

# **Payroll Management System**

## **Proposal**

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# **1 Introduction**

A payroll management system is a software application designed to help businesses manage their employee's payroll processes. The system can automate and streamline payroll tasks, including calculating employee salaries, and deductions, generating payslips, and managing taxes. The system typically consists of several modules, including employee information management, payroll processing, tax management, time tracking, and date validation. The primary goal of the payroll management system is to simplify the complex process of payroll of paying employees. This system can save time and reduce errors associated with manual payroll processing, increase efficiency, and improve accuracy in the payroll process.

## **1.1 Purpose**

A payroll management system can benefit any organization with employees. The system is particularly useful for organizations with large numbers of employees or complex payroll processes, as it can automate and streamline many of the manual tasks associated with payroll processing.

One of the main beneficiaries of the payroll management system are the payroll teams and the HR department who are responsible for managing employee wages, salaries, and compensation. These teams can benefit from the system by reducing the amount of time and effort required to manage the payroll process, improving the accuracy of payroll calculations and reports, and reducing risk or errors or non-compliance.

## **1.2 Scope**

This payroll management system will provide a comprehensive solution for managing employee payroll processes, including salaries, deductions, taxes, and generating payslips. The software consists of several modules, including employee information management, payroll

processing, tax management, and date validation. Our system will have five subsystems. First subsystem is the Login System, this system focuses on the input and Login functions. The Second subsystem is the Employee Information System, this subsystem focuses on the management of the employees information. Third subsystem is the payroll computations system, this subsystem focuses on the employee's calculations of payroll net salaries, and taxes. Our fourth subsystem is the Payslip Generation System, this subsystem allows users to generate their payslip in a PDF format. The final and fifth subsystem of our project is the Contract Removal System, this system terminates the contractual agreement once the contract exceeds the date of expiration.

There will be two end users for this Payroll Management System; the administrator and the employee. The employees will only have access to view their profile and the generated PDF payslip. On the other hand, the administrator will be capable of reviewing and revising such information that the system offers.

### **1.3 Definitions, Acronyms, and Abbreviations.**

Payroll - record of a company's employees and the total amount of wages or salary the employees to be paid.

Streamline - refers to the process of optimizing something to improve its performance by efficiency.

HR - stands for Human Resources. It is a department that functions within the organization that is responsible for managing all aspects of employee relations.

End users - The people that will use the system.

SRS - Software Requirements Specifications

### **1.4 Overview**

The SRS will be divided into two sections. The first section is The Overall Description that will describe the requirements of the Payroll Management System in a vague but effective manner. The second section is the Specific Requirements section that will delineate the system requirements.

## **2 The Overall Description**

This section explains the components that affect the Payroll management system and its requirements. This section will not state any specific requirements but it provides the background for its requirements.

### **2.1 Product Perspective**

The payroll management system has the capability to process employee's information, payroll, and time value. Such data will be stored via a database that will be manipulated by SQL. The system will have an executable file that will be centralized access points for a series of instructions from Java, SQL, and the database.

#### **2.1.1 Hardware Interfaces**

**Operating system:** Windows 10 or newer (64-bit)

**Processor:** 2 GHz or faster processor

**Hard Disk Space:** At least 1 GB free of space

**RAM Memory:** 4 GB or more

**Screen Resolution:** 1280 x 800 or Higher

**Input Devices:** Mouse and Keyboard

#### **2.1.2 Software Interfaces**

**Logback-classic.jar** - for generating pdf

**Logback-core.jar** - for generating pdf

**itext-7-core.jar(s)** - for generating pdf

**Itexpdf-5.5.9.jar** - software for generating pdf

**Jcalendar.jar** - window date chooser

**Mssql.jdbc-12.2.0.jre11.jar** - connects database into sql

**Mysql-connector-j-8.0.33.jar** - connects database into sql

## **2.2 Product Functions**

### **First subsystem: Login Interface System ( )**

- Allows user Login with username and password via GUI.
- Identifies the difference between admin and user login.

### **Second subsystem: Employee Information System**

- Administrators will be able to add, edit, update, and remove working hours, base salary, deductions of each employee. They would also be able to do employee information, and image.
- Administrators are allowed to remove or set provisional employees into contractual or regular.
- Allows administrators access to the employee table database.
- Allows employees to view their profile.

### **Third Subsystem: Payroll Computations System**

- Calculates employee's net salaries, annual, salaries, and annual tax.

### **Fourth Subsystem: Payslip System**

- Generates Employee PDF payslip.
- Allows employees to view their profile.

### **Fifth Subsystem: Contractual Removal System**

- Allows automated contractual employee termination after contract end.

## **2.3 User Characteristics**

Educational level of PMS computer software – Low (Admin)

Educational level of PMS computer software – None (User)

Experience of PMS software – Medium (Admin)

Experience of PMS software – None (User)

Technical Expertise – Medium (Admin)

Technical Expertise – Low (User)

## **2.4 Apportioning of Requirements**

The graphic design of the graphical user interface (GUI) would be of less priority, thus resulting in less hue compatibility, and less appealing designs in terms of product theme. Audio and visual effects will also not be of priority due to less importance to the project.

## **2.5 Apportioning of Requirements**

### **Assumptions**

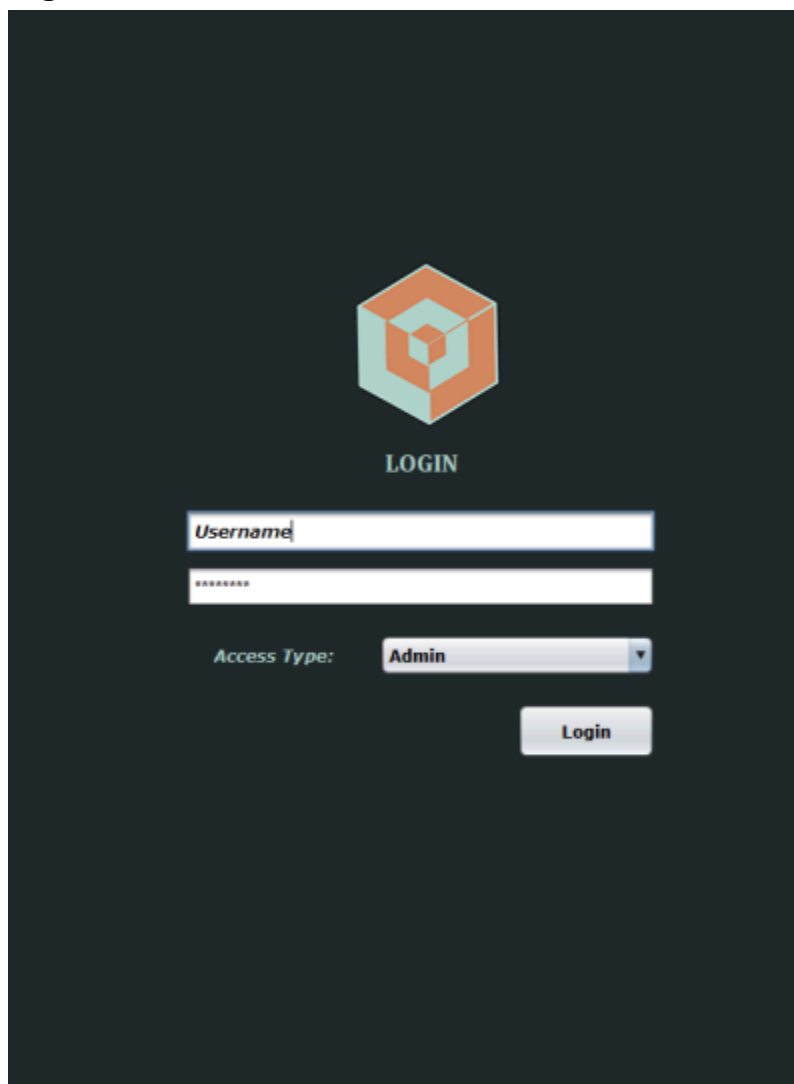
- The employee's information in the system such as name, address, base salary, deductions and tax rates are accurate.
- The payroll management system will follow the labor laws and regulations related to payroll including tax laws, minimum wage and overtime pay.
- The system assumes that the generation of pay slip implies that the employee's payment has been made.
- The administrator / admin accurately recorded each employee's working hours.
- The system assumes that the administrator operating the management system has the knowledge of handling sensitive information within the system such as employee data.

### **Dependencies**

- The Payroll Management System is dependent on an accurate and timely data entry of employee information, time worked, and benefits, and deductions.
- The system is dependent on the appropriate hardware and software in order to process the calculation of net pay, report generation, and storing of data.
- The system is dependent on proper security measures to protect employee data, prevent unauthorized access, and ensure data privacy.

## **Sample Screenshots**

## Login Panel



The image shows a login panel with a dark background. At the top center is a logo consisting of a teal cube with an orange cube inside it. Below the logo is the word "LOGIN" in white capital letters. Underneath "LOGIN" are two white input fields: the first is labeled "Username" and the second is masked with "XXXXXXXX". Below these fields is a label "Access Type:" followed by a dropdown menu currently showing "Admin". At the bottom right of the form is a "Login" button.

This will be a login menu for both admin and user. The option named 'Access Type' determines the level of access of the user.



## ADMIN ACCESS:

### Admin Main Menu Panel

**PAYROLL MANAGEMENT SYSTEM**

ADMIN MAIN MENU

**SALARY LIST**

Employee Type: All Salary List

| Employee Name | Employee ID | Employee Type | Total Allowance | Total Deductions | Net Salary |
|---------------|-------------|---------------|-----------------|------------------|------------|
| emp1 emp1     | R0623001    | Regular       | 0.0             | 625.0            | 24375.0    |
| temp temp     | P0623002    | Probational   | 0.0             | 1825.0           | 31175.0    |

Search Employee Add New Employee Change Password Create Admin Account

Generate PDF Admin ID: #0623001 LOGOUT

After the admin logs in, they will first see the salary list can be filtered by employee type (Probational, Regular, Contractual). The employee table list may also be changed into a Log list, where the table will present the recent logs of the system. Here also they are presented with possible interaction with the system, like generating pdf for the list, search employee, add employee, change password, create admin account, and logout current account.

## Admin Main Menu >> Search Employee Panel

**Back**

**PAYROLL MANAGEMENT SYSTEM**

SEARCH EMPLOYEE

Enter Employee\_ID Search by ID

**Employee Information:**

Date Hired:  
Employee Type  
Employee ID:  
Employee Name  
Gender:  
Basic Salary:  
Contract Length:  
Contract Expiration:

**Allowances**

Overtime:  
Skills Training:  
Medical:  
Bonus:

Transportation:  
Meal:  
Uniform:  
Tools/Equipment:

Rate/Hour:  
Total:

**Deductions**

Income Tax:  
SSS:  
PhilHealth:

Loans  
Pagibig:  
Others:


Total:

**Total Net Pay:**

**Actions:**

**Edit Employee** **Edit Deductions and Allowance** **Delete Employee**

When the admin clicks the search employee in the admin main menu, they will be directed to this panel. Here the admins are capable of searching employees by their name or their employee ID. After the employee is searched, the system will present their information. This panel also allows the admin to return to the admin main menu panel using the back button, edit employee details and salary via edit button, or delete employee.

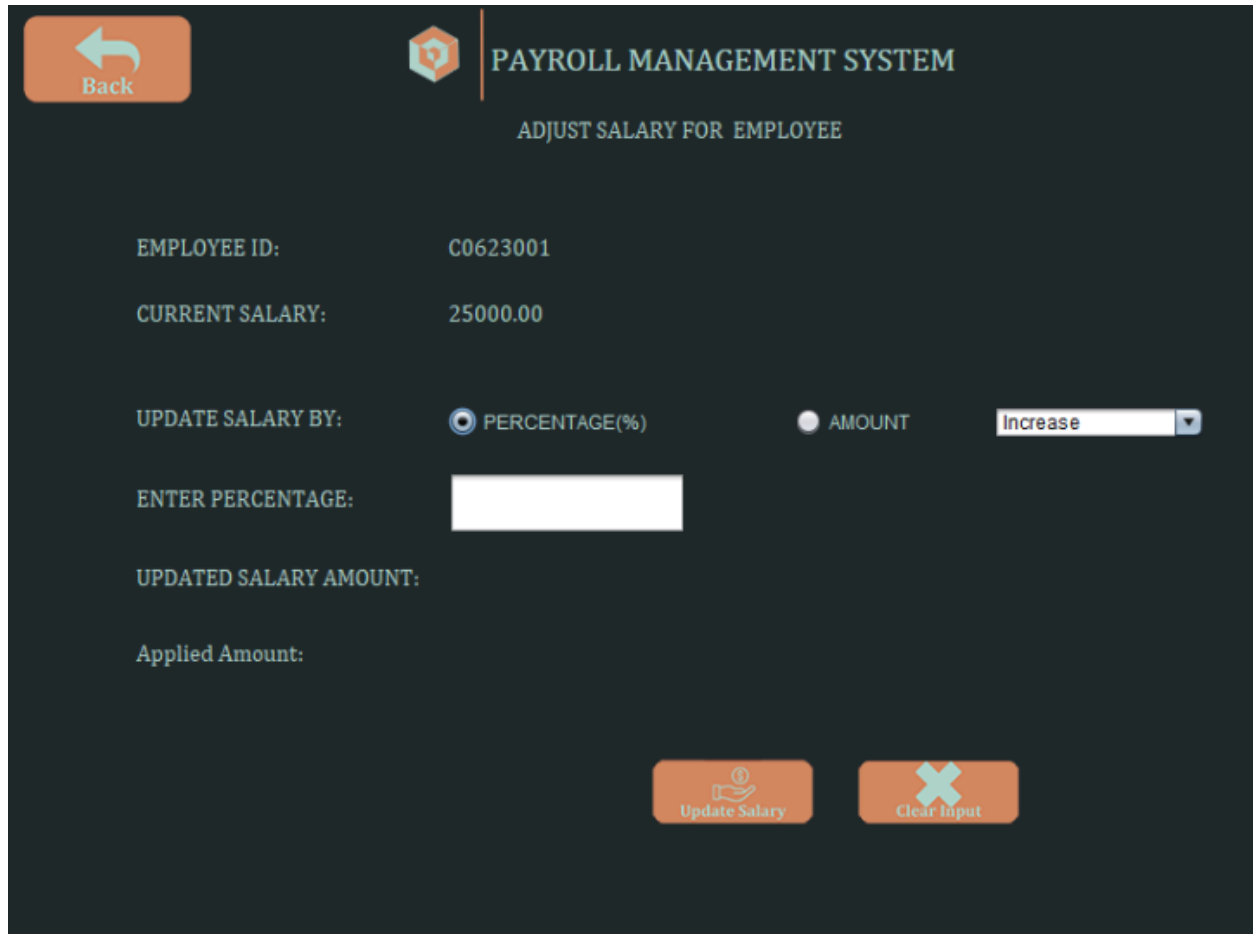
**Admin Main Menu >> Search Employee Panel >> Edit Employee Information**

The screenshot shows the 'UPDATE EMPLOYEE INFORMATION' form in the 'PAYROLL MANAGEMENT SYSTEM'. The form is set against a dark blue background. At the top left, there is a 'Back' button with a left arrow icon. The title 'PAYROLL MANAGEMENT SYSTEM' is at the top center, with 'UPDATE EMPLOYEE INFORMATION' below it. The form contains the following fields and controls:

- Date Hired:** A date picker showing 'June 1, 2023'.
- Date of Birth:** A date picker showing 'June 1, 2023'.
- Employee Type:** A dropdown menu with 'Contractual' selected.
- Employee ID:** A text field containing 'C0623001'.
- First Name:** A text field containing 'emp2'.
- Surname:** A text field containing 'emp2'.
- Gender:** Radio buttons for 'Male' (selected) and 'Female'.
- Email:** A text field containing 'emp2'.
- Contact:** A text field containing 'emp2'.
- Address:** A text field containing 'emp2'.
- Salary:** A text field containing '25000.0'.
- Contract Length:** A text field containing '25'.
- Change Employee's Image:** A button with a photo of a woman and a camera icon.
- Update:** A button with a pencil icon.
- Clear Data:** A button with a red 'X' icon.

This panel allows the admin to edit mainly the personal details for the employee. Admins are also allowed to change the employee's image.

**Admin Main Menu >> Search Employee Panel >> Edit Employee Information >> Update Salary**




The screenshot displays a web interface for adjusting an employee's salary. At the top left is a 'Back' button with a left arrow icon. The header area includes a logo and the title 'PAYROLL MANAGEMENT SYSTEM'. Below the header, the form is titled 'ADJUST SALARY FOR EMPLOYEE'. It contains the following fields and controls:

- EMPLOYEE ID:** C0623001
- CURRENT SALARY:** 25000.00
- UPDATE SALARY BY:** Two radio buttons are present: 'PERCENTAGE(%)' (which is selected) and 'AMOUNT'.
- ENTER PERCENTAGE:** A text input field.
- UPDATE SALARY BY:** A dropdown menu currently showing 'Increase'.
- UPDATED SALARY AMOUNT:** A label for the calculated result.
- Applied Amount:** A label for the final applied amount.
- Buttons:** At the bottom right, there are two buttons: 'Update Salary' (with a hand icon) and 'Clear Input' (with an 'X' icon).

This panel allows the admin to edit employee salary from the employee details panel.

## Admin Main Menu >> Search Employee Panel >> Edit Employee Salary and Deductions


**PAYROLL MANAGEMENT SYSTEM**  
 ALLOWANCE AND DEDUCTIONS

### Allowances

|                  |                                  |                  |                                  |
|------------------|----------------------------------|------------------|----------------------------------|
| Overtime (hrs):  | <input type="text" value="0.0"/> | Transportation:  | <input type="text" value="0.0"/> |
| Skills Training: | <input type="text" value="0.0"/> | Meal:            | <input type="text" value="0.0"/> |
| Medical:         | <input type="text" value="0.0"/> | Uniform:         | <input type="text" value="0.0"/> |
| Bonus:           | <input type="text" value="0.0"/> | Tools/Equipment: | <input type="text" value="0.0"/> |

|            |                                  |        |             |
|------------|----------------------------------|--------|-------------|
| Rate/Hour: | <input type="text" value="0.0"/> | Total: | <b>P0.0</b> |
|------------|----------------------------------|--------|-------------|

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### Deductions

|             |                                  |          |                                  |
|-------------|----------------------------------|----------|----------------------------------|
| Income Tax  | <b>625.0</b>                     | Loans    | <input type="text" value="0.0"/> |
| SSS:        | <input type="text" value="0.0"/> | Pag-ibig | <input type="text" value="0.0"/> |
| PhilHealth: | <input type="text" value="0.0"/> | Others:  | <input type="text" value="0.0"/> |

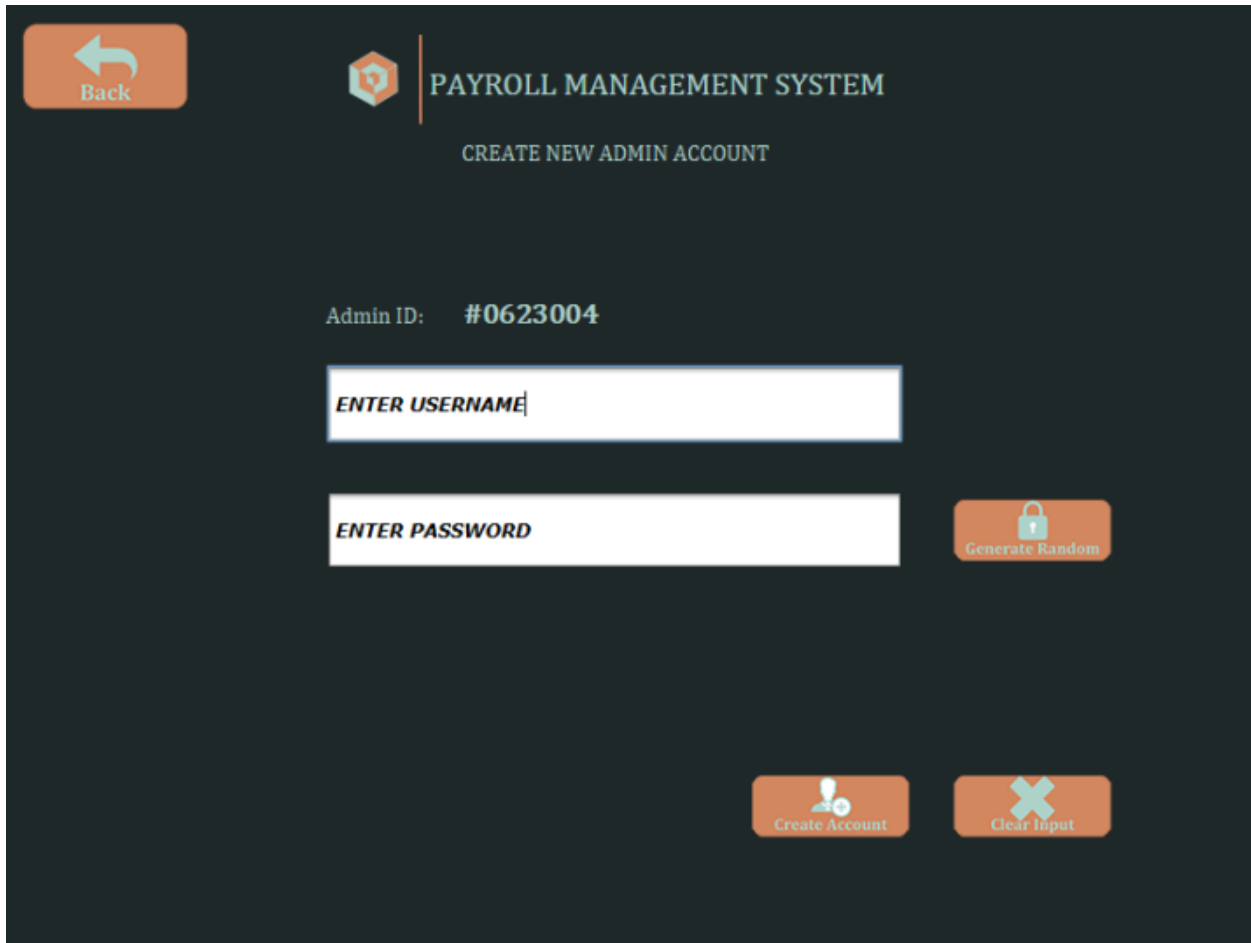
  

Total: **625.0**

Save

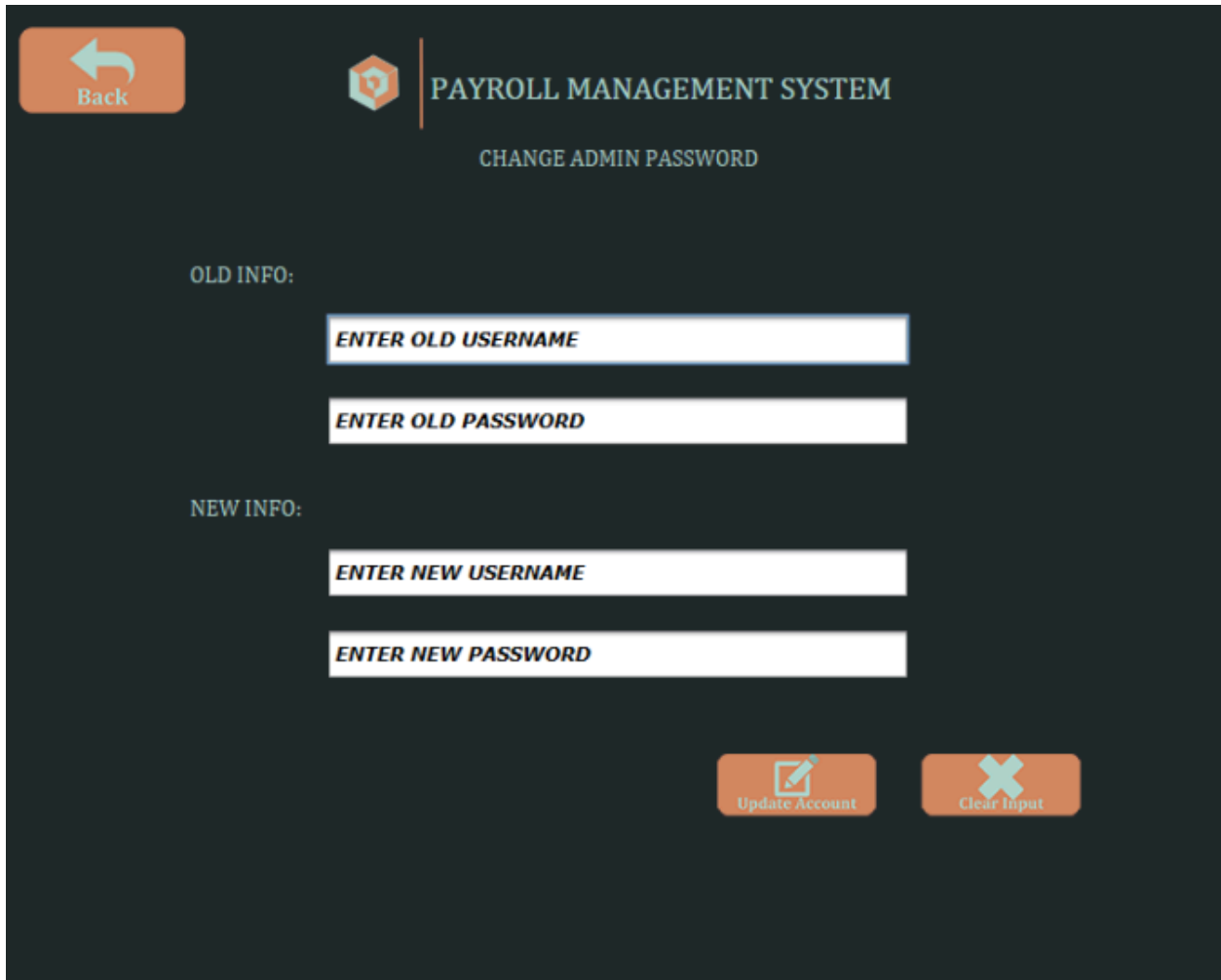
Clear Input

This panel is admin's to mainly edit their employee's salary and the deductions to their salary.

**Admin Main Menu >> Create New Admin Account**

The screenshot displays the 'CREATE NEW ADMIN ACCOUNT' page of a 'PAYROLL MANAGEMENT SYSTEM'. The interface features a dark blue background with orange accents. At the top left is a 'Back' button with a left-pointing arrow. The system title 'PAYROLL MANAGEMENT SYSTEM' is centered at the top, with a hexagonal logo containing a gear icon to its left. Below the title, the page heading 'CREATE NEW ADMIN ACCOUNT' is centered. The 'Admin ID' is displayed as '#0623004'. There are two input fields: 'ENTER USERNAME' and 'ENTER PASSWORD'. To the right of the password field is a 'Generate Random' button with a padlock icon. At the bottom right, there are two buttons: 'Create Account' with a person icon and 'Clear Input' with a red 'X' icon.

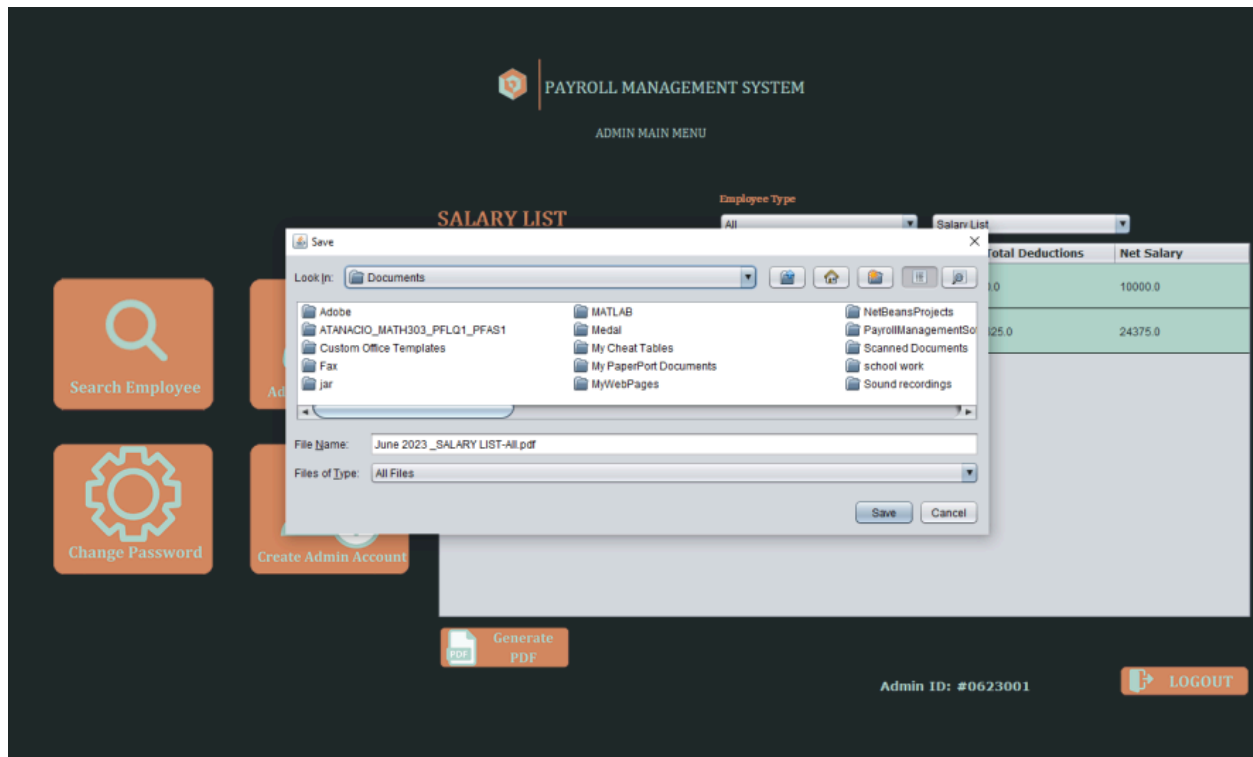
From the Admin Main Menu panel, the admins are allowed and capable of generating new admin accounts for the system. This panel also allows random generation of characters for the password.

**Admin Main Menu >> Change Password**

The screenshot displays a web interface for changing an admin password. At the top left is a blue rounded button with a left-pointing arrow and the text 'Back'. To its right is a logo consisting of a blue hexagon with a white shield inside, followed by a vertical line and the text 'PAYROLL MANAGEMENT SYSTEM' in blue. Below this is the title 'CHANGE ADMIN PASSWORD' in blue. The form is divided into two sections: 'OLD INFO:' and 'NEW INFO:'. Each section contains two white input fields with blue borders. The first field in each section is labeled 'ENTER OLD USERNAME' and 'ENTER NEW USERNAME' respectively. The second field is labeled 'ENTER OLD PASSWORD' and 'ENTER NEW PASSWORD' respectively. At the bottom right, there are two blue rounded buttons: 'Update Account' with a pencil icon and 'Clear Input' with a red 'X' icon.

From the Admin Main Menu panel, this panel allows the admins to change their username and their password.

## Admin Main Menu >> Generate PDF

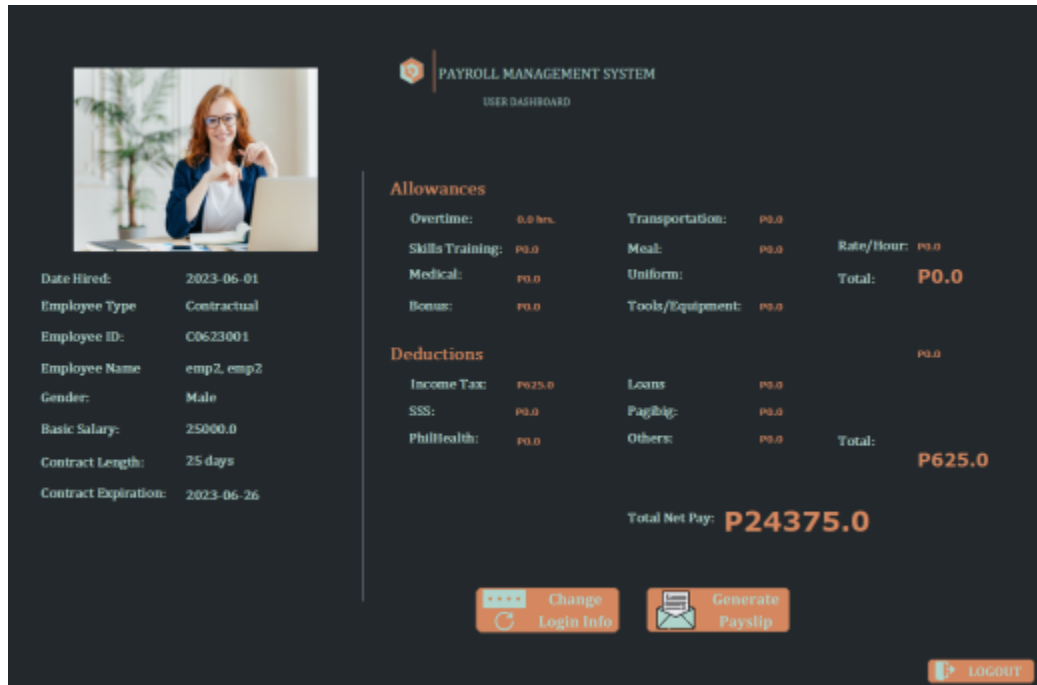


Clicking this button from the admin main menu will allow the admins to generate a pdf file according to the latest presented list or table from the main menu.



## USER ACCESS

### User Main Menu



**PAYROLL MANAGEMENT SYSTEM**  
USER DASHBOARD

**Employee Details:**

- Date Hired: 2023-06-01
- Employee Type: Contractual
- Employee ID: C0623001
- Employee Name: emp2, emp2
- Gender: Male
- Basic Salary: 25000.0
- Contract Length: 25 days
- Contract Expiration: 2023-06-26

**Allowances**

|                  |          |                  |      |            |             |
|------------------|----------|------------------|------|------------|-------------|
| Overtime:        | 0.0 hrs. | Transportation:  | P0.0 | Rate/Hour: | P0.0        |
| Skills Training: | P0.0     | Meal:            | P0.0 |            |             |
| Medical:         | P0.0     | Uniform:         |      | Total:     | <b>P0.0</b> |
| Bonus:           | P0.0     | Tools/Equipment: | P0.0 |            |             |

**Deductions**

|             |        |          |      |        |               |
|-------------|--------|----------|------|--------|---------------|
| Income Tax: | P625.0 | Loans:   | P0.0 |        |               |
| SSS:        | P0.0   | Pagibig: | P0.0 |        |               |
| PhilHealth: | P0.0   | Others:  | P0.0 | Total: | <b>P625.0</b> |

**Total Net Pay: P24375.0**

**Actions:**

- Change Login Info
- Generate Payslip
- LOGOUT

The user access from the logins are only capable of a few little things. One of which is to view their employee details. The users (employees) will be presented with the same information that the admin will see by search from employee details.

## User Main Menu >> Change Password | Login Info

**PAYROLL MANAGEMENT SYSTEM**

CHANGE USER PASSWORD

OLD INFO:

ENTER OLD USERNAME

ENTER OLD PASSWORD

NEW INFO:

ENTER NEW USERNAME

ENTER NEW PASSWORD

Update Account

Clear Input

Change Login Info

Generate Payslip

LOGOUT

Employee Details:

- Date Hired: 2023-01-01
- Employee Type: Contractor
- Employee ID: C06231
- Employee Name: emp2,000
- Gender: Male
- Basic Salary: 25000.00
- Contract Length: 25 days
- Contract Expiration: 2023-06-01

Financial Summary:

- Rate/Hour: P0.0
- Total: P0.0
- Total: P625.0
- Total: P5.0

The users may change their password and username according to their fancy. Clicking the update button will update their account login details.

## User Main Menu >> Generate Payslip

The screenshot displays the 'PAYROLL MANAGEMENT SYSTEM' USER DASHBOARD. On the left, a profile picture of a woman is shown above a list of employee details:

- Date Hired: 2023-06-26
- Employee Type: Contract
- Employee ID: C0623001
- Employee Name: emp2
- Gender: Male
- Basic Salary: 25000.0
- Contract Length: 25 days
- Contract Expiration: 2023-06-26

A 'Save' dialog box is open in the center, showing the 'Documents' folder. The file name is 'June 2023\_C0623001-Payslips.pdf' and the file type is 'All Files'. The dialog lists various folders and files, including 'Adobe', 'MATLAB', 'NetBeansProjects', 'ATANACIO\_MATH303\_PFLQ1\_PFA51', 'Medal', 'PayrollManagementSo', 'Custom Office Templates', 'My Cheat Tables', 'Scanned Documents', 'Fax', 'My PaperPort Documents', 'school work', 'jar', 'MyWebPages', and 'Sound recordings'.

On the right side of the dashboard, the following payroll information is displayed:

- Rate/Hour: P0.0
- Total: P0.0
- P0.0
- Total: P625.0
- Total Net Pay: P24375.0

At the bottom, there are three buttons: 'Change Login Info' (with a refresh icon), 'Generate Payslip' (with an envelope icon), and 'LOGOUT' (with a logout icon).

The last function that the user is capable of is generating their payslip that will be saved into a pdf file.