An Independent Project Report

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[Online Payroll Management System]

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Authorship Declaration

Except where reference is made in the references, this report contains no material published elsewhere or extracted in whole or in part from a dissertation or report presented by me for another degree or diploma.

No other person's work has been used without due acknowledgement in the content of the report.

Signature: __Rojina giri_____ Date:__2022/11/25_____

[Student Name]

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At the end I would like to express my sincere thanks to all my friends and others who helped me directly or indirectly during this project work.

ABSTRACT

The project deals with the analysis, design and implementation of Online Employee Payroll Management System for certain firms. “Online Payroll Management System” is a web-based management system which allows any firms or organizations to manage employee records and manage their payroll.

Manual payroll systems have several drawbacks, including: B. Inaccessibility, poor data quality, limited flexibility, and slow processes. Maintaining traditional systems is also very difficult and requires a lot of time and effort. An online payroll system is critical to eliminate these errors present in manual payroll systems. The system is efficient, fast and reliable.

The Online Payroll Management System can create employee, manage the information and schedule, manage overtime, cash deductions, advance payments and can generate a pay slip which reduces the huge burden of managing the payment of employee in an organization, company or firms.

This project is very efficient and it comes handy to every company or organization. This project has Attendance for employees, admin login, dashboard and schedules, overtime, deductions, advance pay can be managed easily. It also can generate pay slip and we can download it on PDF format.

Keywords: Online Payroll, Admin, Employees, PHP, My SQL.

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CHAPTER1 : INTRODUCTION

1.1 Background

The current payment management system in Nepal is still in a transitional phase and is still not advanced. Nepalese Payroll Management System is far behind of payroll management system in developed countries. Technological progress in Nepal is improving gradually. Nepal's payroll system still follows the traditional record keeping system. This legacy payment management system needs to change. Some companies in Nepal have started adopting online and technological approaches to managing their payroll systems. Our online payroll system is secure, easy to use, reliable and accurate.

This system eliminates logistical hassles and drawbacks in the traditional mode of the payment management. The Online Payroll Management System adopts a fresh approach by shifting to a virtual platform. Companies can access related information, anywhere. Online Payroll Management System is needed to ensure management of every data in a payment related platform in a systematic and virtual way.

“Online Payroll Management System” assesses employees by arranging, conducting and managing in online way. This system allows companies to conveniently store and use all information. According to today's demands, an online payroll management system is very important for businesses to save the time and effort required to manage attendance and check physical records, as well as the lengthy and tedious process. This system helps companies monitor and track their employees. Administrators can create, update employees, add overtime and manage deductions.

1.2 Problem Statement

The existing system of managing payroll is manual. Most of the companies and other organizations in Nepal make the use of manual payroll management system. This system of manual payroll management has multiple drawbacks such as time consuming, results are not accurate since calculations are done manually, the chance of data being inaccurate is higher, checking of attendance is time consuming since it is done manually. The existing errors in manual payroll management system can be eliminated with the proper utilization and development of Information Technology.

1.3 Aim

The Online Payroll Management System can create employee, manage the information and schedule, manage overtime, cash deductions, advance payments and can generate a pay slip which reduces the huge burden of managing the payment of employee in an organization, company or firms.

This project is very efficient and it comes handy to every company or organization. This project has Attendance for employees, admin login, dashboard and schedules, overtime, deductions, advance pay can be managed easily.

1.4 Objectives

Following are some of the specific objectives of this Online Payroll Management System.

- To provide a user-friendly and responsive interface through which employees can do attendance by checking in and checking out.
- To manage payroll virtually, efficiently and reduce administrative burden.
- To reduce time, cost and manpower consumed when management of payroll is conducted manually.

1.5 Justification

Nepalese Payroll Management System is far behind of payroll management system in developed countries. The advancement of technology in Nepal is gradually improving. Nepalese Payroll Management System still follows Traditional System of keeping records and management. This traditional system of payment management needs to be changed.

This system eliminates logistical hassles and drawbacks in the traditional mode of the payment management. The Online Payroll Management System adopts a fresh approach by shifting to a virtual platform. Companies can access related information, anywhere. Online Payroll Management System is needed to ensure management of every data in a payment related platform in a systematic and virtual way.

This System assesses employees by arranging, conducting and managing in online way. This system enables companies to store and use all the information at ease. According to today's requirement, Online Payroll Management System is significantly important to the companies to manage the attendance, saving the time and effort that is required to check the physical records and all the lengthy and irritating process.

1.6 Scope

Scope of this project is very broad in terms of other manual payroll management system. Few of them are:

- This system can be used in any kind of companies.
- Can be used anywhere anytime as it is a web-based application.
- Employees, Administrators can have separate roles and the flow of information between them is efficient.
- Cost effective and time saving.

CHAPTER2 : INFORMATION GATHERING

2.1 Literature Review

The use of Online Payroll Management System in Nepalese companies is increasing with internet and electronic devices being more accessible. Most of the companies in Nepal still choose to manage payroll manually due to limited technological infrastructure. Previously, Online Payroll Management System was used only by top companies but now it is being used by other companies as well. Some of the widely used system are:

e-Payroll - Online Payroll Management System (MIS) is a is online Payroll management system that enhances the process of your business organization with power of Integration, Simplicity. [1]

PIE Human Capital Management is a most trusted HR software in Nepal. Also ranked as a result proven Payroll Software in Nepal for SMBs. [2]

HR and Payroll • Rigo Technologies is a Premium Human Resources and Accounting Software development company in Nepal. [3]

Mero Network in Nepal with payroll software for human resource management and payroll management of any organization with a simplified HR System. [4]

Nimble Infosys is a leading HR software provider company in Nepal working in the market since 2010. Nimble HRMS is widely used by many reputed and leading companies of Nepal. [5]

Nepal Realistic Solutions is boutique management and technology consulting firm based in Kathmandu, Nepal. They offer their clients practical and creative solutions to their complex business challenges.[6]

Danfebooks is an online Hybrid HRM software that combines payroll having a free and premium feature for businesses in Nepal [7]

The major dissimilarity between above mentioned system and this project is that “OPMS” only focuses on payroll management and it has a lot more features that these integrated systems.

2.2 Research Methods

The main source of requirements was the case study scenario itself, which clearly identified some basic requirements that the system needed to include anyway. It served as a source of basic and general requirements.

2.2.1 Interviewing

The interview method is one of the most effective methods in research and one of the most important qualitative information gathering techniques. Through interviews, we can understand how people think and feel about certain things. Collecting information from various interviews is reliable and very useful for building better systems. Conducted to collect information.

I was able to meet directly with IIMS College staff and students. The information and answers I received were of great help in working and implementing the project. After all I have gathered some of the problems from research papers and some payroll managers.

So I interviewed him and asked him series of question and some of them are listed below:-

1. Could you mention what all functions are involved in Payroll?

2. How do we set up small business payroll?
3. Do you mention what you have to do to pay the new employee?
4. What are the most common mistakes made during the payroll process?

2.2.2 Questionnaire

Surveys are very useful for generating new ideas, acquiring correct knowledge, and gathering useful information from experienced people. Here, I am collecting the necessary information for the project by asking the requirements of the client and some people who are experienced and familiar with the relevant flies so that I can gather enough information.

1. What kind of payroll do you offer?
2. What is your pricing structure?
3. How secure is the service and where are the data centers?
4. What kind of ongoing helpdesk support do you offer?

2.3 System Development Methodology

A system development lifecycle can be defined as the processes used to manage, build, and build. Organization, use and updating of information systems. Lifecycle for development apply through the following systematic method or workflow: We can also call it a framework. This should be followed in every step of development to create an application. It is the process improve the quality of the application, suitable or standard format for system development. The system development life cycle is mainly of the six phases listed below:

- Requirement Gathering and Analysis
- Design
- Implementation/Coding
- Testing
- Deployment
- Maintenance

2.3.1 Gathering system requirement and documentation

In this phase, all project requirements are collected. At this stage, many stakeholders and administrators are involved. Meetings with stakes are held to determine correct needs with owners, administrators, and possibly end users. for example: Which child system do you want? What are the main functional requirements? Who do you want this system for? etc. All of these common questions are considered during the requirements gathering phase.

2.3.2 System Design

After collecting all the information, we will design the system from the required specifications at the design stage. Hardware and software requirements are specified in this phase. The overall architecture of the system is identified here. System design speciation is very useful for the next phase of the SDLC. During this phase, the tester plays an important role in the parent process. Testers develop test strategies that specify what to test and how.

2.3.3 Implementation

Once the design phase is complete, tasks are broken down into modules or units based on the system design document and the actual coding begins. Primarily, developers are mostly involved in logic coding and are very enthusiastic about making their code bug-free. This phase is the longest phase of the SDLC.

2.3.4 Testing

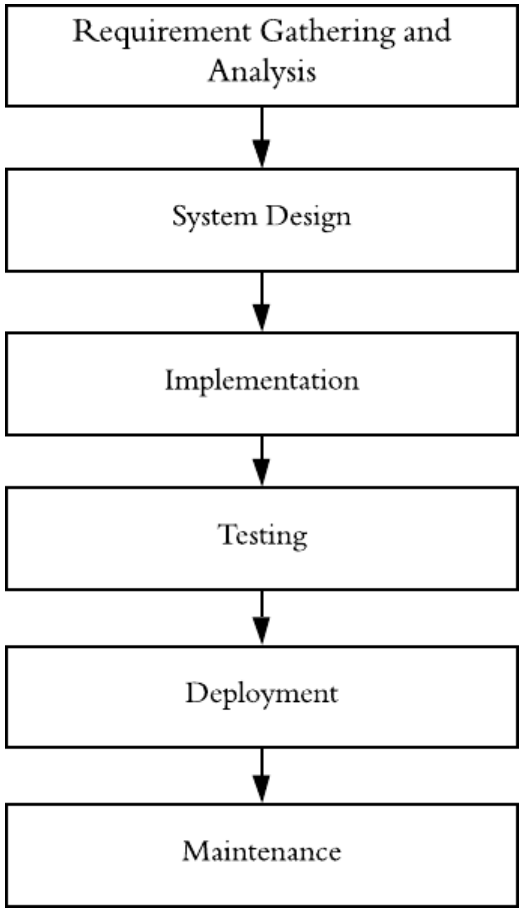
After implementation or coding is completed, it is analyzed and tested by testers or developers. It is then compared again with the requirements gathered in the first phase to see if the expected product results are achieved. During this phase all kinds of tests are performed, such as: B. Unit tests, system tests, integration tests, acceptance tests, and non-functional tests.

2.3.5 Deployment

After positive test results, the product is served for lunch or to the end-user or customer. This is also in the beta testing stage. If any bugs are found or changes are required, we will report them to the development team. Once all changes have been completed or bugs have been fixed, the final deployment will occur.

2.3.6 Maintenance

Once the deployment phase is complete and end users have started using the system, the system should be maintained regularly when problems arise. This is the phase of the SDLC where attention is paid to what is developed.



System Development Life Cycle (SDLC)

The proposed system will be developed using a modular concept following the SDLC. We chose the RAD model for the proposed system. This model is very useful for rapid application development. It is especially useful for small projects developing applications in a short period of time (60-90 days).

The Phases of Rapid Application Development Methodology (RAD) are described below:

Business Modelling

In this model phase, we collected information from travel agencies. The client has provided us with all the information about their business. Having gathered all the business information by asking questions and interviewing, I first created a fact sheet with many questions to clarify the customer's requirements. After the questionnaire, I participated in an interview asking for detailed information not clearly explained in the fact sheet. Implement problems and their resolution requests into the system.

Data Modelling

Information received or collected from customers during business modeling is used to outline knowledge objects required by the business. Provides an overview of travel information objects. I actually created a flow chart to provide low cost functionality to the system.

Process Modelling

In the process modeling stage, we plan the workflow of the development system based on the conceptual design and overall picture of the system, so we analyze the customer's requirements, draw a UML diagram, and create a requirements document. Therefore, it helps to track the respective system flow. knowledge flow from information objects along them. This section provides an overview of the system.

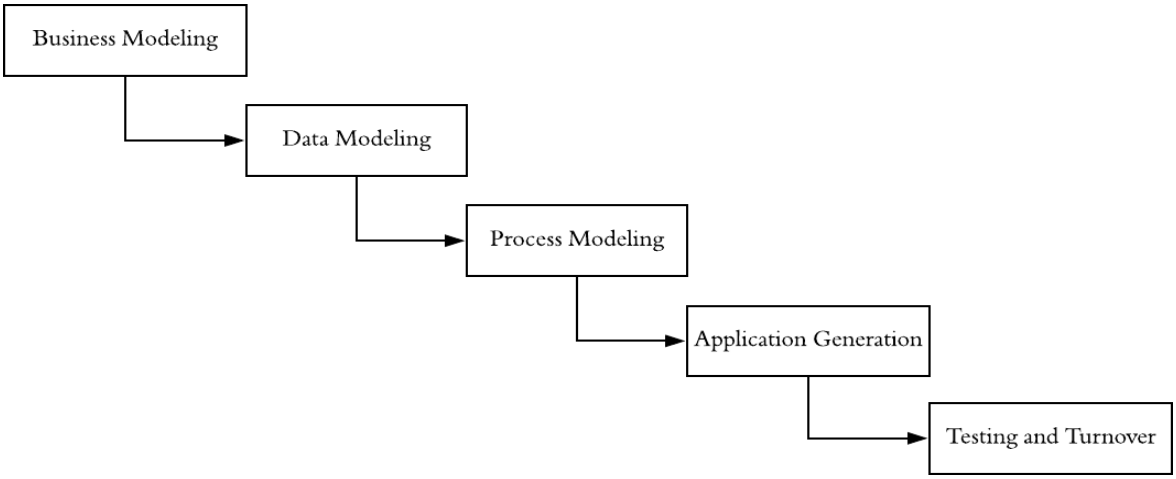
Application Generation

During the application generation phase, appropriate secret scripts are developed for the entire system using off-the-shelf documents such as use case diagrams, ER diagrams, and alternative knowledge modeling documents.

Testing and Turnover

After developing the system, various tests were performed as shown below. We use different types of tests such as unit tests, implementation tests, system tests, and acceptance tests to check whether the system is working properly and fulfilling all its functionalities.

The diagrammatical representation of RAD Model is mentioned below:-

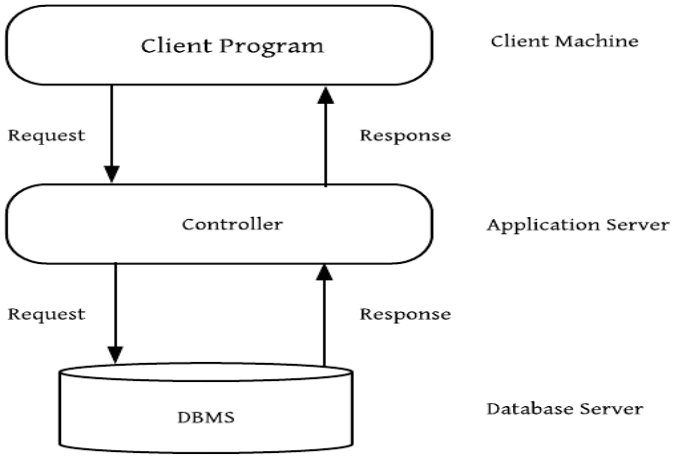


Rapid Application Development (RAD)

2.4 System Architecture

Our system is a 3-tier architecture. H. A client-server architecture in which functional process logic, data access, computer data storage, and user interfaces are developed and maintained as independent modules on separate platforms. A three-tier architecture is a software design pattern and an established software architecture.

A 3-tier architecture allows each of the 3 tiers to be upgraded or replaced independently. The user interface is implemented on a desktop PC and uses a standard graphical user interface with various modules running on the application server. A reasonable database management system on a database server includes computer data storage logic. The middle level is usually multi-tiered.



System Architecture

2.5 Risk Register

Identified Risk	Description	Effect	Mitigate risk
User Interface	This is the process of creating the user interface of the system with an emphasis on appearance. Users should be able to easily understand and enjoy the content.	Without good user interface design, your software will not be successful in the long term, affecting your entire system business.	The design of the system focuses on current market trends.
Time and Cost	The total time and cost required to complete the project.	If the project is not completed within the given timeframe, costs can increase, which is a problem for the developer and the team as a whole.	Find out about the cost and time it will take to complete the project.
Documentation	It is a written form of material that provides official information or evidence that acts as a record.	Poorly documented system software makes it difficult for users and developers to work with.	Document each task properly.
Lack of information of business trend	Information about the current business development of the system is necessary for the success of the system.	Projects are not suitable to compete with other software and may fail.	Research various articles and internet sources to get more information about current business trends.

CHAPTER3 : ANALYSIS

3.1 Feasibility Study

A feasibility study is one that takes into account all factors related to a project, including economic, legal, technical and scheduling considerations, in order to determine the likelihood of successful completion of the project analysis. A feasibility study also helps determine the future success of a project by analyzing the project from various aspects such as: B. Is it practical for future use? Also, will this system be beneficial to the users who use this system? Will this system help solve the problems of the existing system of voting procedures? A feasibility study is required before it can be launched. In order to determine whether the development of this system will be successful, a feasibility study will be conducted as shown below.

3.1.1 Economical Feasibility

Economic analysis is used to assess the effectiveness of the system. Also known as cost-benefit analysis, this is the process of identifying benefits and savings that are excluded from the system and comparing these to the costs. Decisions are made about the design and implementation of the system. OPMS is economically viable because it is developed using existing tools and software. Additionally, organizations implementing this system do not require additional hardware resources.

3.1.2 Operational Feasibility

Operational feasibility deals with whether the organization's needs can be met through project completion. It also examines how the project plan meets the requirements identified during the requirements analysis phase of system development. An online payroll system is operational because it has a good infrastructure, is easy to understand and easy to implement. Operational activity is very fast, so modules can be developed in the shortest possible time and with less effort.

3.1.3 Technical Feasibility

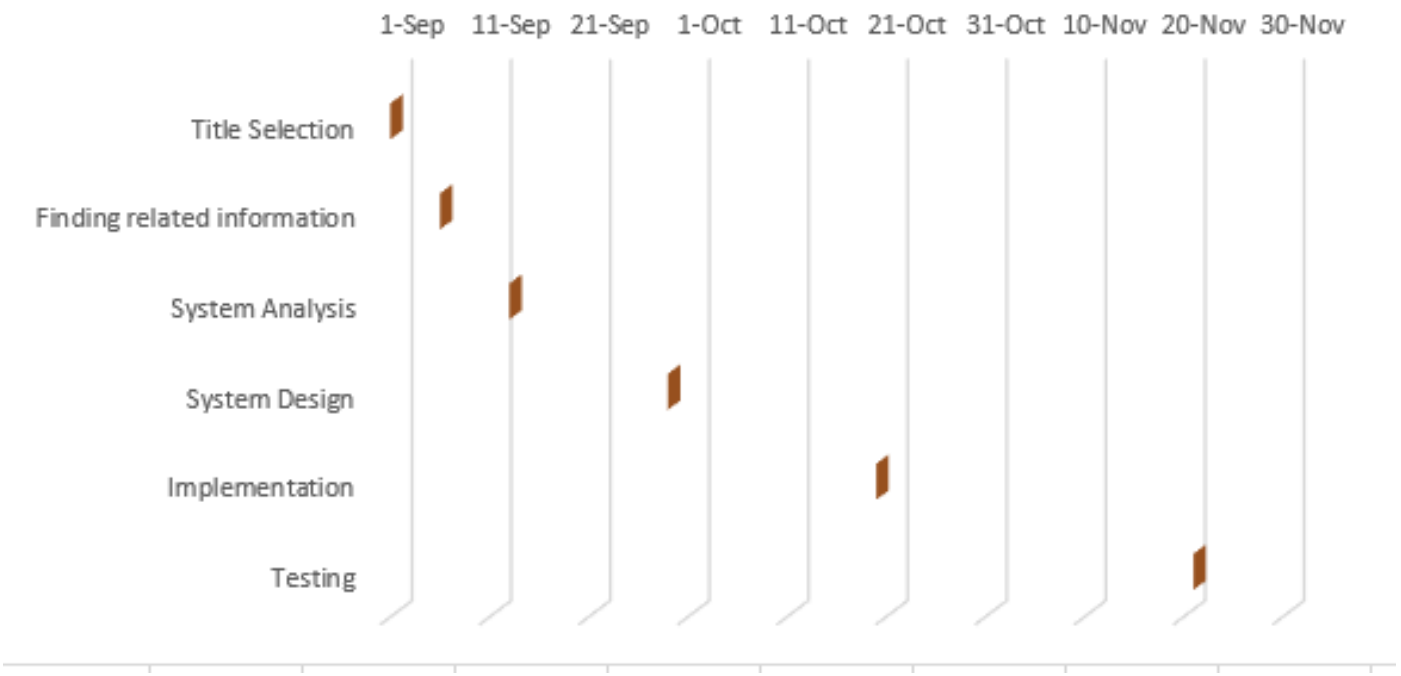
Technical feasibility means whether the available hardware, software and technical resources can meet the requirements of the system. It focuses on existing systems and how well they can support proposed systems. An online payroll system does not require high-end technology to function. This system offers a higher level of user friendliness. It's also cheap to maintain. Therefore, this system is technically feasible.

3.1.4 Legal Feasibility

Online Payroll Management System doesn’t conflict with any legal requirements like data protection acts or social media laws.

3.1.5 Scheduling Feasibility

It is most important for project success. In scheduling feasibility, an organization estimates how much time the project will take to complete. Online Payroll Management System is schedulable and hence can be completed in estimated time. My project is divided into six parts in the Gantt chart below. As shown in figure Title selection has taken 5 days, finding related info has taken 6 days, system analysis has taken 15 days, system design has taken 20 days, implementation has taken 30 days and testing has taken 5 days as in the figure. The Gantt chart for our project is below:



Gantt Chart Showing Project Schedule

3.2 Functional Requirements

A functional requirement is a requirement specifically requested by an end user as a basic function that the system should provide. Integrating all these functions into the system is essential. This online payroll management system must meet the following requirements:

- **Administrator Aspect**
    1. Create/Edit/Delete admin and employee's account.
    2. Adding Deductions
    3. Creating/Editing/Deleting positions
    4. Generate pay slip
    5. Adding attendance
    6. Taking backup of the database

- **Employee Aspect**
    1. Logging into the system for attendance
    2. Check time in
    3. Check time out

- **Analysis**
    1. Authenticating employees based on employee id.
    2. Keeping track of employee.
    3. Keeping history of employee's working hours.

3.3 Non-Functional Requirements

Non-Functional Requirements are the quality constraints that the system must satisfy according to the project contract. The non-functional requirements for this system are:

- **Performance Requirements**

  The database shall be able to accommodate multiple records of employees. The system shall support use of multiple employees at a time. There are no other specific performance requirements that will affect development.

- **Safety Requirements**

  The database may get crashed at any time due to virus or operating system failure. Therefore, it is required to take the database backup.

- **Security Requirements**

  Some of the factors that are identified to protect the system from accidental or malicious access, use, modification, destruction or disclosure are described below.

  1. Keep specific log or history data sets.
  2. Assign certain functions to different modules.
  3. Restrict communications between some areas of the program.
  4. Check data integrity for critical variables.
  5. Incorporate encryption techniques in the user/license authentication process.
  6. Communication needs to be restricted when the application is validating the user or license.

3.4 System Requirements

This is a requirement for the system to run on any device or computer. These requirements are absolutely necessary for the software to run without errors or troubles. I have broken this down into two parts: Software and hardware specification.

3.4.1 Hardware Specification

- Pentium Processor Computer With:
  - 5GB free Hard Disk Drive space
  - Windows keyboard and Mouse

3.4.2 Software Specification

- OPERATING SYSTEM including

  Windows 7, Windows 8, Windows 10

- Linux, Unix or Mac
- XAMPP server needed for local host
- Some antivirus software for some security reasons.
- Browsers such as Chrome, Mozilla Firefox, Microsoft Edge.

3.4.3 Tools and Techniques

- HTML

  HTML is the standard markup language for documents designed to be displayed in a web browser. It has been used in this project to create HTML forms where user can input data that is sent to a server for processing and HTML tables for displaying data.

- CSS

  CSS is a style sheet language used for describing the presentation of a document written in a markup language like HTML. It has been used in this project to style the anchor tag, html tables and to create loading spinner.

- Bootstrap

  Bootstrap is a free and open-source CSS framework directed at responsive, mobile-first front-end web development which contains CSS- and JavaScript- based design templates for typography, forms, buttons, navigation and other interface components. It has been used in this project to style form input fields and make layout responsive.

- MySQL

  MySQL is an open-source relational database management system. It has been used in the application to store information of different employees and other data required in an application.

- Visual Paradigm

  Visual Paradigm is a UML Case Tool supporting UML 2, SysML and Business Process Modeling Notation (BPMN). It has been used in this system to draw Data Flow Diagram, Use Case Diagram and ER Diagram.

- GitHub

  GitHub is a platform for code sharing and version controlling.

- Visual Studio Code

  Visual Studio Code is a freeware source-code editor made by Microsoft for Windows, Linux and MacOS.

- Microsoft Word

  Microsoft Word is developed by Microsoft. Word Processor is used for documentation.

3.5 System Design

Architectural Design

This architectural design identifies the sub-systems making up a system and the framework for sub-system control and communication. The output of this design process is a description of the software architecture. The components of the Online Payroll Management System are as follows:

- **Admin Dashboard**

  The admin dashboard can be used only by admins of application. It consists of interface for managing employee, salary, pay roll etc.

  - **Employee Registration**

    This module allows admin to create employees. Employees are registered by admins, so that they can access the system using their details.

  - **Employee Management**

    The admin can update existing employees, remove it as well as add new user by using graphical interface.

  - **Pay Roll Management**

    The admin can manage employee's payroll

- **User View**

  The user view allows users i.e., employees to do attendance.

  - **Time In**

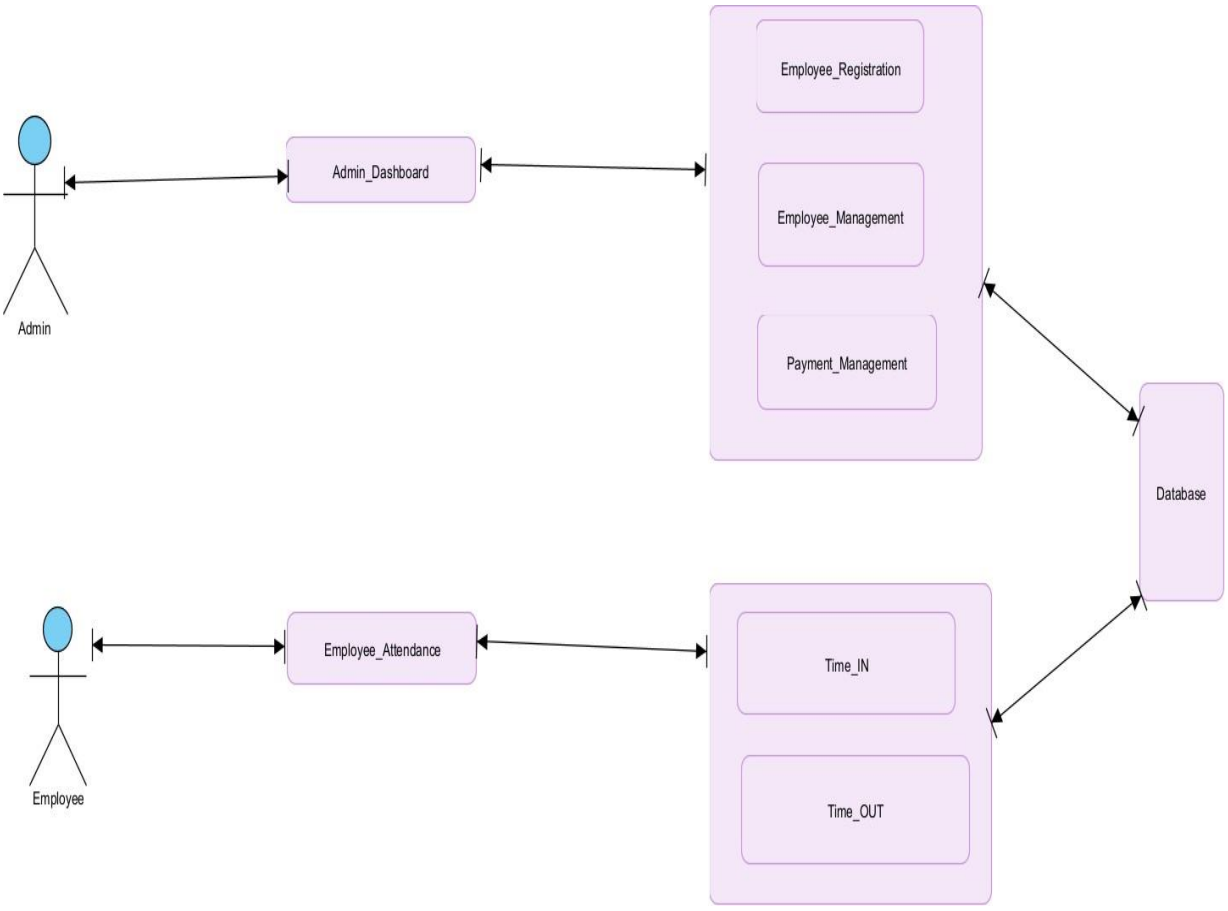
    The employees can check in using their employee id.

  - **Time Out**

    The employees can check out using their employee id.

The architecture diagram below gives us an overview of how the system actually works. As we can see in the image below, you can easily see how the OPMS system works.

Managers can register, manage and pay for employees from the admin dashboard, the data is stored in the database, employees can clock in on and off hours, the data is stored in the database will be So this architecture diagram gives an overview of how the system works.

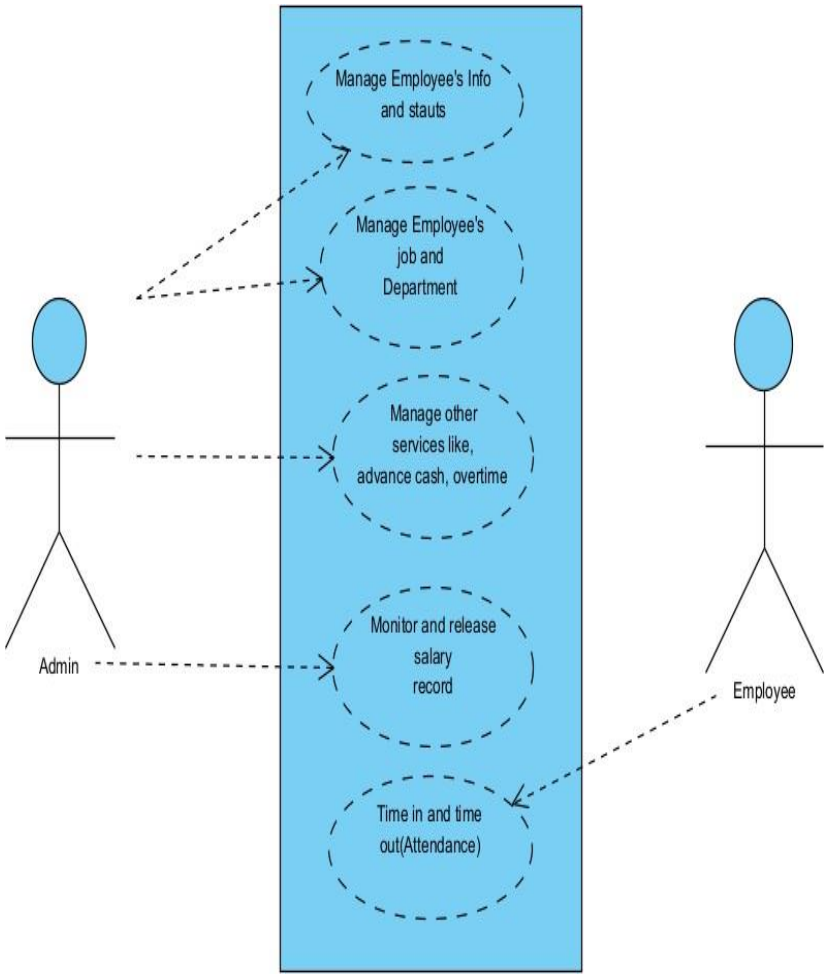


Architecture Diagram of Online Payroll Management System

CHAPTER4 : SYNTHESIS

4.1 Use case Diagram

Use case diagram is a technique for capturing the functional requirements of a system. In the diagram below We have two actors, Admin and Employee. Admin has four roles in the system and Employee has a single role that is to do the attendance. Use case diagram of this system is as follows:

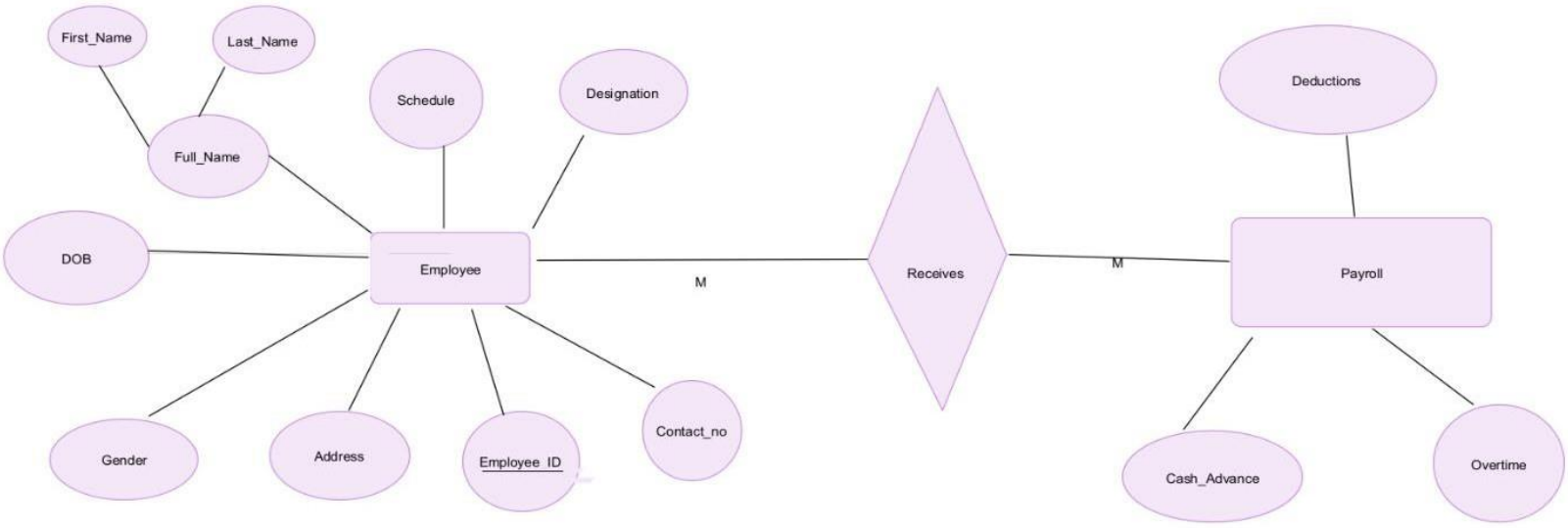


Use Case Diagram of Online Payroll Management System

4.2 ER Diagram

ER diagram is the graphical representation of the system that shows the relations between the entities of the system. The below diagram shows the ER diagram of the system. The entities present in the diagram are Employee, Pay roll.

In the below ER diagram, there are two entities and several attributes related to them. The primary key is Employee_Id, there is many to many relation between the two entities. Entities are shown in rectangular box, attributes in oval box and relationship between them in a diamond box.

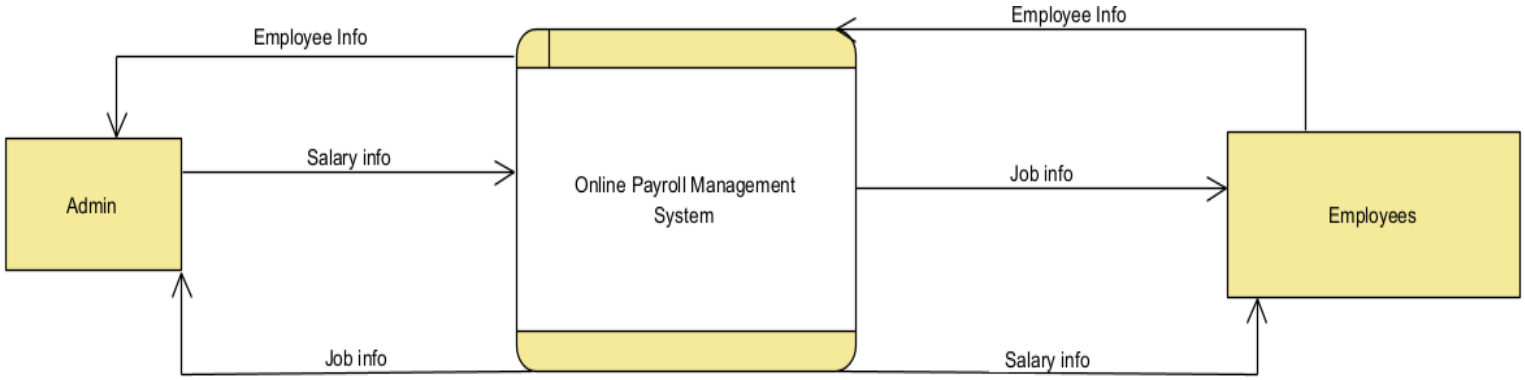


Entity Relationship Diagram for Online Payroll Management System

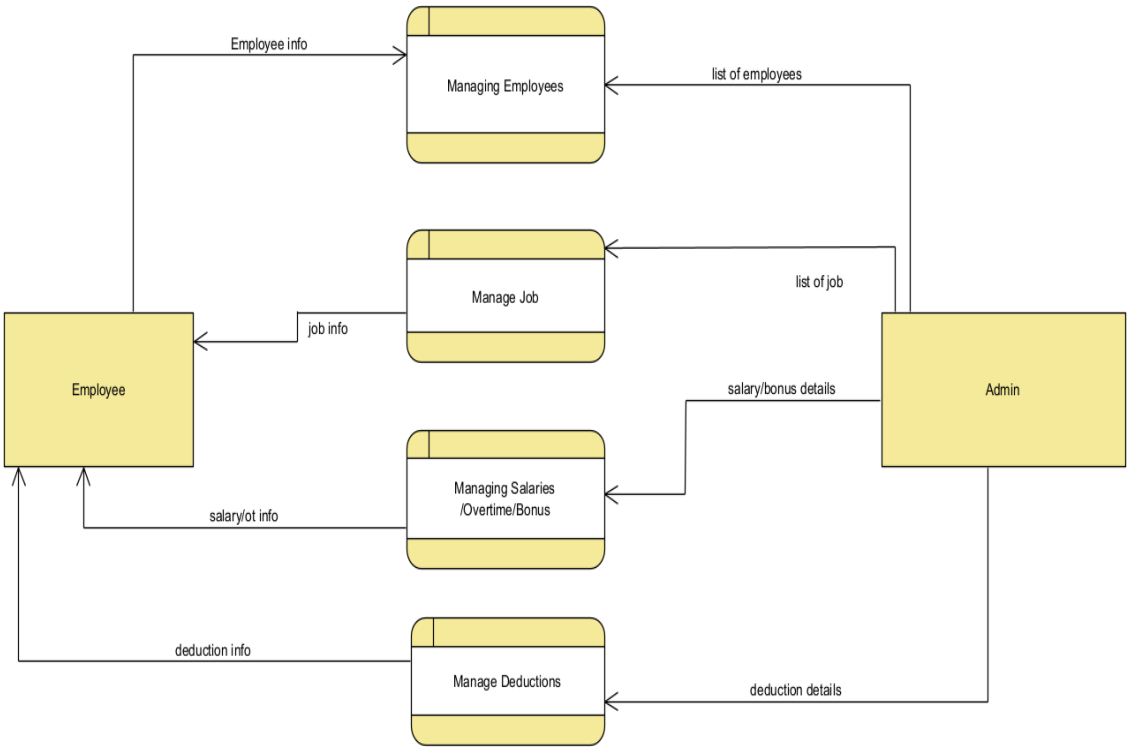
4.3 Data Flow Diagram

Data Flow Diagram is a graphical diagram that shows the flow of data between various functions of system and specifies how the current system is implemented. The figure below shows the data flow diagram for the Online Payroll Management System.

In the below context diagram, the system is Online Payroll Management system and it is showing the flow of data among the System, Admin and Employees. This diagram is showing interaction between the components.



Context Diagram for Online Payroll Management System

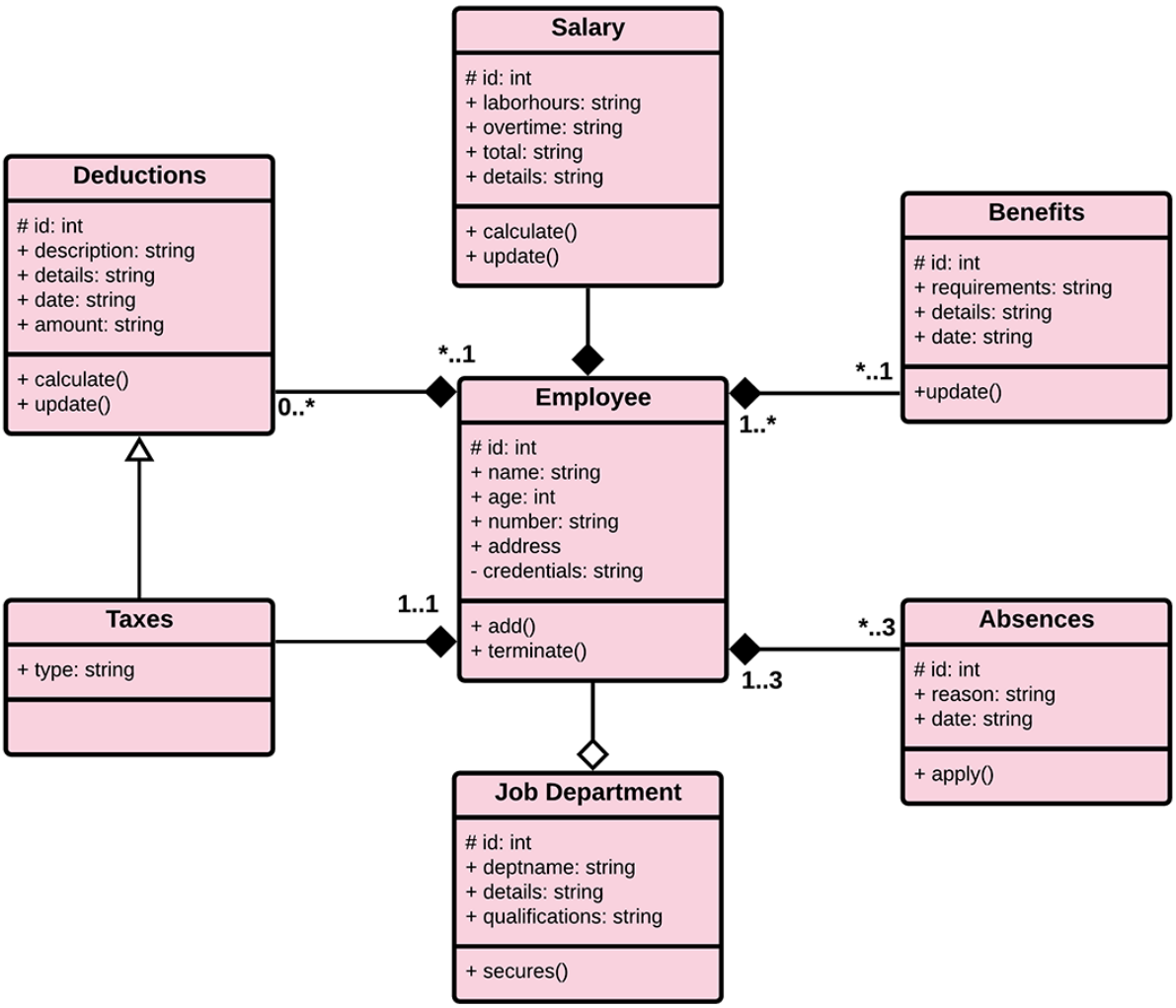


Level 1 DFD for Online Payroll Management System

Now in the diagram our system is further divided into four components and they are: Managing Employees, Manage Job, Managing Salaries/Overtime and Manage Deductions. This Level 1 DFD is exploded form of the context diagram. As more accurately and in describing way we can see how the data is actually flowing between the Employee and Admin through the various sub components.

4.4 Class Diagram

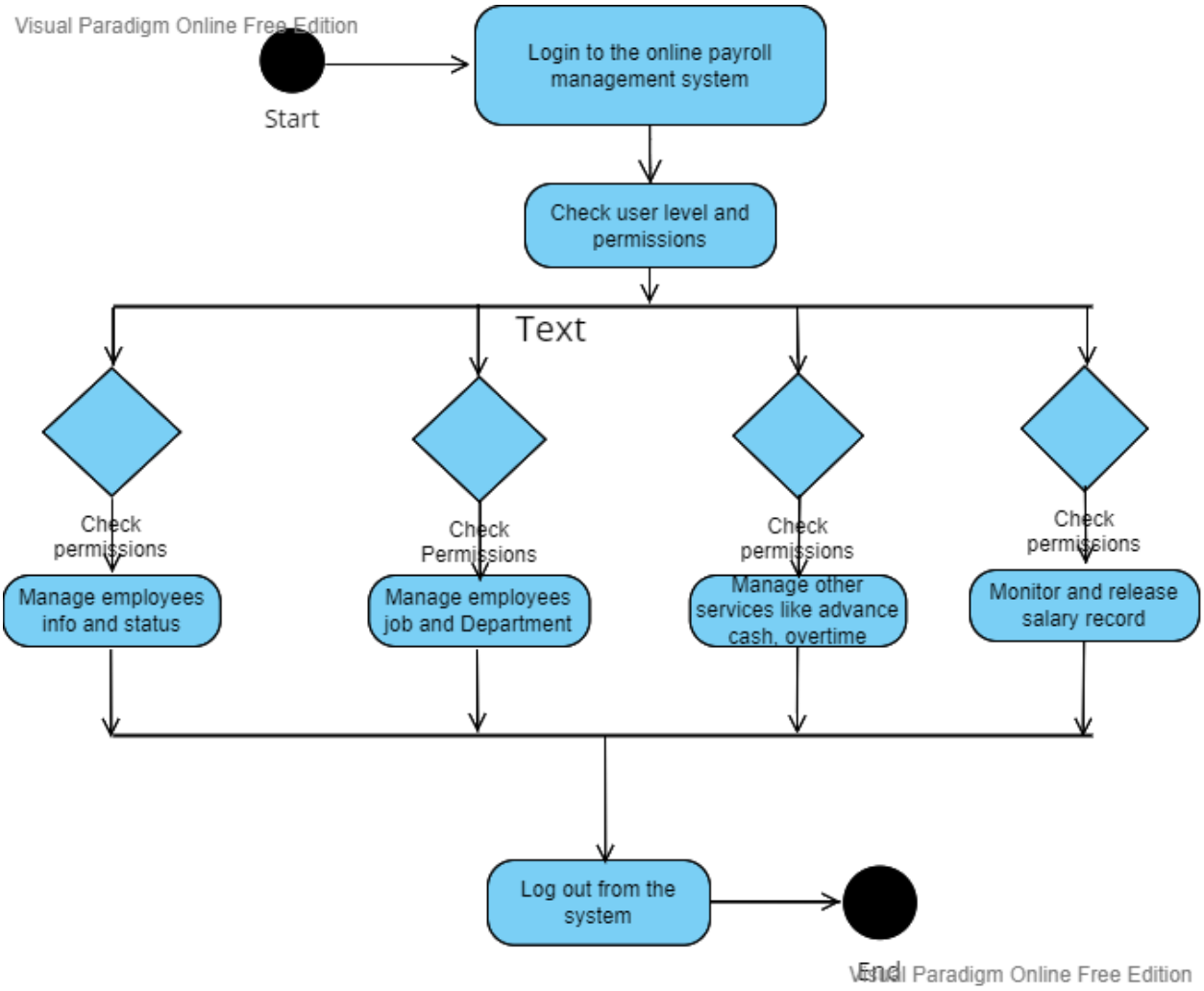
The static view of application in a static diagram by showing the classes, attributes and their methods and the relationship among different object used in the system is known as class diagram.



Class diagram for Online Payroll Management System

4.5 Activity Diagram

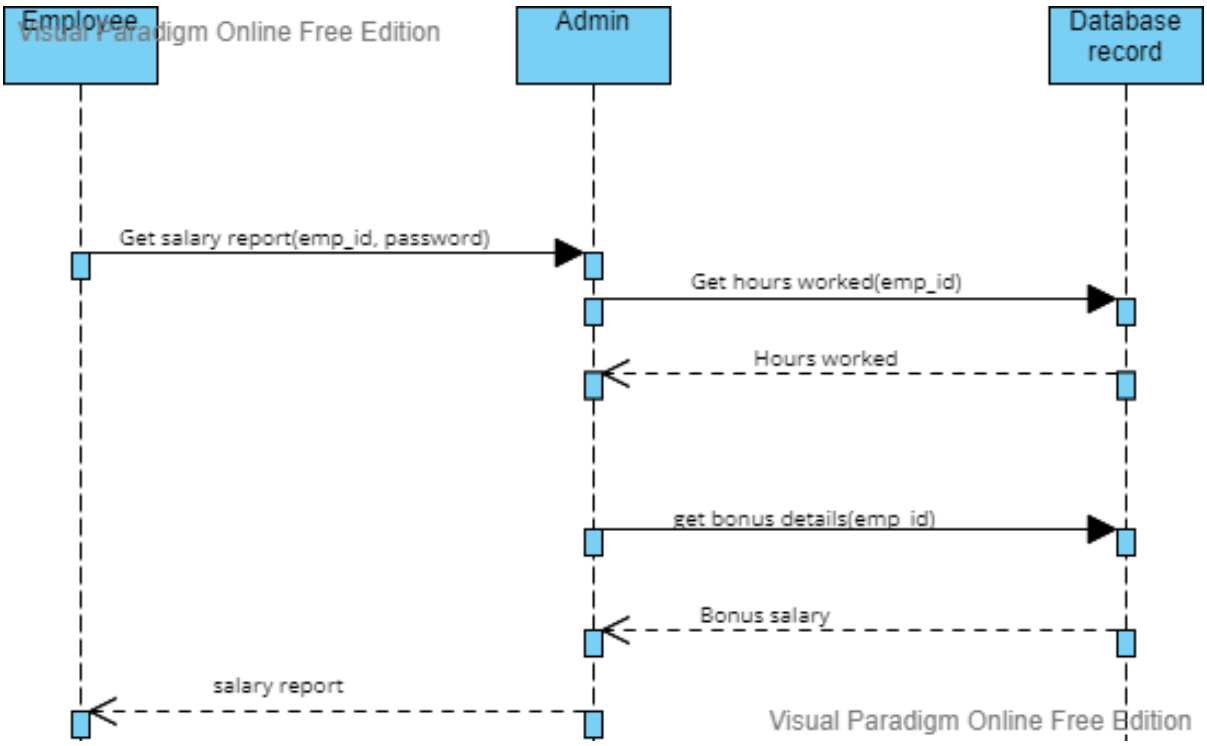
Activity diagrams, like flowcharts and data flow diagrams, represent a sequence of actions or the flow of control within a system. Activity diagrams are commonly used in business process modeling. You can also illustrate the steps with a use case diagram.



Activity diagram for Online Payroll Management System

4.6 Sequence Diagram

Sequence diagram is also known as the interaction diagram. They are used to describe the interactions between the classes by exchanging the message over the certain time. Event diagrams is also the another name for sequence diagram. There are many types of sequence notations and sequence messages used in the sequence diagram. They are used to visualize various runtime status of the system in a good diagrammatic way.



Sequence diagram for Online Payroll Management System

CHAPTER5 : EVALUATION

Different testing was conducted for the system after the system was finished. Some of the testing are:

1. Unit Testing

   All functionality of the system was tested during unit testing. Unit tests are run on the system to ensure that all code and all functional parts of the system work correctly when assigned. Each activity like login, create employee, attendance etc. has been tested individually.

   Test Case Design and Execution

Test Case for Login						
Test Case ID	**Test Case Description**	**Input test data**	**Expected Result**	**Actual Result**	**Pass/ Fail**	**Remarks**
TC-01	Open browser and enter URL	http://localhost/onlinepayrollphp/admin/	Login page should be displayed	Login page displayed	Pass	
TC-02	Enter valid admin username and password	Username: rojina Password: admin	User should get "logged in as ROLE_ADMIN"	Response message displayed as "logged in as ROLE_ADMIN"	Pass	

Test Case for Attendance						
Test Case ID	**Test Case Description**	**Input test data**	**Expected Result**	**Actual Result**	**Pass/Fail**	**Remarks**
TC-06	Login as employee	EID: EZQ327164890	Time in should be displayed	Time in displayed	Pass	
TC-07	Login as employee	EID: EZQ327164890	Time in should be displayed	Time in displayed	Pass	
TC-08	Enter invalid data or leave any field empty		"Employee id not found"	"Employee id not found"	Pass	

Test Case for Adding Employee						
Test Case ID	**Test Case Description**	**Input test data**	**Expected Result**	**Actual Result**	**Pass/Fail**	**Remarks**
TC-09	Admin should create Employee	Firstname: Sarmila Lastname:giri Address:lamjung Birthdate:2058-10-24 Contact :9861660705 Gender: female Position: Database specialist Schedule 11.30 to 7.00 Photo	Response message "Employee added Successfully"	Response message "Employee added Successfully"	Pass	
TC-10	Admin should create Employee	Firstname: rabina Lastname: giri Address:kirtipur Birthdate:2064-01-01 Contact :9849578735 Gender: female Position: Managers Schedule	Response message "Employee added Successfully"	Response message "Employee added Successfully"	Pass	

		08.00 to 15.00 Photo				

2. Integration Testing

   The integration testing of the application has been done by dividing the project into multiple modules.

Test Case Design and Execution

Test Case for Editing Employee						
Test Case ID	**Test Case Description**	**Input test data**	**Expected Result**	**Actual Result**	**Pass/Fail**	**Remarks**
TC- 01	Select Edit employee and change the details	Firstname: Sarmila Lastname:Magar Address: lamjung Birthdate:2 058-10-24 Contact: 986166070 5 Gender: female Position: Database specialist Schedule 11.30 to 7.00 Photo	Response message "employee updated"	Response message "employee updated" displayed	Pass	
TC- 02	Select Edit employee and change	Firstname: Rabina Lastname:giri Address: dh aran Birthdat	Response message "employee updated	Response message "employee updated" displayed	Pass	

	the detail s	e:2 064-01-01 Contact :9849578 73 5 Gender: female Position: Managers Schedule 08.00 to 15.00 Photo				

Test Case for Generating Payroll						
Test Case ID	**Test Case Description**	**Input test data**	**Expected Result**	**Actual Result**	**Pass/ Fail**	**Remarks**
TC-05	Select Payroll Generation tab and click on generate payroll	Employee details	"Payroll should have been displayed in pdf format"	"tcpdf error"	Fail	
TC-06	Select Payroll Generation tab and click on generate payroll	Employee details	Payroll should have been displayed in pdf format	As expected	Pass	

CHAPTER6 : CONCLUSION AND FUTURE ENHANCEMENT

6.1 Conclusion

Online Payroll Management System is a web application developed using open- source platform. The main focus of the Online Payroll Management System is to establish a smart, efficient, secure and reliable paperless payroll management system. It can be easily adopted by businesses to make their payment system more secure and flexible. The system is he divided into two main subsystems (administrators and employees) and is designed to bring maximum benefit to the system by carefully describing each subsystem service. With effective use, any company can apply an online payroll management system for fast payroll processing and get better results in less time.

The online payroll management system is a user-friendly system that is very easy to use and convenient. The system is complete in the sense that it is operational and tested by entering data and generating reports in the correct order. But there is always room for improvement and improvement. During development, we follow coding standards to facilitate maintainability and extensibility.

Online payroll systems are designed primarily for businesses, but can be modified for larger organizations. The web-based features and technologies that enabled the creation of this system make it extremely easy to implement and even easier to use. The user interface is also user-friendly, making it easy for users with minimal computer skills to operate the system.

6.2 Future Enhancement

Current system provides only management of employees and pay slip generation. In this project, admin has the most of the role and employees can only do the attendance portion by entering the employee id.

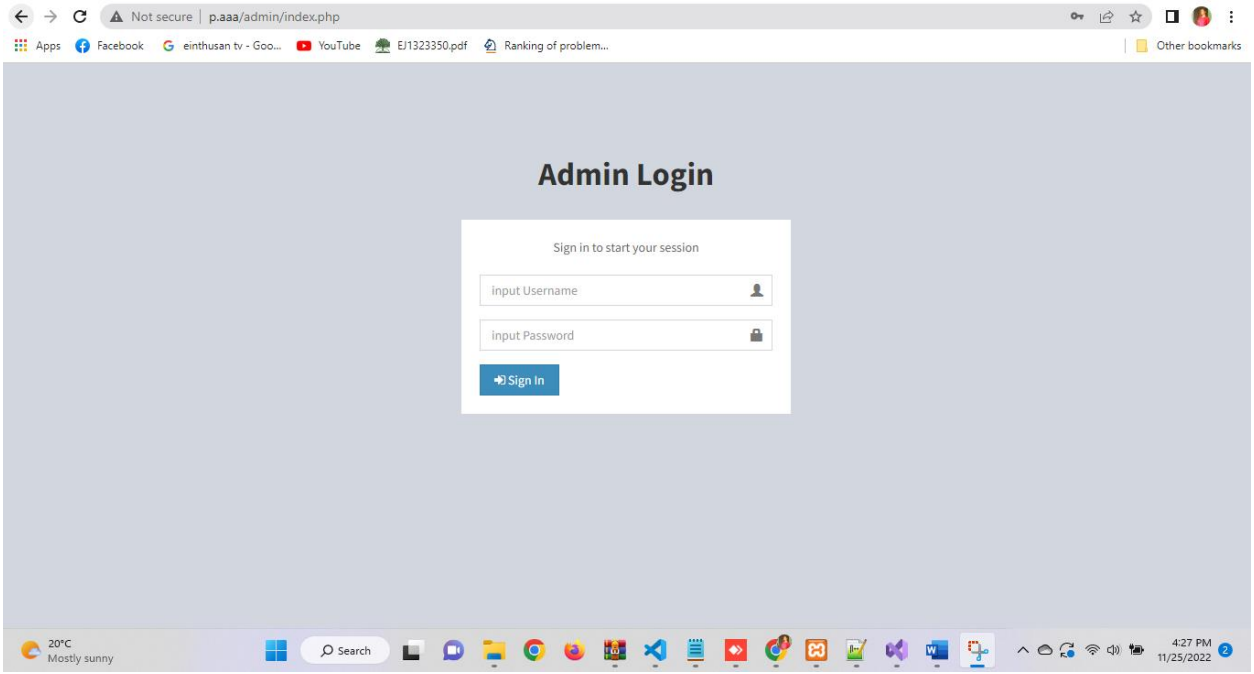
But this project can be further modified and advanced by adding bar code login feature for employees and also employee should have been able to view their status. In future this project can also add features also to directly pay from this application by integrating with payment gateways. More security can be added to the employee portion by proving them password as well.

User Interface Design

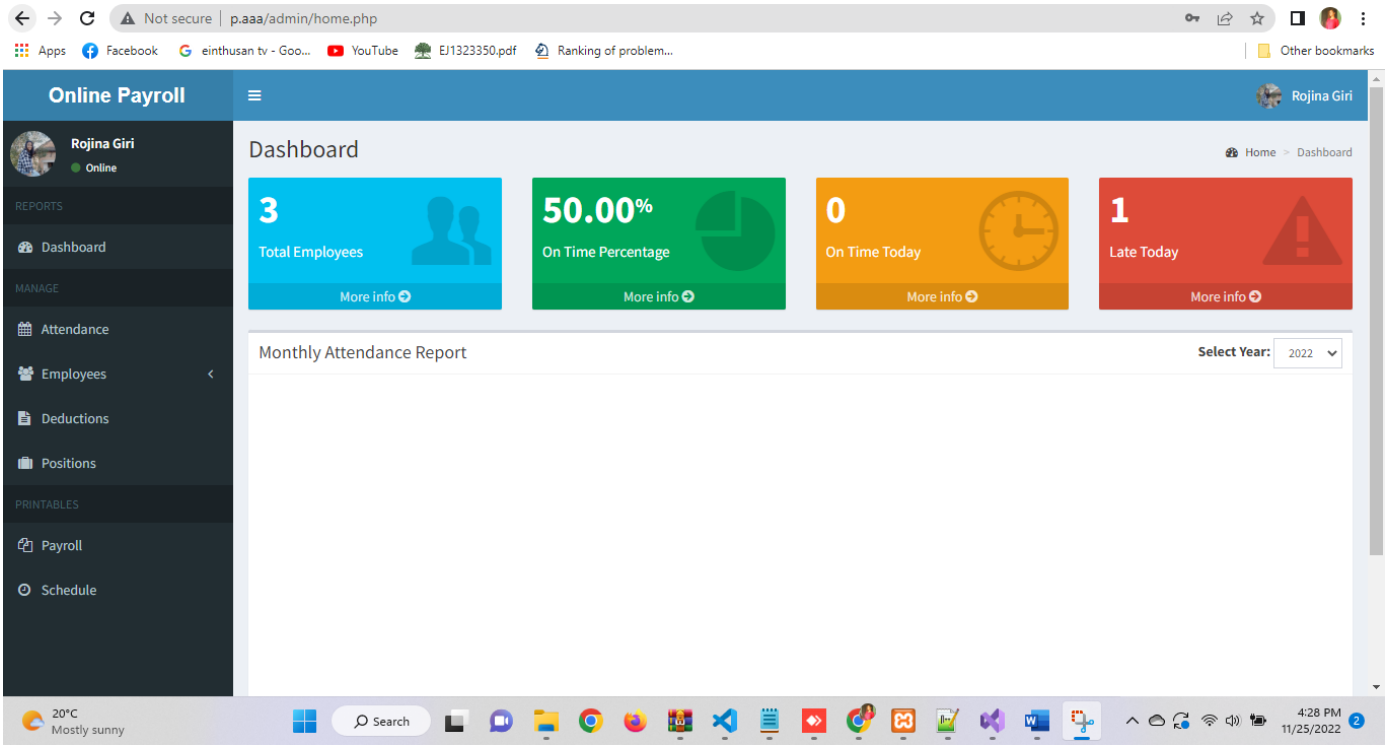
Interface is the medium through which the user communicates with the application. The user interface acts as a mediator between the user and the system. The interface of the Online Payroll Management System is user friendly.

The interface elements for the Online Payroll Management System are as follows:

Admin login page

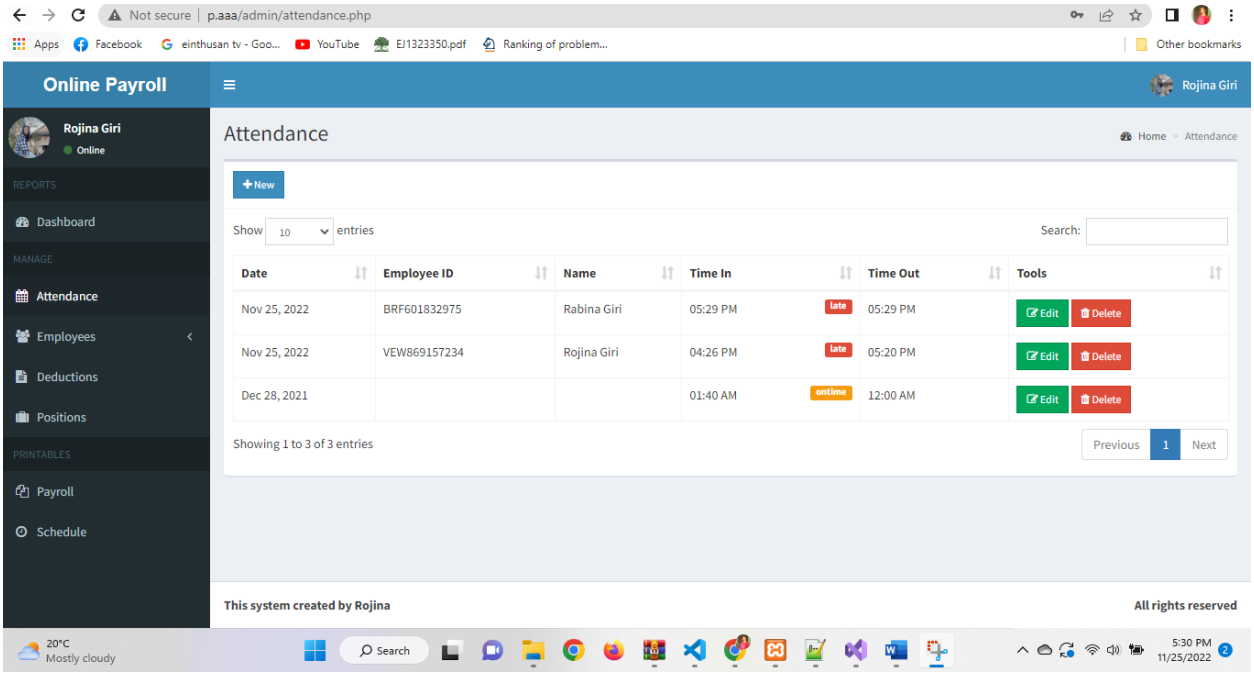


Admin Dashboard

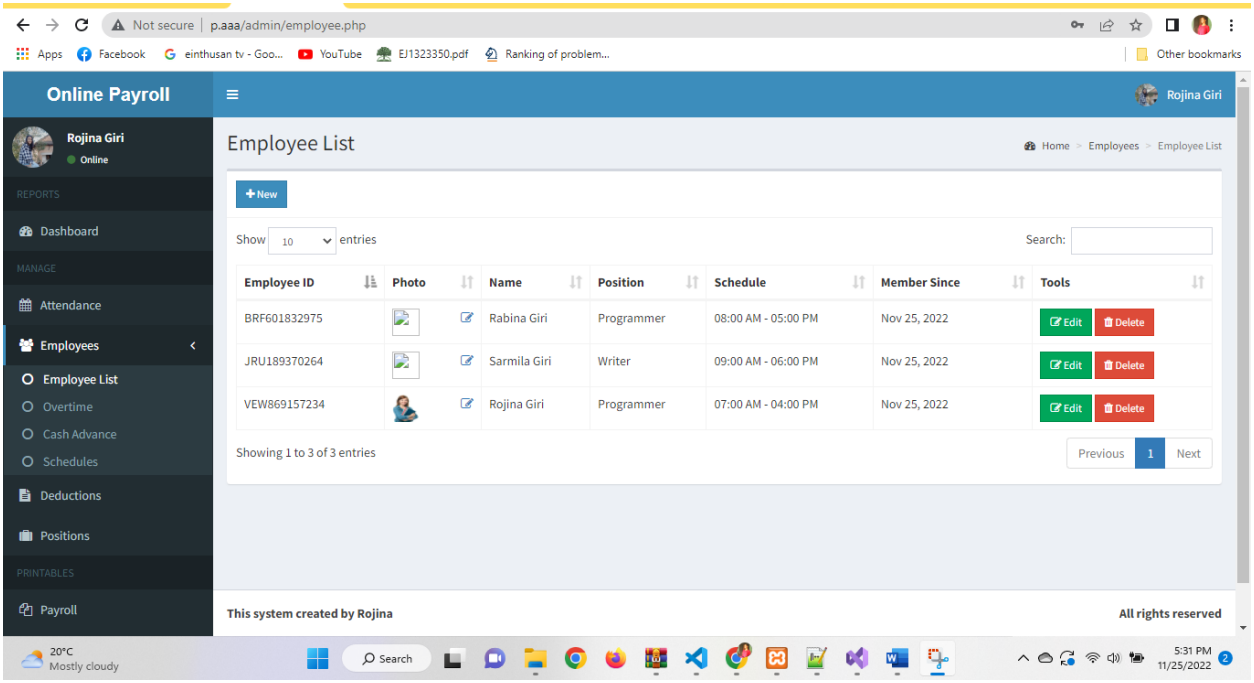


Dashboard is used in OPMS application to navigate to different application menus where user can add, view components. Here side navbar has all the options to choose from and admin can perform whatever action he wants to by clicking on the buttons of the navbar.

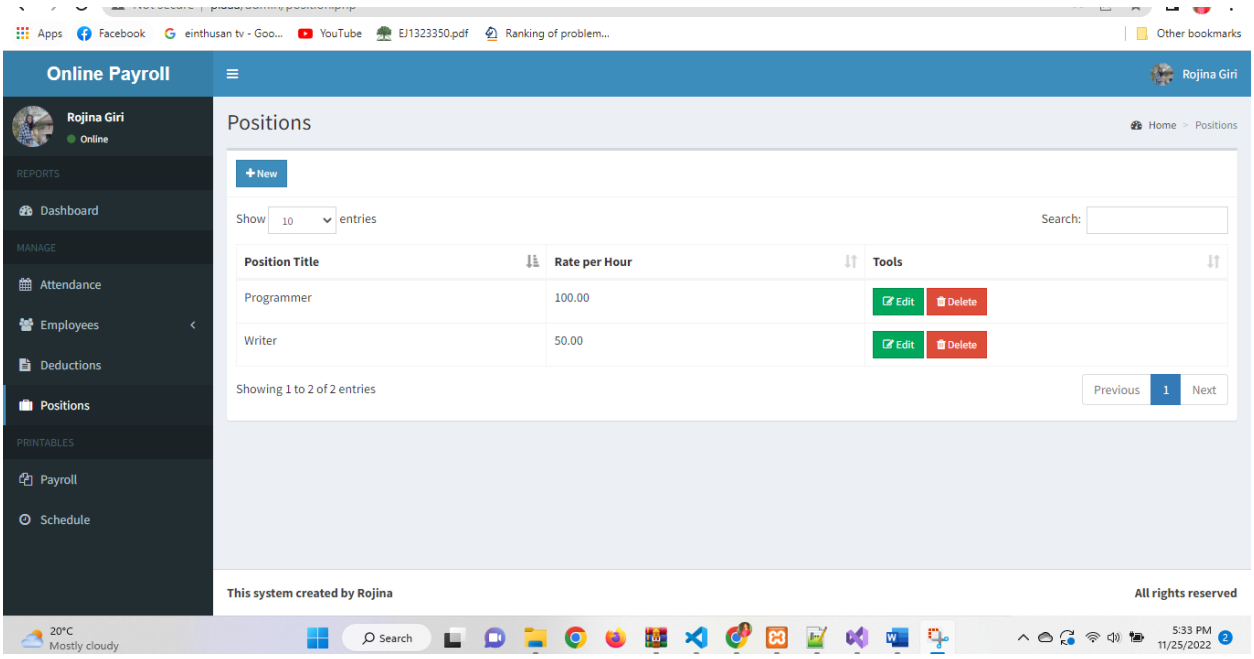
Attendance


Not secure | p.aaa/admin/attendance.php
Apps
Facebook
einthusan tv - Goo...
YouTube
EJ1323350.pdf
Ranking of problem...
Other bookmarks
Online Payroll
Rojina Giri
Online
REPORTS
Dashboard
MANAGE
Attendance
Employees
Deductions
Positions
PRINTABLES
Payroll
Schedule
Rojina Giri
Attendance
Home > Attendance
+ New
Show 10 entries
Search:
Date
Employee ID
Name
Time In
Time Out
Tools
Nov 25, 2022
BRF601832975
Rabina Giri
05:29 PM
late
05:29 PM
Edit
Delete
Nov 25, 2022
VEW869157234
Rojina Giri
04:26 PM
late
05:20 PM
Edit
Delete
Dec 28, 2021
01:40 AM
ontime
12:00 AM
Edit
Delete
Showing 1 to 3 of 3 entries
Previous
1
Next
This system created by Rojina
All rights reserved
20°C
Mostly cloudy
Search
5:30 PM
11/25/2022

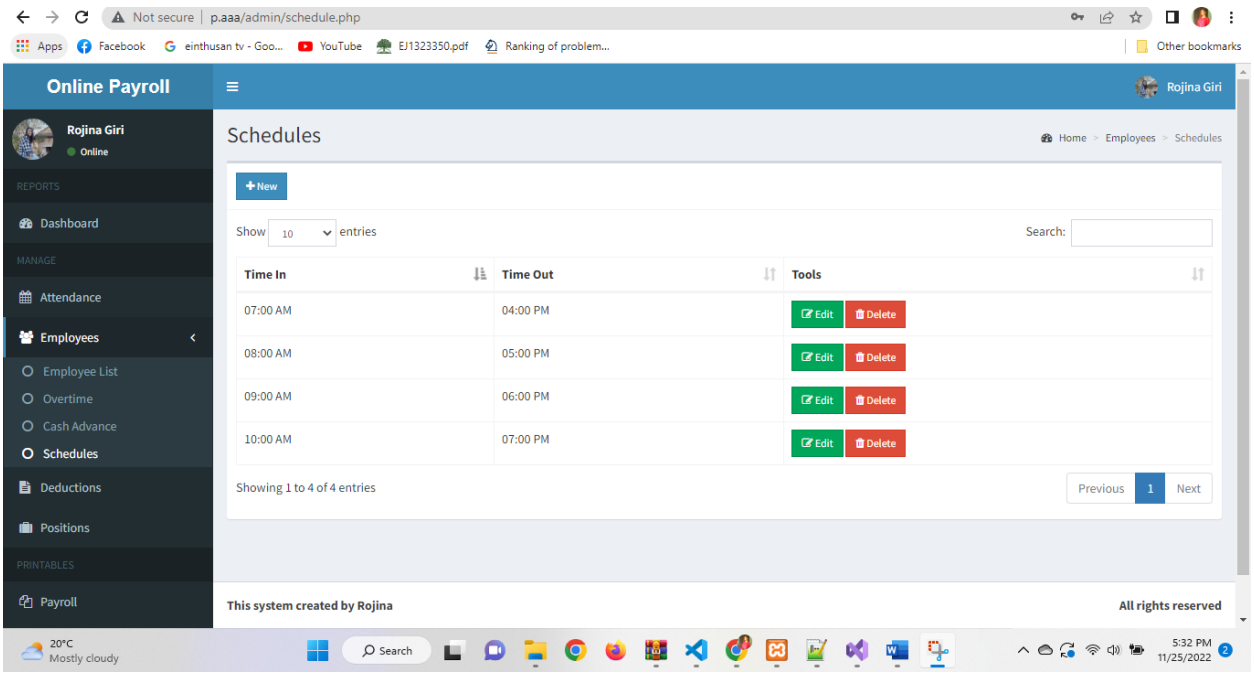
Employees List



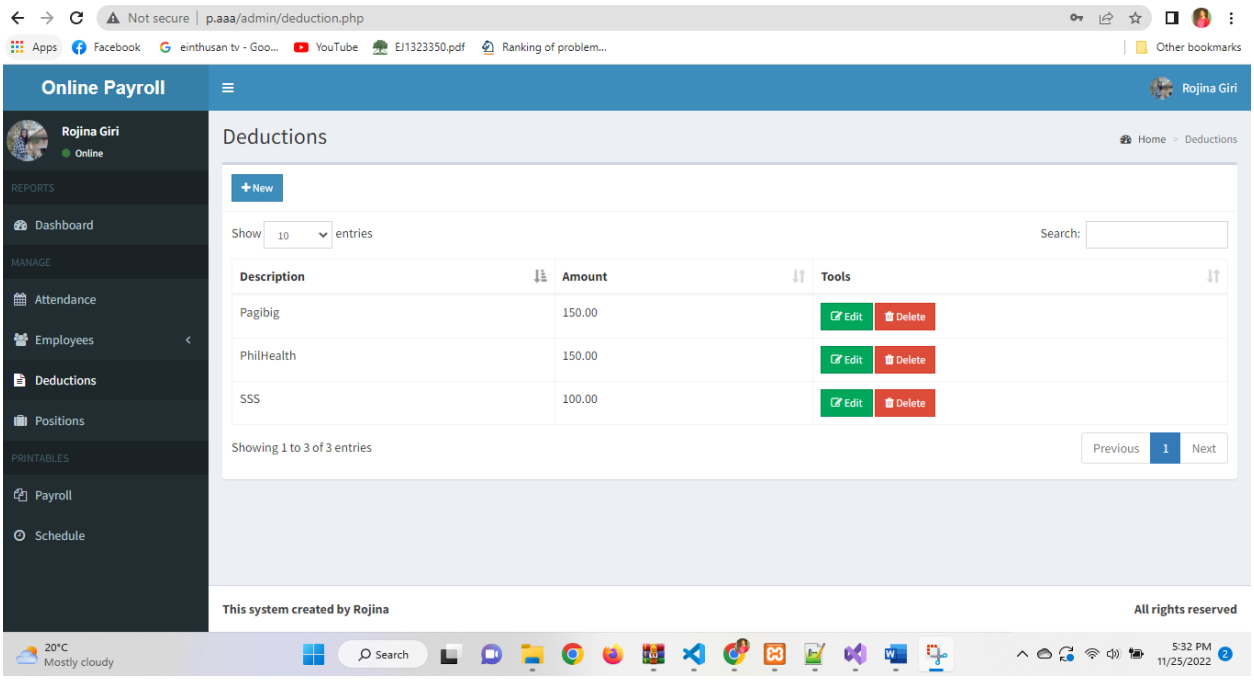
Employees Positions



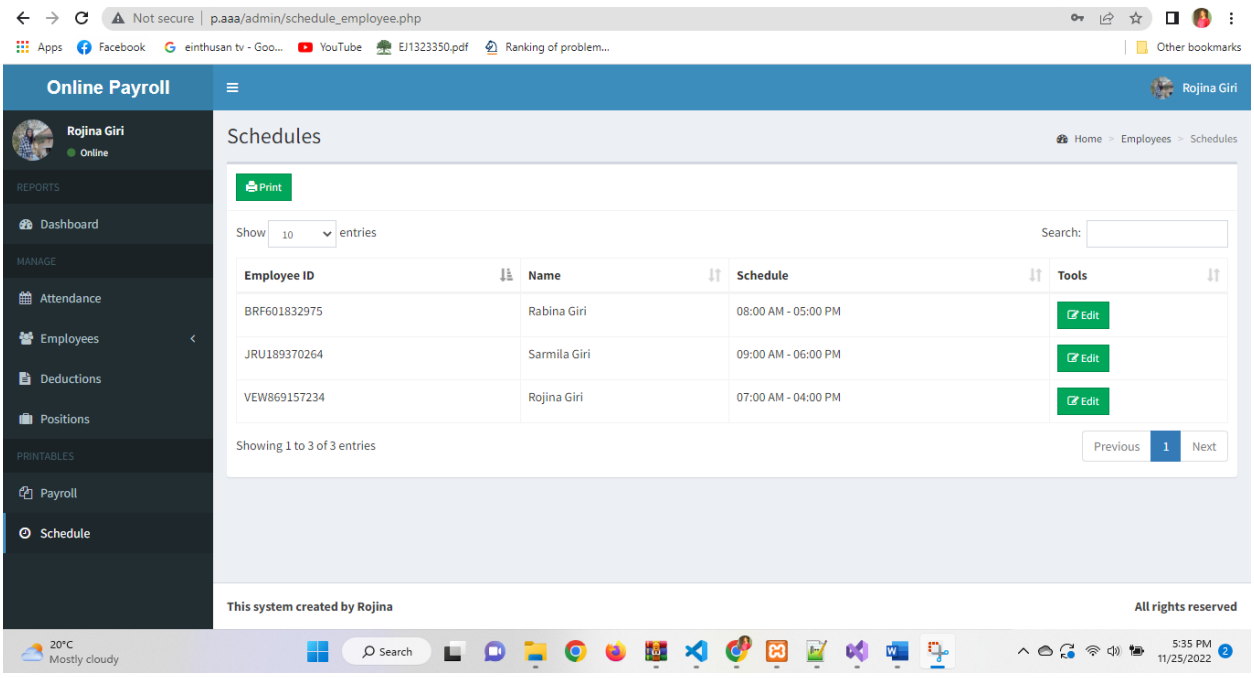
Employees Schedule



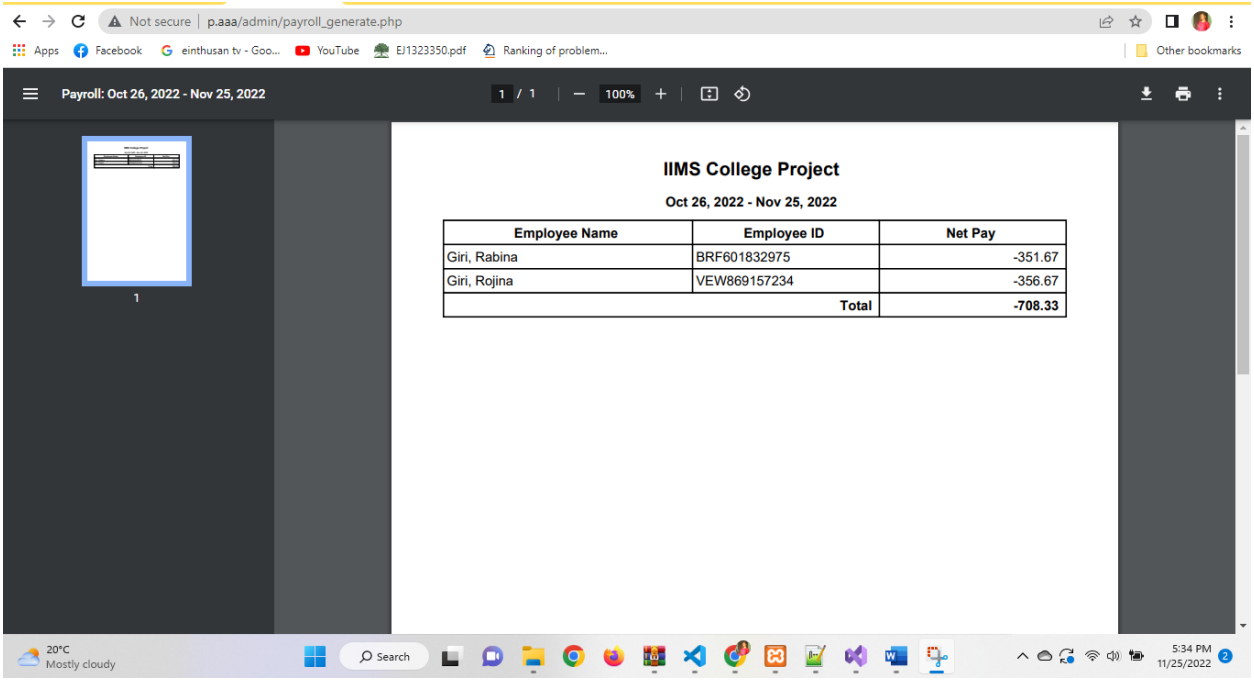
Deductions


Not secure | p.aaa/admin/deduction.php
Apps
Facebook
einthusan tv - Goo...
YouTube
EJ1323350.pdf
Ranking of problem...
Other bookmarks
Online Payroll
Rojina Giri
Online
REPORTS
Dashboard
MANAGE
Attendance
Employees
Deductions
Positions
PRINTABLES
Payroll
Schedule
Rojina Giri
Deductions
Home > Deductions
+New
Show 10 entries
Search:
Description
Amount
Tools
Pagibig
150.00
Edit
Delete
PhilHealth
150.00
Edit
Delete
SSS
100.00
Edit
Delete
Showing 1 to 3 of 3 entries
Previous
1
Next
This system created by Rojina
All rights reserved
20°C
Mostly cloudy
Search
5:32 PM
11/25/2022

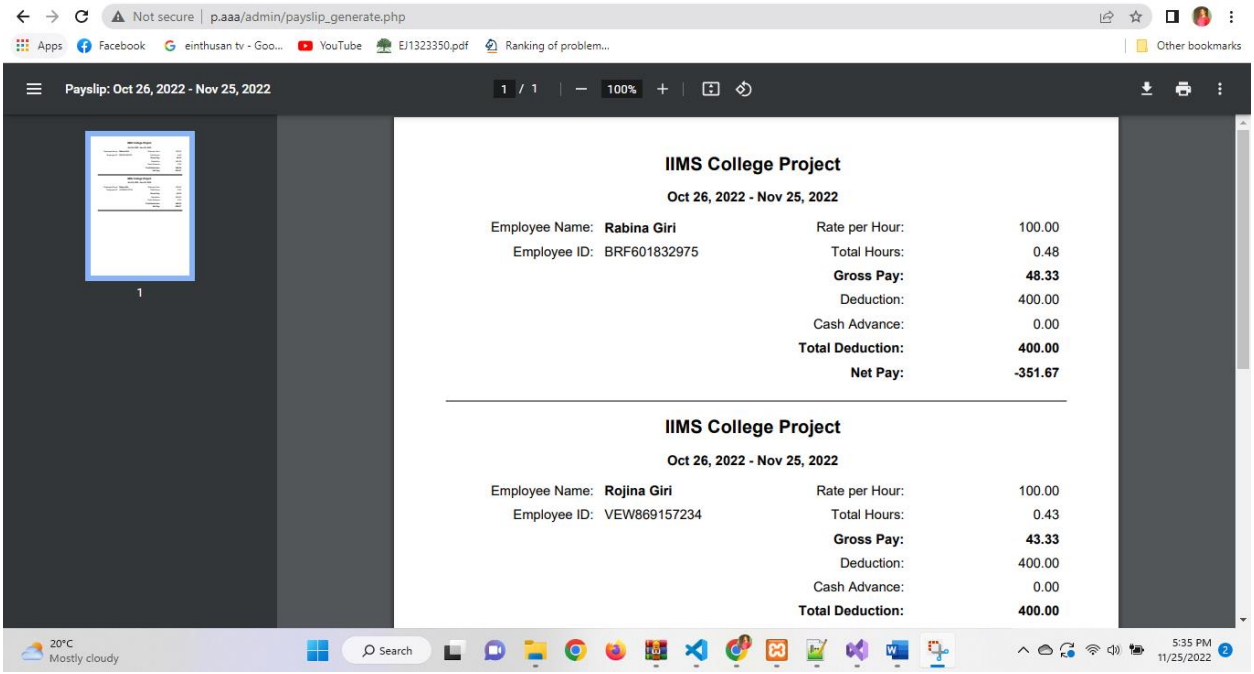
Schedules


Not secure | p.aaa/admin/schedule_employee.php
Online Payroll
Rojina Giri
Online
REPORTS
Dashboard
MANAGE
Attendance
Employees
Deductions
Positions
PRINTABLES
Payroll
Schedule
Schedules
Home > Employees > Schedules
Print
Show 10 entries
Search:
Employee ID
Name
Schedule
Tools
BRF601832975
Rabina Giri
08:00 AM - 05:00 PM
Edit
JRU189370264
Sarmila Giri
09:00 AM - 06:00 PM
Edit
VEW869157234
Rojina Giri
07:00 AM - 04:00 PM
Edit
Showing 1 to 3 of 3 entries
Previous
1
Next
This system created by Rojina
All rights reserved

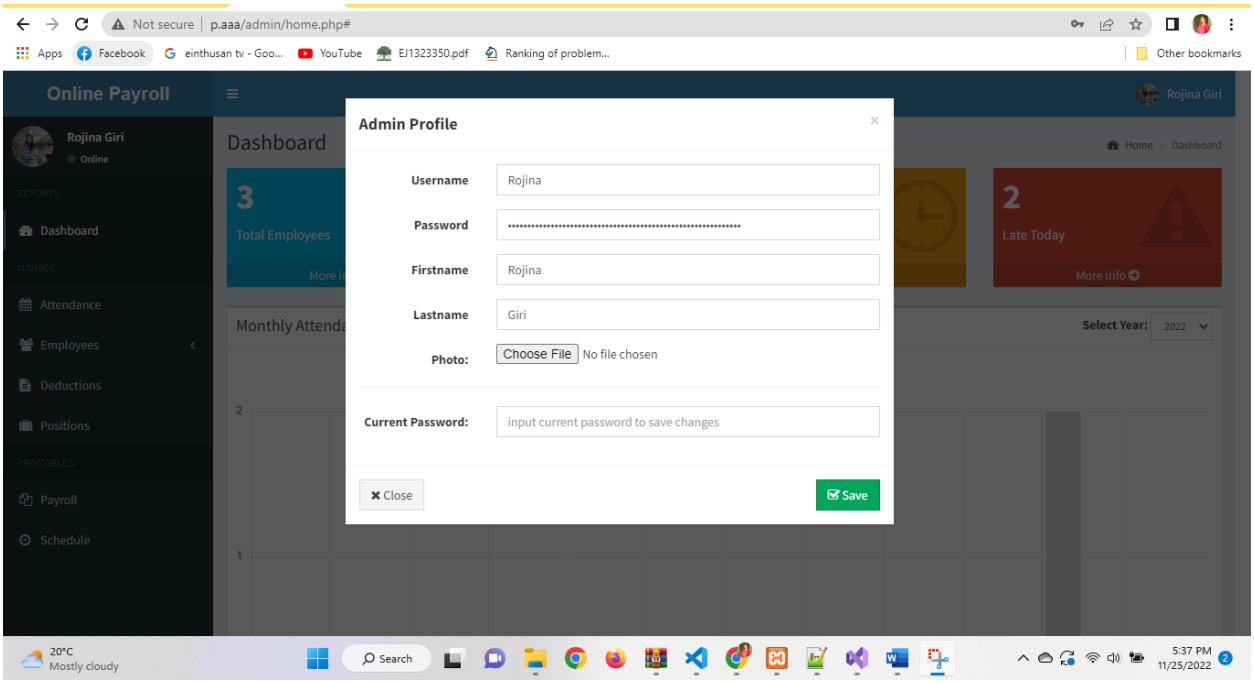
Payroll


Not secure | p.aaa/admin/payroll_generate.php
Payroll: Oct 26, 2022 - Nov 25, 2022
1 / 1
100%
IIMS College Project
Oct 26, 2022 - Nov 25, 2022
Employee Name | Employee ID | Net Pay
Giri, Rabina | BRF601832975 | -351.67
Giri, Rojina | VEW869157234 | -356.67
Total | -708.33
20°C
Mostly cloudy
Search
5:34 PM
11/25/2022

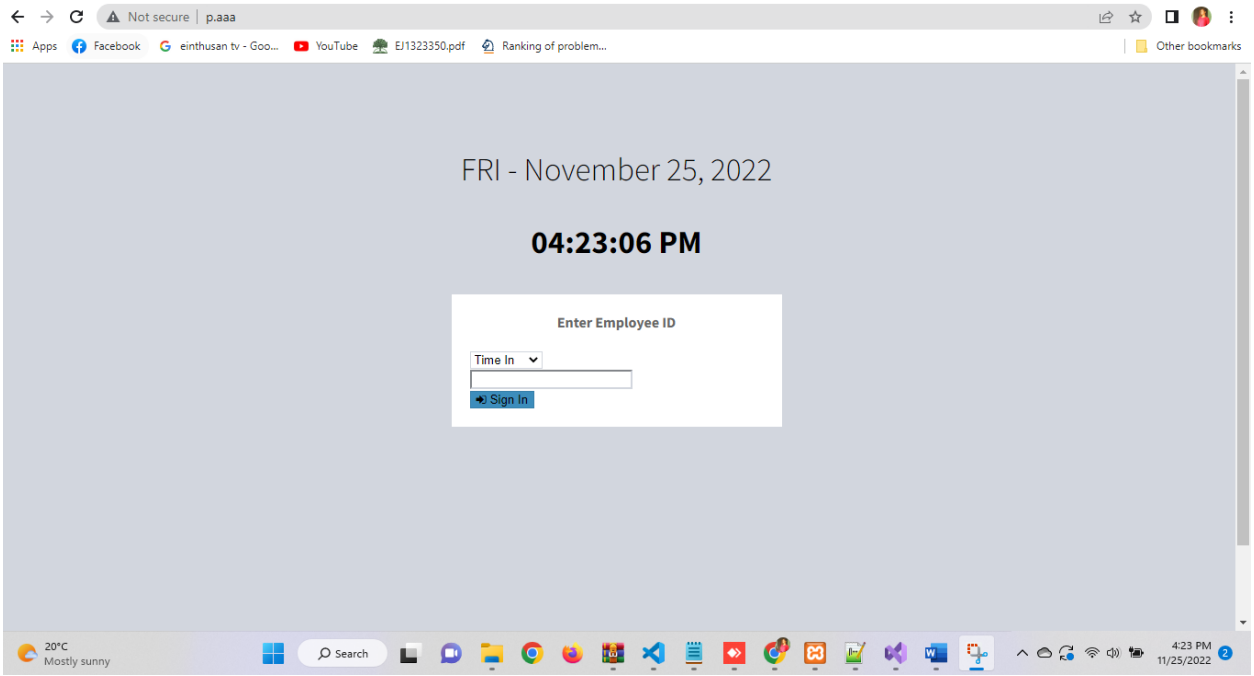
Pay slip



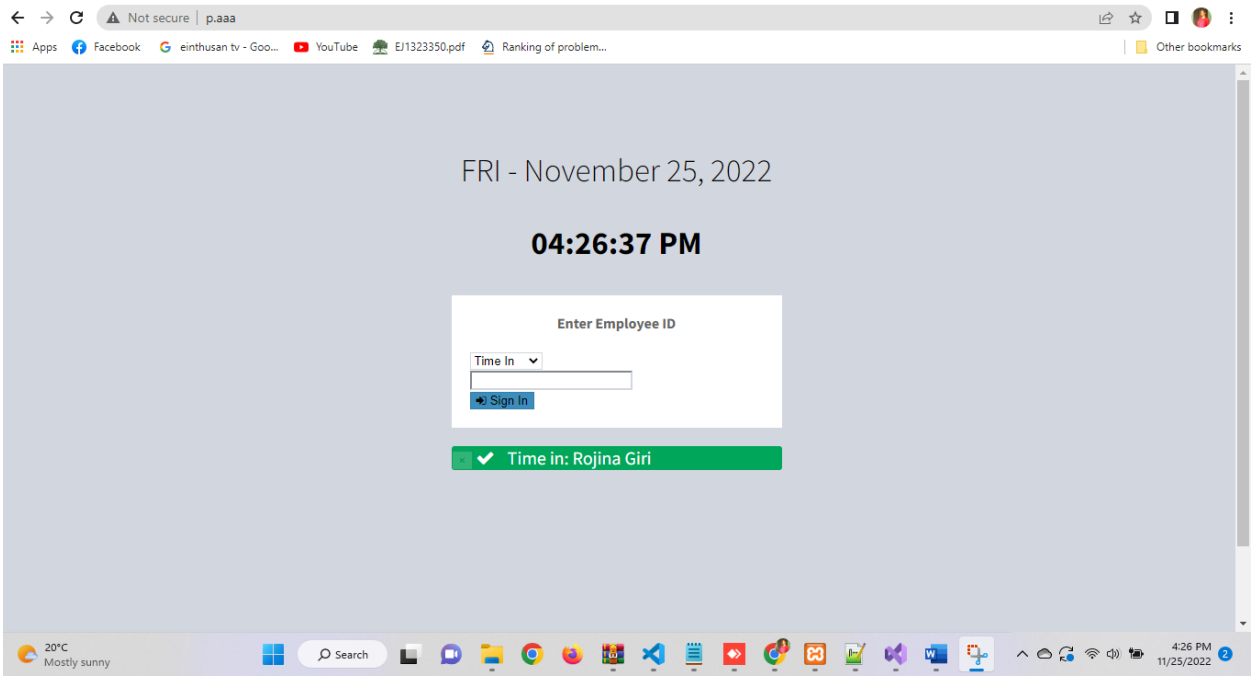
Admin Profile Update



Employees Sign in



Time in Successfull



CHAPTER7 : REFERENCES

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2. HR Software in Nepal | Payroll Software In Nepal [Online]. Available: https://piehcm.com/
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Appendices

Source code for generating payroll

```
<?php

include 'includes/session.php';


function generateRow($from, $to, $conn, $deduction){

$contents = '';


$sql = "SELECT *, sum(num_hr) AS total_hr, attendance.employee_id AS empid FROM attendance LEFT JOIN employees ON employees.id=attendance.employee_id LEFT JOIN position ON position.id=employees.position_id WHERE date BETWEEN '$from' AND '$to' GROUP BY attendance.employee_id ORDER BY employees.lastname ASC, employees.firstname ASC";


$query = $conn->query($sql);

$total = 0;

while($row = $query->fetch_assoc()){

$empid = $row['empid'];


$casql = "SELECT *, SUM(amount) AS cashamount FROM cashadvance WHERE employee_id='$empid' AND date_advance BETWEEN '$from' AND '$to'";


$caquery = $conn->query($casql);

$carow = $caquery->fetch_assoc();
```

```
$cashadvance = $carow['cashamount'];


$gross = $row['rate'] * $row['total_hr'];
$total_deduction = $deduction + $cashadvance;
$net = $gross - $total_deduction;


$total += $net;
$contents .= '
<tr>
<td>'.$row['lastname'].', '.$row['firstname'].'</td>
<td>'.$row['employee_id'].'</td>
<td align="right">'.number_format($net, 2).'</td>
</tr> ';
}



$contents .= '
<tr>



</tr>
```

```
<td colspan="2" align="right"><b>Total</b></td>

<td align="right"><b>'.number_format($total, 2).'</b></td>


';

return $contents;

}


$range = $_POST['date_range'];

$ex = explode(' - ', $range);

$from = date('Y-m-d', strtotime($ex[0]));

$to = date('Y-m-d', strtotime($ex[1]));


$sql = "SELECT *, SUM(amount) as total_amount FROM deductions";

$query = $conn->query($sql);

$drow = $query->fetch_assoc();

$deduction = $drow['total_amount'];


$from_title = date('M d, Y', strtotime($ex[0]));

$to_title = date('M d, Y', strtotime($ex[1]));


require_once('../tcpdf/tcpdf.php');

$pdf = new TCPDF('P', PDF_UNIT, PDF_PAGE_FORMAT, true, 'UTF-8', false);
```

```
$pdf->SetCreator(PDF_CREATOR);
$pdf->SetTitle('Payroll: '.$from_title.' - '.$to_title);
$pdf->SetHeaderData('', '', PDF_HEADER_TITLE, PDF_HEADER_STRING);
$pdf->setHeaderFont(Array(PDF_FONT_NAME_MAIN, '', PDF_FONT_SIZE_MAIN));
$pdf->setFooterFont(Array(PDF_FONT_NAME_DATA, '', PDF_FONT_SIZE_DATA));
$pdf->SetDefaultMonospacedFont('helvetica');
$pdf->SetFooterMargin(PDF_MARGIN_FOOTER);
$pdf->SetMargins(PDF_MARGIN_LEFT, '10', PDF_MARGIN_RIGHT);
$pdf->setPrintHeader(false);
$pdf->setPrintFooter(false);
$pdf->SetAutoPageBreak(TRUE, 10);
$pdf->SetFont('helvetica', '', 11);
$pdf->AddPage();
$content = '';
$content .= '
<h2 align="center">St.Lawrence APS College Project</h2>
<h4 align="center">'.$from_title." - ".$to_title.'</h4>
<table border="1" cellspacing="0" cellpadding="3">
<tr>
<th width="40%" align="center"><b>Employee Name</b></th>
<th width="30%" align="center"><b>Employee ID</b></th>
<th width="30%" align="center"><b>Net Pay</b></th>
</tr>
```

```
';

$content .= generateRow($from, $to, $conn, $deduction);

$content .= '</table>';

$pdf->writeHTML($content);

$pdf->Output('payroll.pdf', 'I');
```