CHAPTER-03

1. Acknowledgement:

We like to thank many people who helped us in completing this project. Foremost I would like to thank Almighty Allah for giving us strength and ability to complete this project. We would like to express our gratitude to all those who gave us the possibility to complete this project and we want to thank the Department of faculty for helping us to do the necessary research. We furthermore, thank our class Sir. TayyabFayyaz for giving us complete support and advising us in the project. Especially, we would like to thank to our colleagues for the valuable suggestions.

2. Introduction

This project is aimed at developing a leave management system that is of importance to any organization. The Leave Management System (LMS) is an application that can be accessed by all the employees of the organization. This system can be used to automate the workflow of leave applications and their approvals. The periodic crediting of leave is also automated. There are features like cancellation of leave, report generators etc.

Existing Scenario

In most of the organizations, each employee has been provided with the leave card at the time of appointment. Leave card shows the leaves credited to the employee's account. Each time employee wants to go on leave, he will have to mention the details on the card, get it approved from the superior and submit it to the HR person for updating in the company records. At the end of the year the leave balance is updated. However this paper based process is very time consuming and also causes discrepancies in the records. Leave Management System

Proposed Solution

Due to the inconvenience in managing the data using leave cards, it is required to have a computer based system where an employee can login and apply for the leave. He can even see the records of the previous leaves taken as well check the balance leaves.

Functional Requirements

There will be registered people in the system. Some will be approvers. An approver can also be a requestor. In an organization, the hierarchy will be Engineers/Managers/Business Managers/Managing Director. You can add more positions in the hierarchy.

1. A person should be able to login to the system through the first page of the application
    1) change the password after logging into the system
    2) see his/her eligibility details (like how many days of leave he/she is eligible for etc.)
    3) query the leave balance
    4) See his/her leave history since the time he/she joined the company.
    5) Apply for leave, specifying the from and to dates, reason for taking leave, address for communication while on leave.
    6) see his/her current leave applications and the leave applications that are submitted to him/her for approval or cancellation approve/reject the leave applications that are submitted to him/her.
    7) withdraw his/her leave application (which has not been approved yet)
    8) Cancel his/her leave (which has been already approved). This will need to be approved by his/her Superior
    9) get help about the leave system on how to use the different features of the system
2. As soon as a leave application/cancellation request/withdrawal/approval /rejection/password-change is made by the person, a message is saved in the messages (area provided to each member) for his superior giving details about the action
3. The number of days of leave (as per the assumed leave policy) should be automatically credited to everybody

4. A summary report of the leave details of his/her sub-ordinates should be sent to every manager periodically
5. A calendar giving the public holidays of the organization should be available on the system

3. Login Panel:-

Enter correct username and password then login and perform specific tasks the application automatic check who is login Admin/User/ Engineer etc.

Creating a login panel for a payroll college administration system requires careful consideration of security, user roles, and data privacy. Here's a general outline of how you might structure such a system:

1. User Roles:

- **Admin:** Access to all features and functionalities of the system. Can manage employee information, payroll, and other administrative tasks.
- **Manager:** Limited access compared to admin, usually can view and manage employee information within their department.
- **Employee:** Can view personal information, submit timecards, and access relevant documents.

2. Login Panel:

- Username/Email
- Password
- "Forgot Password" functionality (optional but recommended for user convenience)
- "Remember Me" option (optional)

3. Authentication:

- Use secure protocols like HTTPS.
- Implement password hashing and salting to store passwords securely.
- Utilize session management techniques to maintain user sessions securely.

4. Dashboard:

- After successful authentication, users should be directed to a dashboard tailored to their role.
- Admin dashboard should include options for managing employee information, payroll, generating reports, etc.
- Manager dashboard should allow for viewing and managing employee information within their department, approving leave requests, etc.
- Employee dashboard should provide access to personal information, salary details, leave balances, etc.

5. Employee Information Management:

a. Admin and managers should be able to add, edit, and delete employee information.

b. Employee information may include personal details, contact information, employment history, salary details, etc.

c. Ensure that sensitive information is only accessible to authorized users and is stored securely.

6. Payroll Management:

a. Admin should have access to payroll management features such as processing payroll, generating pay stubs, managing tax information, etc.

b. Integration with accounting systems for seamless payroll processing.

7. Security Measures:

a. Implement role-based access control (RBAC) to ensure that users can only access functionalities relevant to their role.

b. Regular security audits and updates to patch vulnerabilities.

c. Encourage users to choose strong passwords and periodically enforce password resets.

8. Data Privacy:

a. Comply with data privacy regulations such as GDPR, CCPA, etc., depending on the jurisdiction.

b. Obtain consent from users for collecting and processing their personal information.

c. Implement data encryption for sensitive information both in transit and at rest.

9. Logging and Audit Trails:

a. Keep logs of login attempts, user actions, and system activities for auditing purposes.

b. Monitor and review logs regularly to detect any suspicious activities.

10. User Support:

- Provide user support for any issues related to login, access, or system functionalities.
- Include a help section or knowledge base to assist users in navigating the system.

Implementing a robust login panel for a payroll college administration system involves attention to detail and adherence to security best practices to safeguard sensitive information and ensure smooth operations.

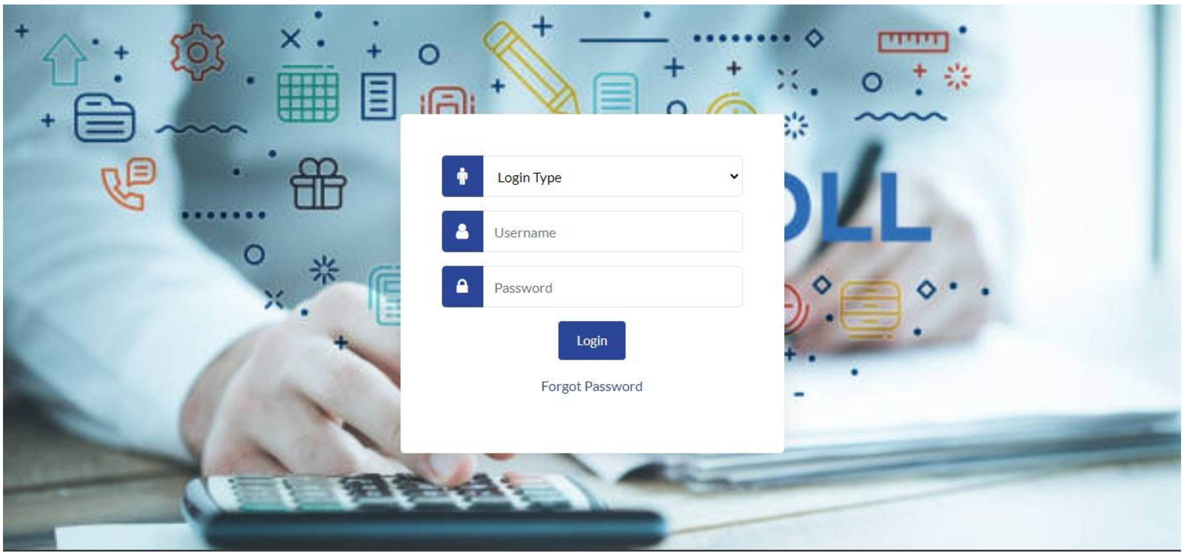

Figure:3.1-User Support

4. Main Window:-

Main window have contain multiple options and also available public holiday calendar the employee see which holiday up coming.

Incorporating a calendar feature into the main window of a payroll college administration system can greatly enhance organization and scheduling for admins, managers, and employees alike. Here's how you might integrate a calendar into the main window:

1. Calendar Display:

- The calendar should be prominently displayed in a dedicated section of the main window.
- Use a monthly or weekly view to show upcoming events, deadlines, and important dates.
- Allow users to navigate between different months or weeks easily.

2. Events and Tasks:

- Display events and tasks relevant to payroll, college administration, and employee management on the calendar.
- Events could include paydays, deadlines for submitting timecards or expense reports, performance reviews, training sessions, holidays, etc.
- Users should be able to click on an event to view more details or take action if necessary.

3. Color-Coding:

- Use color-coding to differentiate between different types of events or tasks.
- For example, payroll-related events could be in one color, employee training sessions in another, holidays in a different color, etc.
- This makes it easier for users to quickly identify the nature of each event.

4. Integration with Other Features:

- Integrate the calendar with other features of the system, such as employee scheduling, leave management, and task assignments.
- Allow managers to schedule shifts, assign tasks, and approve leave requests directly from the calendar interface.
- Employees should be able to view their work schedules, upcoming deadlines, and leave balances on the calendar.

5. Customization Options:

- Provide customization options to allow users to personalize their calendar views.
- Options could include the ability to hide or show certain types of events, change the color scheme, set reminders for upcoming events, etc.

6. Drag-and-Drop Functionality:

- Implement drag-and-drop functionality to make it easy for users to create, reschedule, or delete events on the calendar.
- Admins and managers can use this feature to adjust employee schedules or rearrange deadlines as needed.

7. Syncing with External Calendars:

- Allow users to sync the system’s calendar with their external calendars (e.g., Google Calendar, Outlook Calendar).
- This ensures that users can access their schedule from any device and receive notifications for upcoming events.

8. Accessibility and Responsiveness:

- Ensure that the calendar is accessible to all users, including those with disabilities.
- Design the calendar interface to be responsive, so it works well on different screen sizes and devices.

3.2 Main Window

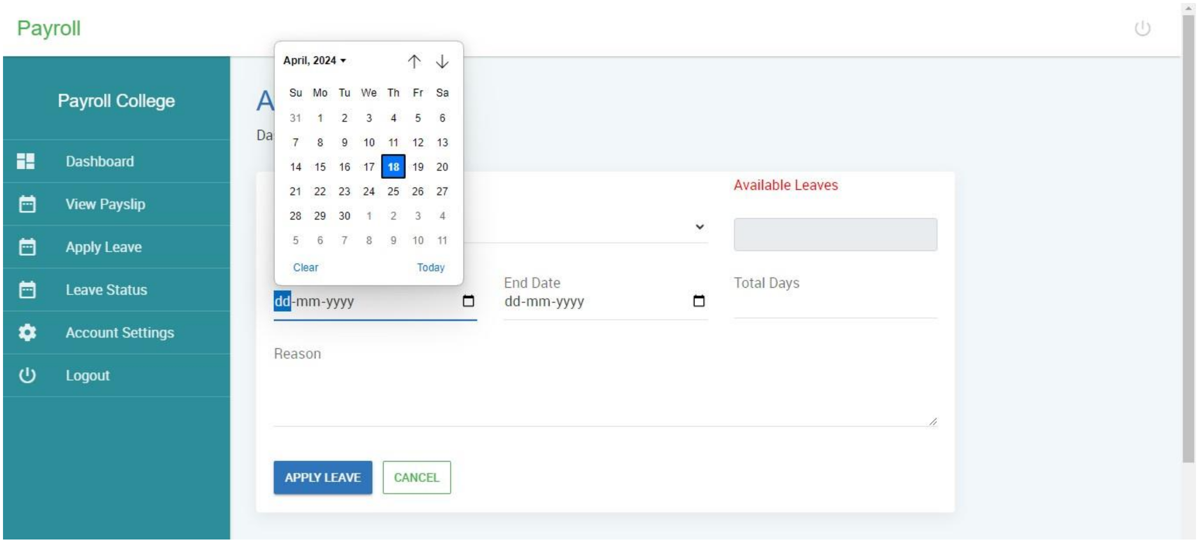

Figure:3.2- Main Window

5.Create Account :-

If new employee hire in the company then first of all create account then employee eligible to give leaves otherwise employee not give leaves.

Creating user accounts for a payroll college administration system involves collecting necessary information from users, assigning appropriate roles and permissions, and ensuring secure access to the system. Here's how you might create accounts for different user roles:

1. Admin Account Creation:

- Admin accounts are typically created during the initial setup of the system.
- Collect information such as full name, email address, and contact number.
- Set a strong password for the admin account and ensure it meets security requirements.
- Assign full administrative privileges to the account, allowing access to all features and functionalities of the system.

2. Manager Account Creation:

- Managers are responsible for overseeing specific departments or teams within the college.
- Collect information such as full name, email address, contact number, and department affiliation.
- Set a password for the manager account and ensure it meets security standards.
- Assign appropriate permissions based on the manager's role, such as access to employee information within their department, the ability to approve leave requests, etc.

3. Employee Account Creation:

- Employees are the staff members of the college who will use the system for tasks such as submitting timecards, accessing payroll information, and updating personal details.
- Collect information such as full name, email address, contact number, department, job title, etc.
- Set a password for the employee account and ensure it meets security criteria.
- Assign permissions based on the employee’s role and responsibilities within the college.
- Employees may have access to view their own information, submit timecards, request leave, and access relevant documents.

4. Security Considerations:

- Implement secure password policies, such as requiring a minimum length, combination of letters, numbers, and special characters.
- Utilize multi-factor authentication (MFA) to add an extra layer of security to user accounts.
- Encrypt sensitive information such as passwords and personal data to protect it from unauthorized access.
- Regularly review and update user permissions to ensure that access is granted only to those who need it.

5. User Onboarding:

- Provide clear instructions to users on how to log in to the system and navigate its features.
- Offer training sessions or tutorials to help users become familiar with the system’s functionalities.

- Offer ongoing support to address any questions or issues that users may encounter.

6. Data Privacy and Compliance:

- Ensure that user account creation processes comply with relevant data privacy regulations, such as GDPR, CCPA, etc.
- Obtain consent from users for collecting and processing their personal information.
- Maintain transparency regarding how user data is stored, used, and protected within the system.

3.3Create Account

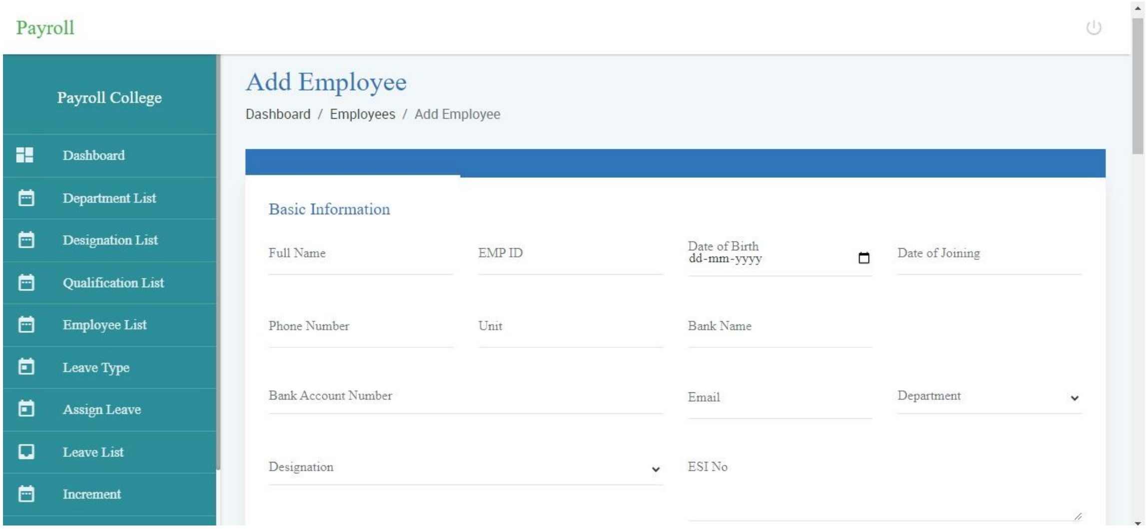

Figure:3.3-Create Account

6.View User's :-

If the superior want to see and modify user's account data then use view user the multiple searching available in this window.

Viewing users of a payroll college administration system typically involves accessing a user management section within the system's interface. Here's how you might implement a feature to view users based on their roles:

1. **User Management Section:**
   - Create a dedicated section within the admin dashboard for user management.
   - This section should allow admins to view, add, edit, and delete user accounts.
2. **Filtering by Role:**
   - Provide options to filter users based on their roles (admin, manager, employee).
   - Include checkboxes or dropdown menus to select specific roles or combinations of roles to filter the user list.
3. **User List Display:**
   - Display a list of users with relevant information such as name, email address, role, department (if applicable), and contact information.
   - Paginate the user list if there are a large number of users to improve usability.
4. **Search Functionality:**
   - Implement a search bar to allow admins to search for users by name, email address, or other criteria.
   - Display search results dynamically as the admin types in the search query.

5. Sorting Options:

- Provide options to sort the user list by name, email address, role, department, etc.
- Allow ascending and descending sorting for each criteria.

6. View User Details:

- Allow admins to click on a user to view more detailed information about them.
- This could include additional details such as contact number, department, job title, date of hire, etc.

7. Editing and Deleting Users:

- Include options to edit user information or delete user accounts as needed.
- When editing users, allow admins to update details such as name, email address, role, department, etc.
- When deleting users, prompt admins for confirmation to prevent accidental deletion.

8. Activity Logs:

- Optionally, include logs of user activities such as account creation, login attempts, and changes to user roles or permissions.
- This can help admins track user actions within the system for auditing purposes.

9. Permissions Management:

- Allow admins to manage permissions for each user, including which features and data they can access within the system.
- Provide options to assign or revoke specific permissions based on the user's role and responsibilities.

3.4 View User’s

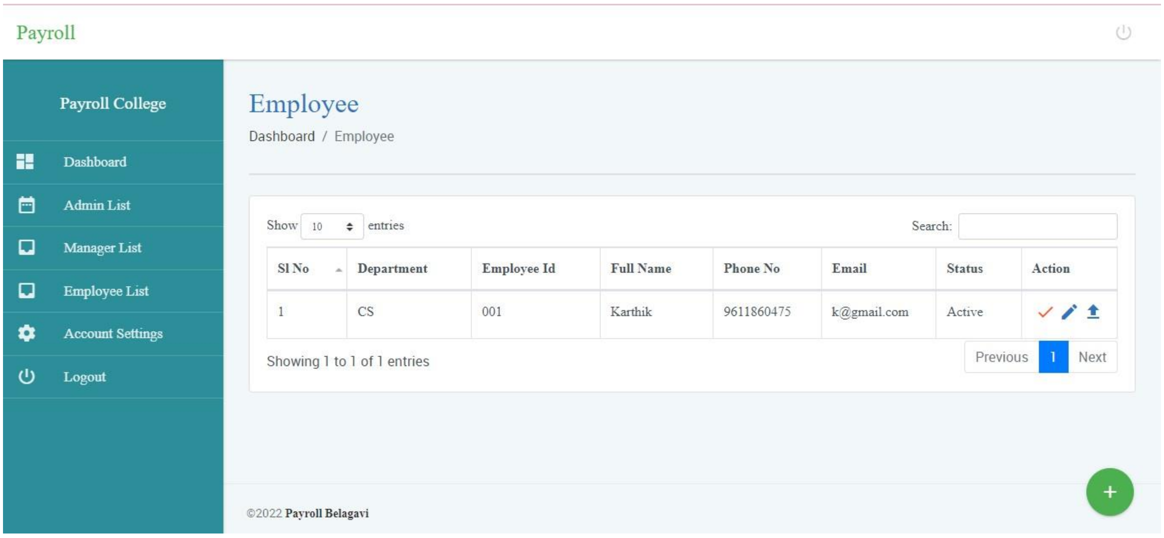

Figure:3.4-View User’s

7.Change Password :-

User change password with this window

Changing passwords for users in a payroll college administration system is a crucial aspect of maintaining security and ensuring data protection. Here's how you might implement a feature to allow users to change their passwords:

1. User Profile Section:

- Create a section within the user interface where users can access their profile settings.
- This section should be accessible to all users (admin, manager, employee) to manage their account details, including password changes.

2. Password Change Form:

- Within the user profile section, include a form specifically for changing passwords.
- The form should require users to enter their current password and then provide fields for entering a new password and confirming it.

3. Password Strength Requirements:

- Implement password strength requirements to ensure that users choose secure passwords.
- Requirements may include a minimum length, combination of letters, numbers, and special characters.
- Provide real-time feedback to users on the strength of their new password as they type it.

4. Password Confirmation:

- Require users to confirm their new password by entering it a second time.
- This helps prevent mistakes when entering the new password and ensures that the user has entered it correctly.

5. Authentication and Security:

- Verify the user’s identity by requiring them to enter their current password before allowing them to change it.
- Use secure protocols (e.g., HTTPS) to encrypt the password change request and protect it from interception.

6. Error Handling:

- Handle errors gracefully and provide informative error messages if the user encounters any issues during the password change process.
- Common errors may include entering an incorrect current password, failing to meet password strength requirements, or mismatching new passwords.

7. Success Confirmation:

- Once the password change is successful, provide a confirmation message to the user.
- Consider offering the option to log out and log back in with the new password for immediate verification.

8. Logging:

- Log password change events, including the user who initiated the change and the timestamp.
- This helps in tracking account activity and auditing password changes for security purposes.

9. Password Expiry Policies:

- Optionally, implement password expiry policies that prompt users to change their passwords periodically.
- Notify users in advance when their passwords are about to expire and provide prompts to change them.

3.5Change Password

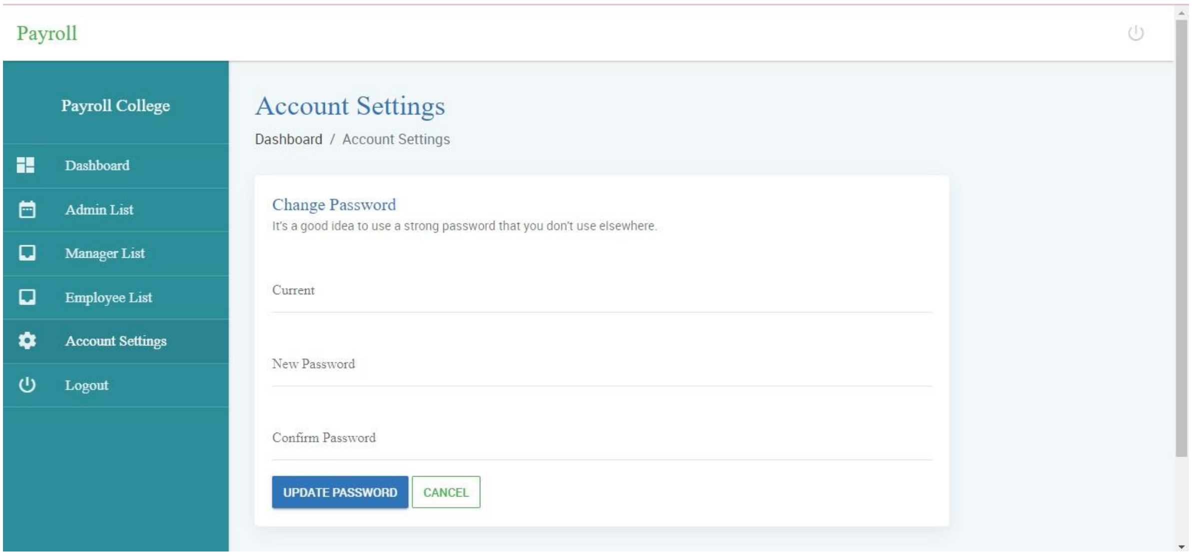

Figure:3.5-Change Password

8.Apply Leave:-

This window show user remaining leave's and prevent give the greater leaves for assumed policy

Implementing a leave application feature in a payroll college administration system allows employees to request time off and enables managers or administrators to review and approve these requests. Here's how you might implement this feature:

1. Leave Application Form:

- Create a form within the system where employees can apply for leave.
- Include fields such as:
    - Type of leave (e.g., vacation, sick leave, personal leave)
    - Start date and end date of the leave
    - Reason for the leave
    - Any additional comments or notes

2. Leave Balance Display:

- Show employees their current leave balances (e.g., vacation days, sick days) before they submit a leave request.
- This helps employees make informed decisions about their available leave balances.

3. Leave Policies and Rules:

- Display the organization's leave policies and rules within the leave application form.
- Include information about how leave requests are processed, any blackout dates, and any other relevant policies.

4. Approval Workflow:

- Once an employee submits a leave request, route it to the appropriate manager or administrator for approval.
- Allow multiple levels of approval if necessary (e.g., first-level manager, department head, HR manager).
- Notify approvers via email or notifications within the system when a new leave request requires their attention.

5. Leave Calendar:

- Display leave requests on a shared calendar to help managers and administrators visualize who will be absent on specific dates.
- Include color-coding to differentiate between different types of leave (e.g., vacation, sick leave).

6. Leave Status Tracking:

- Allow employees to track the status of their leave requests (e.g., pending, approved, rejected).
- Provide notifications to employees when their leave requests are approved or rejected.

7. Leave History:

- Maintain a history of all leave requests and their statuses for each employee.
- Allow employees to view their leave history within the system.

8. Leave Reports:

- Generate reports on leave usage, including data such as the number of leave days taken by each employee, types of leave taken, etc.
- These reports can help managers and administrators track leave trends and plan staffing accordingly.

9. Integration with Payroll:

- Integrate the leave application system with the payroll system to ensure that leave balances are accurately reflected in payroll calculations.
- Deduct leave days from employees' balances once leave requests are approved.

10.Security and Data Privacy:

- Ensure that leave requests and related data are stored securely and comply with relevant data privacy regulations.
- Implement role-based access control to restrict access to sensitive leave information to authorized personnel only.

3.6 Apply Leave

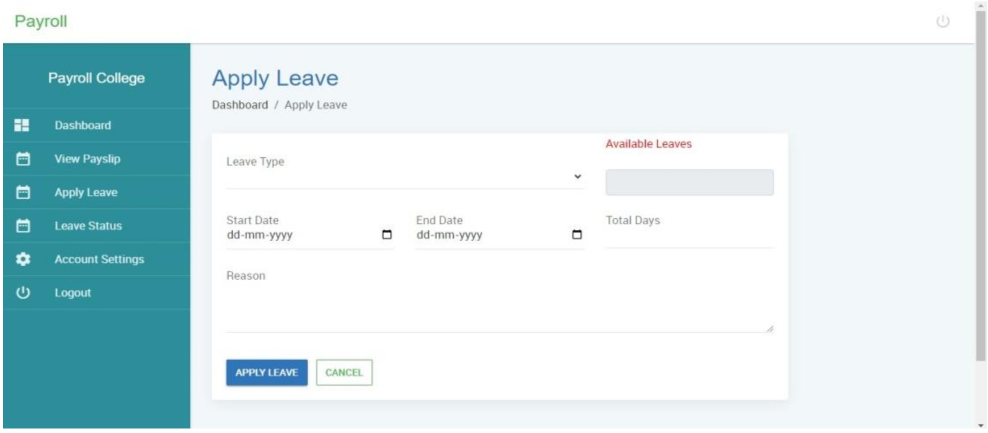

Figure:3.6-Apply Leave

9.View Leave’s:-

The superior watch sub-ordinates leave’s here.

To implement a feature to view leave information in a payroll college administration system, you would create a section within the system’s interface where users with appropriate permissions can access and manage leave records. Here’s how you might implement this feature:

1. Leave Management Section:

- Create a dedicated section within the system’s interface for leave management.
- This section should be accessible to managers and administrators with the necessary permissions.

2. Leave List Display:

- Display a list of leave requests with relevant information such as employee name, leave type, start date, end date, status (pending, approved, rejected), and any comments or notes.
- Paginate the leave list if there are a large number of records.

3. Filtering and Sorting Options:

- Provide options to filter the leave list by criteria such as employee name, leave type, status, date range, etc.
- Allow users to sort the leave list based on various parameters such as date, status, or employee name.

4. Leave Details View:

- Allow users to click on a leave request to view more detailed information.
- Show additional details such as the reason for the leave, any attachments or supporting documents, and the history of actions taken on the request (e.g., approval/rejection comments, dates).

5. Leave Calendar Integration:

- Integrate the leave management section with a shared leave calendar to provide a visual representation of leave requests.
- Show approved leave requests on the calendar to help managers and administrators visualize employee availability.

6. Leave Approval Workflow:

- Allow managers and administrators to review and take action on leave requests directly from the leave management section.
- Provide options to approve, reject, or modify leave requests, along with the ability to add comments or notes.

7. Leave Balances:

- Display employees' current leave balances alongside their leave requests.
- Ensure that leave balances are updated automatically when leave requests are approved or modified.

8. Leave Reports:

- Generate reports on leave usage, including data such as the number of leave days taken by each employee, types of leave taken, etc.
- Provide options to export reports in different formats (e.g., PDF, Excel) for further analysis or sharing.

9. Security and Data Privacy:

- Implement role-based access control to ensure that only authorized users can view and manage leave information.
- Ensure that sensitive leave data is stored securely and complies with relevant data privacy regulations.

a. View Leave’s

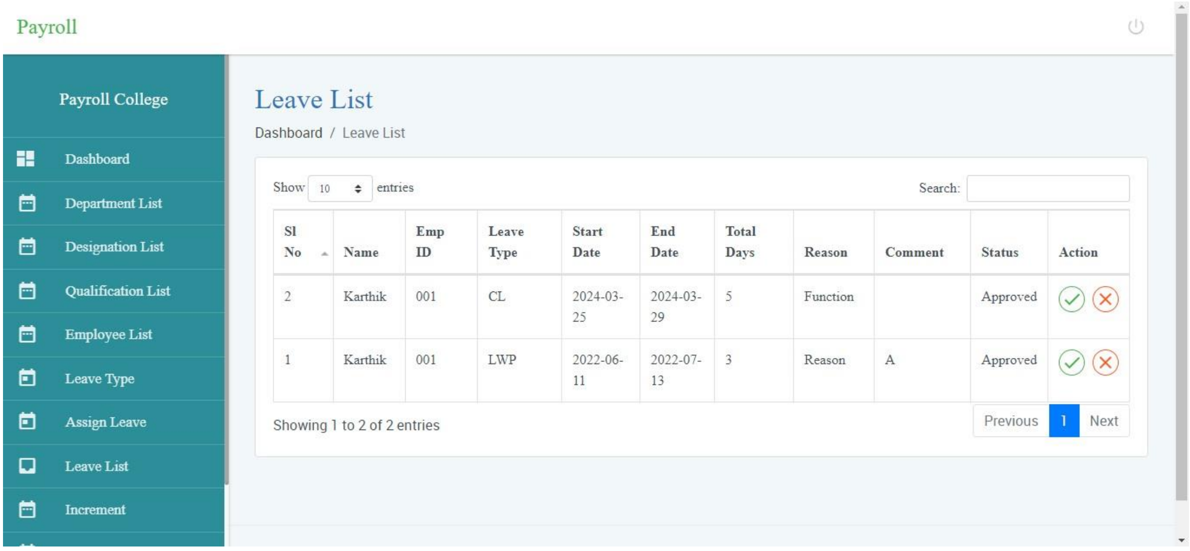

Figure:3.7-View Leave’s

10.View own Leave's :-

If the employee want to see own leave's which Approved/Cancel/Reject see here

To allow employees to view their own leave information in a payroll college administration system, you would create a section within the system's interface where employees can access and manage their leave records. Here's how you might implement this feature:

1. Employee Leave Dashboard:

- Create a dedicated section within the system's interface for employees to view their leave information.
- This section should be accessible to all employees and display their own leave records.

2. Leave Summary:

- Display a summary of the employee's leave information, including their current leave balances for different types of leave (e.g., vacation days, sick days).
- Show the total number of leave days taken and remaining for each leave type.

3. Leave Request History:

- Display a list of the employee's past leave requests with relevant information such as leave type, start date, end date, status (pending, approved, rejected), and any comments or notes.
- Paginate the list if there are a large number of records.

4. Leave Details View:

- Allow employees to click on a past leave request to view more detailed information.
- Show additional details such as the reason for the leave, any attachments or supporting documents, and the history of actions taken on the request (e.g., approval/rejection comments, dates).

5. Leave Request Form:

- Provide a form that allows employees to submit new leave requests.
- Include fields for selecting the type of leave, entering the start date and end date, providing a reason for the leave, and attaching any supporting documents if necessary.

6. Leave Request Status Tracking:

- Display the status of each leave request submitted by the employee (e.g., pending, approved, rejected).
- Provide notifications to the employee when their leave requests are approved or rejected.

7. Leave Balances Update:

- Ensure that leave balances are updated automatically when leave requests are approved or modified.
- Display updated leave balances after each leave request is submitted or approved.

8. Security and Data Privacy:

- Implement authentication mechanisms to ensure that employees can only view their own leave information.
- Ensure that sensitive leave data is stored securely and complies with relevant data privacy regulations.

3.8 View own Leave's

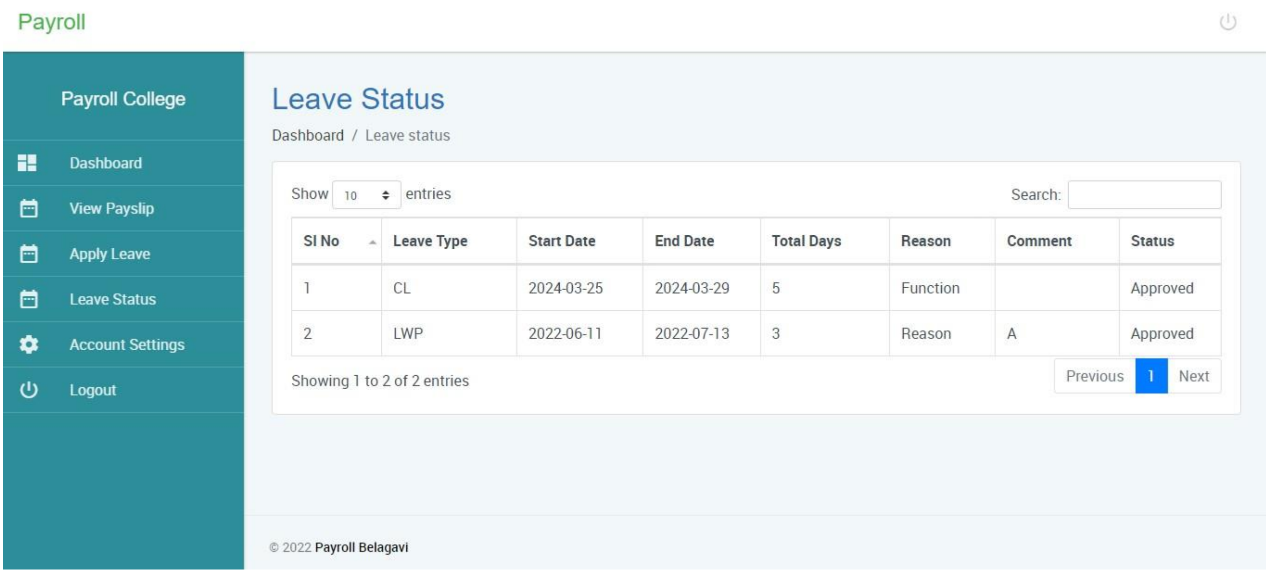

Figure:3.8-View Own Leave's

11.Summary Report :-

The superior must watch sub-ordinates leave's here

Creating a summary report for a payroll college administration system involves consolidating key information related to payroll, employee details, and administrative activities. Here's how you might structure such a report:

1. Executive Summary:

- Provide an overview of the current state of the payroll college administration system.
- Include key metrics such as the total number of employees, payroll expenses, leave balances, etc.

2. Employee Information:

- Include a section summarizing employee details such as:
  - Total number of employees
  - Breakdown of employees by department or role
  - New hires and terminations during the reporting period
  - Employee demographics (optional)

3. Payroll Summary:

- Provide a summary of payroll-related information, including:
  - Total payroll expenses for the reporting period
  - Breakdown of payroll expenses by category (e.g., salaries, benefits, taxes)
  - Average salary or hourly rate
  - Number of pay periods processed
  - Any notable payroll adjustments or discrepancies

4. Leave Management:

- Include data on leave usage and balances, such as:
    - Total leave days taken during the reporting period
    - Breakdown of leave types (e.g., vacation, sick leave)
    - Leave balances for each employee
    - Any trends or patterns in leave usage (e.g., spikes during certain months)

5. Employee Performance:

- Optionally, include a section summarizing employee performance metrics, such as:
    - Number of performance reviews conducted
    - Average performance ratings
    - Any notable achievements or areas for improvement identified during reviews

6. Administrative Activities:

- Summarize administrative activities related to the payroll college administration system, including:
    - Number of user accounts created or deactivated
    - Changes to user roles or permissions
    - Any system updates or maintenance performed during the reporting period

7. Compliance and Regulations:

- Include information on compliance with relevant labor laws, regulations, and internal policies, such as:
  - Compliance with minimum wage requirements
  - Adherence to overtime regulations
  - Any legal or regulatory changes impacting payroll or employee management

8. Future Considerations:

- Provide recommendations or insights based on the data presented in the report.
- Highlight areas for improvement or potential challenges to address in future reporting periods.

9. Appendix:

- Include any supplementary information or detailed data tables that support the findings presented in the report.

3.9 Summary Report

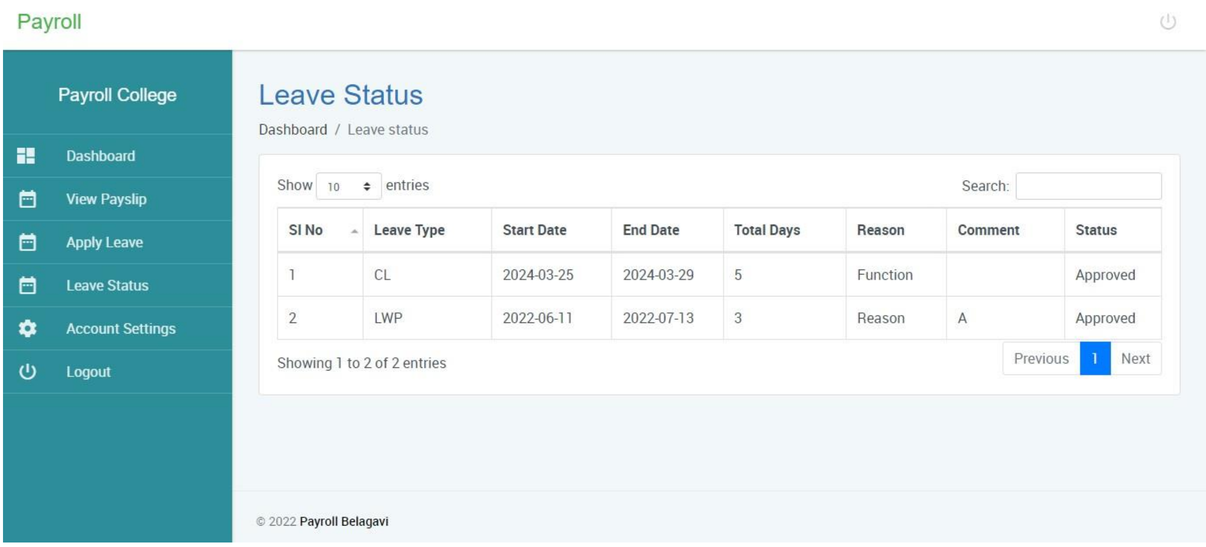

Figure:3.9-Summary Report

12.Notification :-

The two kinds of notification request/Confirmation superior comes request on Sub-ordinates show on request notification bar and after approved and reject leave show confirmation bar

Implementing notifications in a payroll college administration system helps keep users informed about important events, updates, and actions that require their attention. Here's how you might incorporate notifications for different user roles:

1. System-Wide Notifications:

- Send system-wide notifications to all users for critical updates or maintenance activities affecting the entire payroll system.
- Examples include system downtime notifications, upcoming payroll processing deadlines, or changes to system policies.

2. Admin Notifications:

- Notify admins about tasks or events requiring their attention, such as:
  - New employee onboarding tasks (e.g., setting up accounts, assigning roles)
  - Pending approvals for leave requests, expense reports, or payroll adjustments
  - Alerts for potential payroll discrepancies or compliance issues

3. Manager Notifications:

- Inform managers about activities related to their team or department, including:
  - New leave requests submitted by team members requiring approval
  - Notifications about employees reaching overtime thresholds or exceeding leave balances

    - Updates on employee performance evaluations or training requirements

4. Employee Notifications:

- Notify employees about events or actions relevant to their individual employment, such as:
    - Approval or rejection of their leave requests
    - Reminders about upcoming performance reviews or training sessions
    - Updates on changes to their payroll information (e.g., salary adjustments, tax forms)

5. Customizable Notification Preferences:

- Allow users to customize their notification preferences based on their role, preferences, and the types of information they want to receive.
- Provide options to enable or disable specific types of notifications (e.g., email, in-app notifications, SMS).

6. Real-Time Notifications:

- Implement real-time notifications to ensure that users receive timely updates about critical events.
- Use push notifications or in-app alerts to notify users immediately when action is required.

7. Notification Center:

- Create a centralized notification center within the system where users can view and manage their notifications.
- Include features such as filtering, sorting, and marking notifications as read or unread.

8. Compliance and Privacy:

- Ensure that notifications comply with relevant data privacy regulations and do not expose sensitive information.
- Implement encryption and security measures to protect the confidentiality of notification content.

3.10 Notification

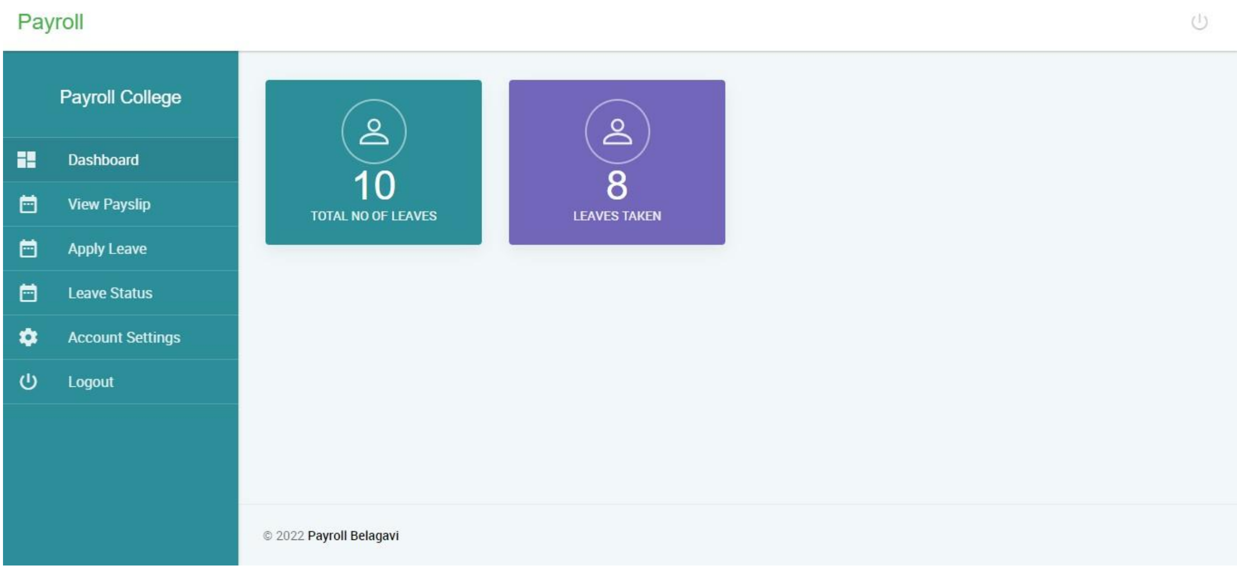

Figure:3.10-Notification

13.Conclusion

Payroll Management System" software developed for a company has been designed to achieve maximum efficiency and reduce the time taken to handle the Payroll activity. It is designed to replace an existing manual record system thereby reducing time taken for calculations and for storing data. The system uses PHP and Mysql database as a backend for the database.

The system is strong enough to withstand regressive daily operations under conditions where the database is maintained and cleared over a certain time of span. The implementation of the system in the organization will considerably reduce data entry, time and also provide readily calculated reports.