), TDS (Tax Deduction at Source) and ESI (Employee State Insurance) are deducted. The payroll administrator then sends the amount to the appropriate government agencies.

The frequency of this process can vary depending on the dues. Most of these fees can be made through specific forms set in place. After all the dues are paid, return reports are filed.

Payroll accounting: It is important that every organization keep a record of all its financial transactions for the payroll process.

Salaries are one of the most vital parts of operating costs to be recorded in your book of accounts. Payroll management should always ensure that all salary and reimbursement data is accurately entered into the company's accounting or ERP (Enterprise Resource Planning) system.

Payout: Salaries can be paid out by cash, check or bank transfer. Typically, employers deposit salaries directly into an employee's bank account.

Once payroll is processed, a company needs to ensure their bank account has enough funds to make salary payments.

The next step is getting a salary bank advice statement to the company's branch. This statement includes details like employee id, bank account number and amount of wages.

If you're using a payroll software that has an employee self-serve portal, it will be easier to publish payslips and employees can log-in to access their account and payslips.

Reporting: After you've completed payroll for a particular month, your finance department or management team might ask for a report on things like department employee costs or location employee costs.

A payroll administrator will need to gather the data and extract the required information to share these reports.

6 Reasons Payroll Systems Are Important

Payroll is an integral part of a company's operations. Not only is it responsible for employees' salary compensation but it also plays an important role in protecting a company by ensuring it is following compliance with tax legislation.

Here are other reasons payroll systems are so important:

1) Employee Morale

An important part of keeping employees happy is paying them on time.

Ensuring that you have a payroll system that pays your company in a timely manner on a consistent basis will definitely impact your employee morale. Late and inaccurate payment is likely to cause your employees to question the financial stability of the company. This might affect the overall environment and culture of your company, resulting in a negative attitude from employees that could bleed into their day-to-day tasks and cause underperformance.

A company's workforce is often the heart of a company and reliable and accurate payroll is part of what keeps that heart beating.

2) Compensation

Payroll goes beyond an employee's salary.

An employee's compensation can also include bonuses and benefits on top of their salary. Bonuses and salary increases associated through performance evaluations are also managed through the payroll system.

3) Reputation

Not only does a company have a financial obligation to their employees, but they must also ensure that its payroll activities are compliant with the country's tax and employment legislation.

Following legislative laws and efficiently meeting tax obligation establishes a company as a stable employer. This boost to a company's reputation will ultimately attract and retain a solid pool of talent.

4) Government Reporting

A payroll system helps companies comply with tax and employment legislation.

A company needs to report their payroll tax withholdings, payments and employee statuses to local, state and federal governments on a quarterly or annual basis. Your company's requirements often depend on the size of your payroll and the type of business you are running.

5) Following Labor Laws

Understanding labor compliance is another way to make sure your company has happy employees and is following local and federal laws.

Each state has different labor laws regarding minimum wage, overtime, labor law posters, termination procedures and more. Payroll systems and payroll administrators make those rules easier to follow and understand.

6) Paying Taxes

To follow state and federal tax laws, company's need to withhold income and payroll taxes from an employee's payroll and pay those taxes on time.

Employers often cover the costs of employees benefits and a portion of that might come from an employee's gross wage. A company's payroll system also needs to deduct Social Security and Medicare payments from an employee's gross wages. On most payrolls, an employer's payroll system will withhold federal and state income taxes from an employee's payroll.

Modules Description :-

A module is a separate unit of software or hardware. Typical characteristics of modular components include portability, which allows them to be used in a variety of systems, and interoperability, which allows them to function with the components of other systems. The term was first used in architecture.

1) In computer programming, especially in older languages such as PL/1, the output of the language compiler was known as an *object module* to distinguish it from the set of *source* language statements, sometimes known as the *source module*. In mainframe systems such as IBM's OS/360, the object module was then linked together with other object modules to form a *load module*. The load module was the executable code that you ran in the computer.

Modular programming is the concept that similar functions should be contained within the same unit of programming code and that separate functions should be developed as separate units of code so that the code can easily be maintained and reused by different programs. Object-oriented programming is a newer idea that inherently encompasses modular programming.

2) In computer hardware and electronics, a module is a relatively compact unit in a larger device or arrangement that is designed to be separately installed, replaced, or serviced. For example, a single in-line memory module is a unit of random access memory (RAM) that you can add to a personal computer.

Result and Evaluation

4.1 Adequacy and Coverage

The payroll software can perform the following functions

- Store employee information
- Calculate gross and net pay, and determine tax deductions to be made
- Print payslips for each month, showing year-to-date totals
- Create and maintain a ledger containing all necessary records of employee payments
- Provide the user with adequate help by the user manual with the software

4.2 Efficiency and Effectiveness

- The payroll software calculates the total earnings of the employee and automatically updates the employee's earning to date.
- The employers can set different rates for employees.
- The software does its calculations in a very clear and concise manner. All calculations are guaranteed accuracy.

4.3 Productiveness

- The payroll software gives the employee the ability to keep track of their earnings by printing their payslip for each month.
- It gives the employers the ability to keep records of how much they pay out as salaries by creating a ledger that can be used to filter out results by employee, month, and year.

4.4 Elegance and User-friendliness

- The different tasks and functions are outlined in a very simple and clear manner for the users.
- The help file can be used by the users to know how to use the payroll software.
- The interface is very simple and not complicated to allow for easy usage.

4.5 Quality assurance

- The software was fully tested to ensure it is relatively error free and that it computes results correctly, including deductions such as taxes.
- The software provides a better, time saving and efficient way of keeping track of employees earnings by speeding up calculations, and reducing paperwork by keeping efficient electronic records.

4.6 Critical Evaluation

- The software overwrites employees information when re-entered. However, employee data is discarded when the employee is deleted from the software.
- The software also stores every information provided by the user, but does not store results of calculations. Instead, calculations are done “on the fly” when the user needs to see them on the ledger, the payroll records, or the pay slip.
- Deductions such as federal tax, state tax and union tax are made according to the set rate provided by the employer, but additional benefits and bonuses are not included in calculations or storage of records.
- The pay slip not only provides the employee with their earning, it also reflects their year-to date recorded earning. However, there are no reports that explicitly summarize grand totals grouped by employees, months, or years. The ledger can be used to filter out these records.

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 records efficiently.

Future scope of the work:

- The option to print the records In future.
- I intend to add a leave structure in the future.
- I would like to implement a regular backup mechanism to back up the employee database to avoid disasters.
- The system can be developed in such a way that its existing features can be modified to better versions.

Reference :-

- www.w3schools.com
- www.tutorialspoint.com
- www.youtube.com
- www.wikipedia.in
- www.greeksforgreeks.org
- www.javatutorial.com
- www.payrollsystem.prg
- www.wampserver.com