SOFTWARE REQUIREMENT SPECIFICATION

<<Human Resource Management System – HRMS>>

Version 1.2.6 approved

Prepared by

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Record of Changes

Version	Date	A* M, D	In charge	Change Description
V1.0.0	01/06	A*	AnhNN	Write a Product Vision and Product Context
V1.0.1	01/06	A*	VietTH	Write Major features and Limitations and Exclusions
V1.0.2	01/06	A*	HuyTQ	Write User Requirements sections 4.1 and 4.3
V1.0.3	01/06	A*	QuyenTV	Write Assumptions and Dependencies and Business Rules
V1.0.4	01/06	A*	NhatNM	Write User Requirements section 4.2
V1.1.0	09/06	A*	AnhNN	Write 'Add employee' and 'Calculate Salary' use cases
V1.1.1	09/06	A*	VietTH	Write 'Conduct Performance Review' and 'Submit Leave Request' use cases
V1.1.2	09/06	A*	HuyTQ	Write 'Create a post' and 'Manage a post' use cases
V1.1.3	09/06	A*	QuyenTV	Write 'View Employee Information' use case
V1.1.4	09/06	A*	NhatNM	Write 'Approve payroll' and 'View and export payroll' use cases
V1.2.0	16/06	A*	AnhNN	Write Non-functional Requirements - Quality Attributes
V1.2.1	16/06	A*	VietTH	Draw the Screen Flow
V1.2.2	16/06	A*	HuyTQ	Write Data Dictionaries and External Interfaces
V1.2.3	16/06	A*	QuyenTV	Write Screen Descriptions and Non-screen functions
V1.2.4	16/06	A*	NhatNM	Draw Entity Relationship Diagram
V1.2.5	16/06	M	NhatNM	Redraw the Use Case Diagram
v1.2.6	17/06	A+	NhatNM	Added Screen Authorization and Screen Description
v1.2.7	21/06	M	NhatNM	Fix use case diagram

*A - Added M - Modified D - Deleted

Table of Contents

I. Product Overview

1. Product Vision

For High Managers , they can approve the payroll sent by HR to pay employees. For HR, they can manage employees, calculate the salary for each employee and send this payroll to the High Manager for approval. For Accountants, they can see approved payroll and export payroll to excel file to send salaries to employees. For HR staff, they can claim employees' attendance information daily and employees can get their attendance information daily. Our Manager feature empowers Department Heads to efficiently oversee their teams by providing easy access to member information, facilitating rewards and reviews. Administrators, they can manage company information, employee account information For and they can set up organisational structure, relationships between departments. For internal communication staff, they can put their posts into the system, they can manage their posts and employees can interact with public posts. For Employees, they can view their information including salary, work calculations, and individual information.

2. Product Context
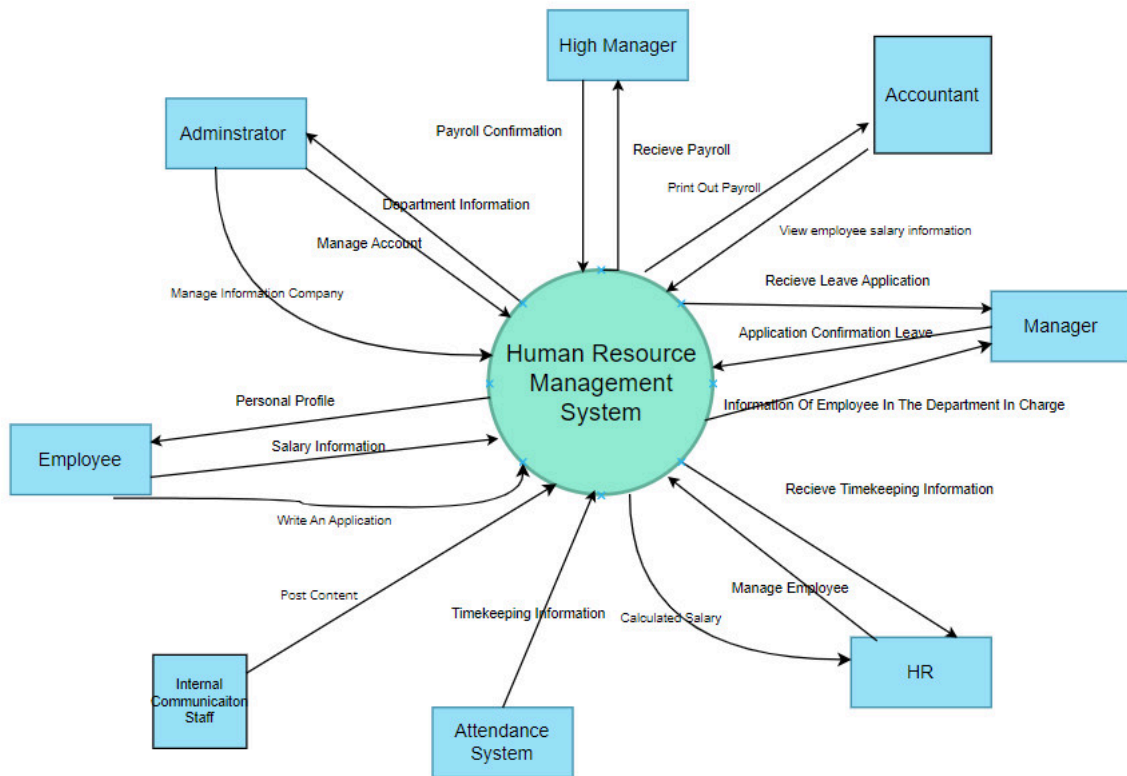
3. Major Features

FE-01: Approve the payroll sent by HR to pay employees.

FE-02: Manage employees' profiles, calculate the salary for each employee, and generate payroll for approval.

FE-03: View approved payroll and export payroll to Excel files to send salaries to employees.

FE-04: Claim employees' attendance information daily, and employees can access their attendance records daily.

FE-05: Oversee teams by accessing member information, facilitating rewards, and conducting reviews.

FE-06: Manage company information and employee account information, set up organisational structure, and define relationships between departments.

FE-07: Publish posts to the system, manage them, and facilitate employee interaction with public posts.

FE-08: View employee's information, including salary details, work calculations, and personal information.
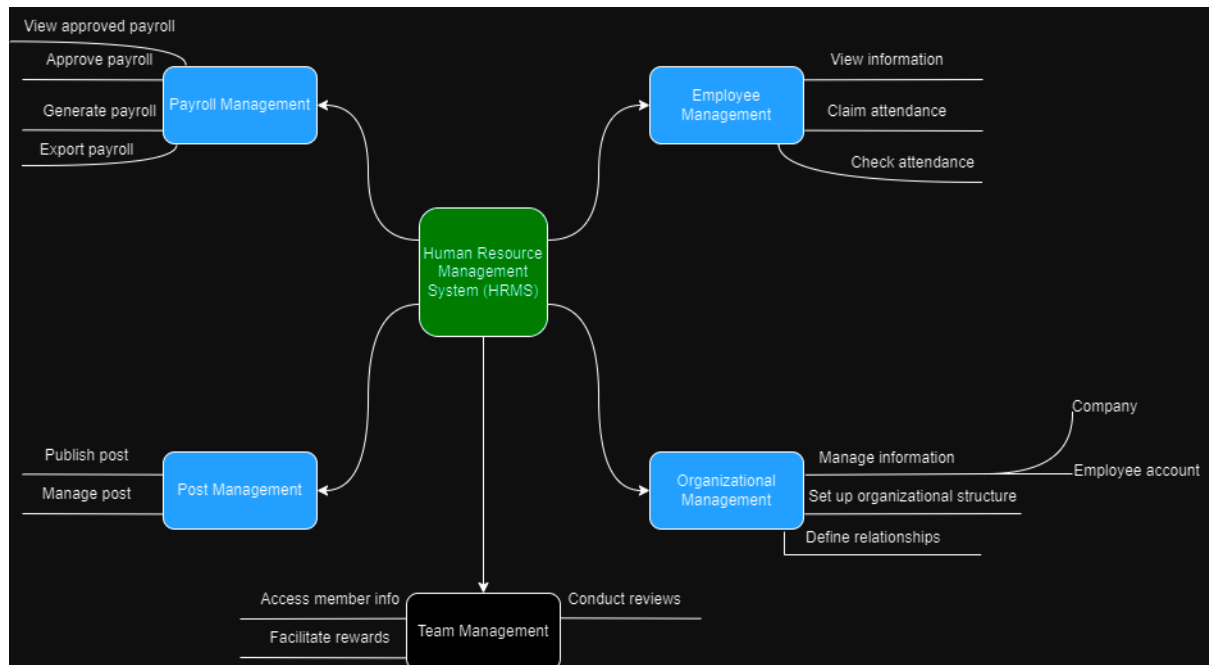
4. User Requirements
4.1 Actors List

#	Actor	Description
1	Manager	They are responsible for overseeing the work of a group of employees within their department. They may also be involved in hiring, training, and evaluating employees.
2	High Manager	Also known as senior management, they hold a key position in the company and make decisions that affect the company's direction and strategy.
3	Administrator	This role typically involves managing the system, ensuring its smooth operation, and dealing with any technical issues. They may also be responsible for setting up accounts for new users and granting appropriate access levels.
4	Employees	They are the users of the system who can access their personal data, apply for leave, view their payroll information, and use other HR services.
5	HR	Human Resources personnel use the system to manage employee data, process payroll, track attendance, manage benefits, and handle other HR tasks.

#	Actor	Description
6	Internal Communication Staff	They are responsible for facilitating communication within the organisation. In the context of an HR system, they might use it to send company-wide announcements or updates.
7	Attendance System	This isn't a role but a feature of the HR system. It's used to track employee attendance, record check-in and check-out times, calculate working hours, and so on.

4.2 Use Cases
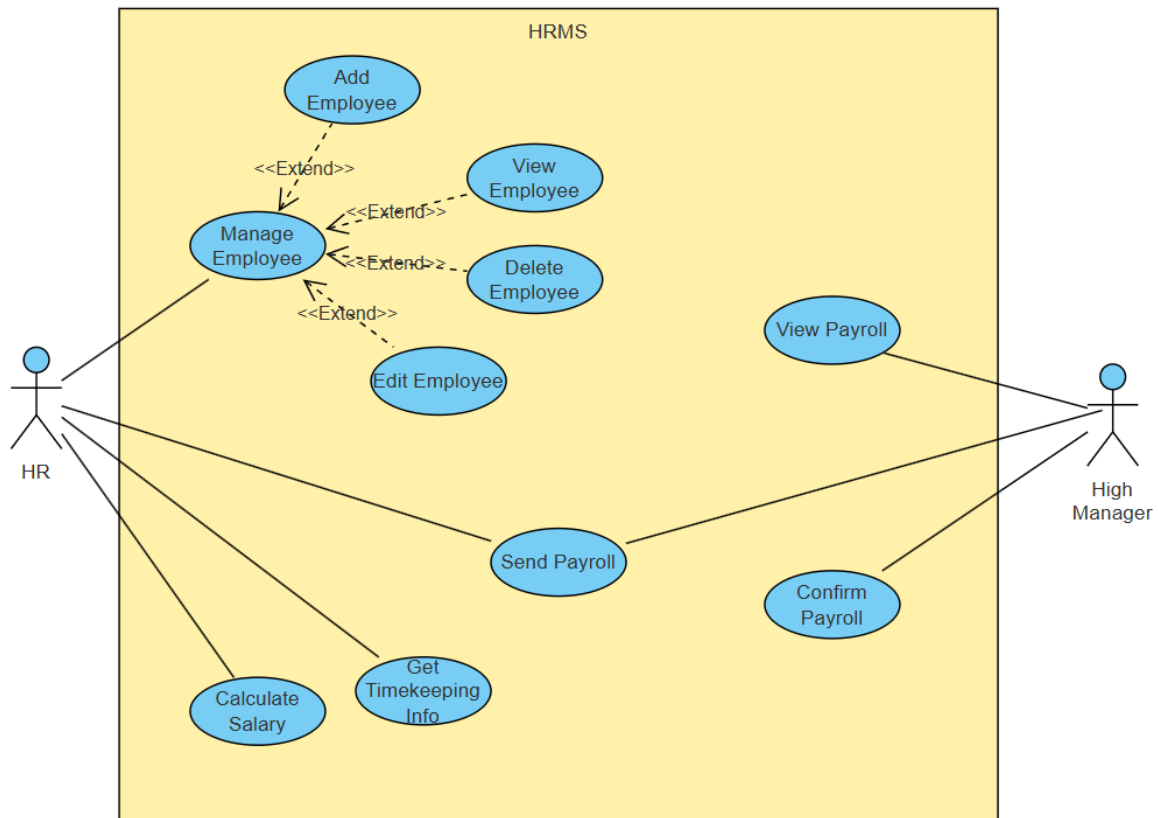
ID	Feature	Use Case	Description
1	Payroll Management	Approve Payroll	High Manager can approve Payroll sent by HR
2	Payroll Management	Send Payroll	HR can send payroll to High Manager
3	Payroll Management	View Payroll	High Manager can view payroll sent by HR
4	Payroll Management	Calculate Salary	HR can calculate salary based on approved payroll
5	Employee Management	Get Timekeeping Info	HR can get the Employee's

			attendance time
6	Employee Management	Manage Employee	HR can Add, Remove or Edit Employee Info
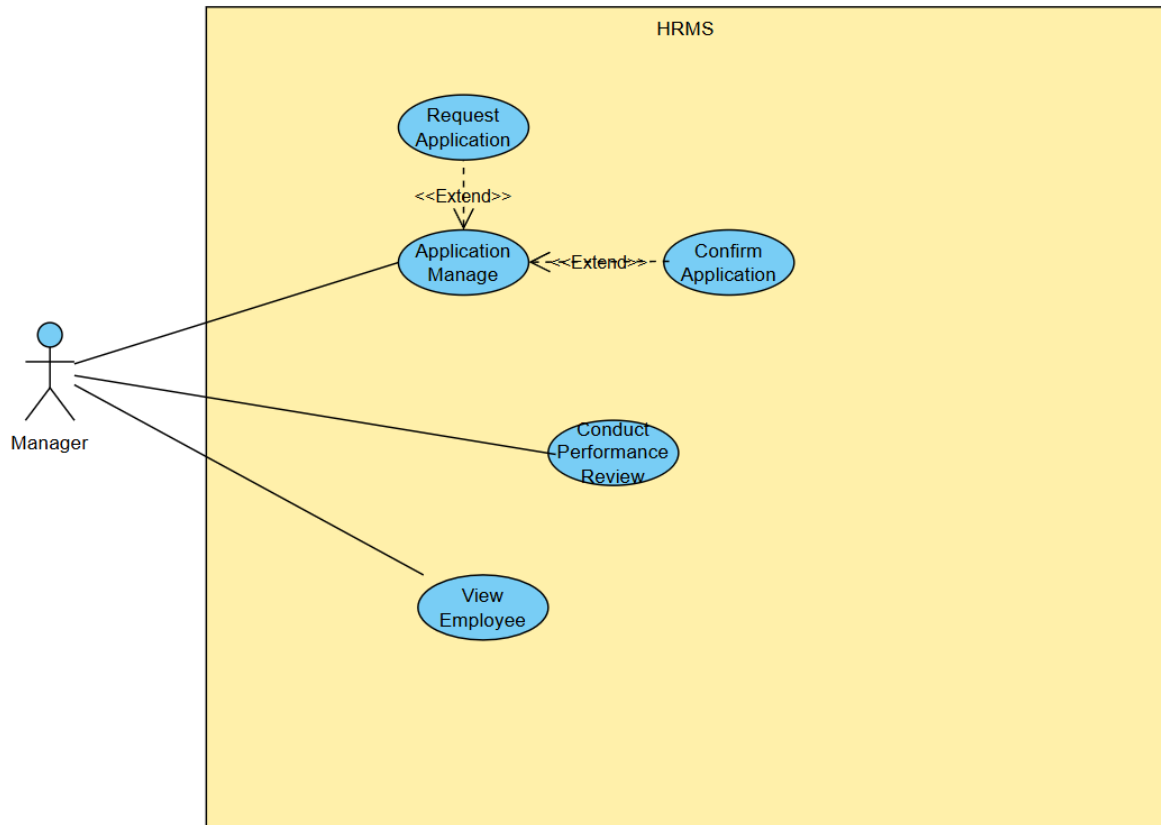
ID	Feature	Use Case	Description
1	Application Management	Request Application	Manager can request application from Employee
2	Application Management	Confirm Application	Manager can confirm application send by Employee
3	Employee Management	View Employee	Manager can view Employee Info
4	Team Management	Conduct Performance Review	Managers can conduct a performance review of their employees in charge.
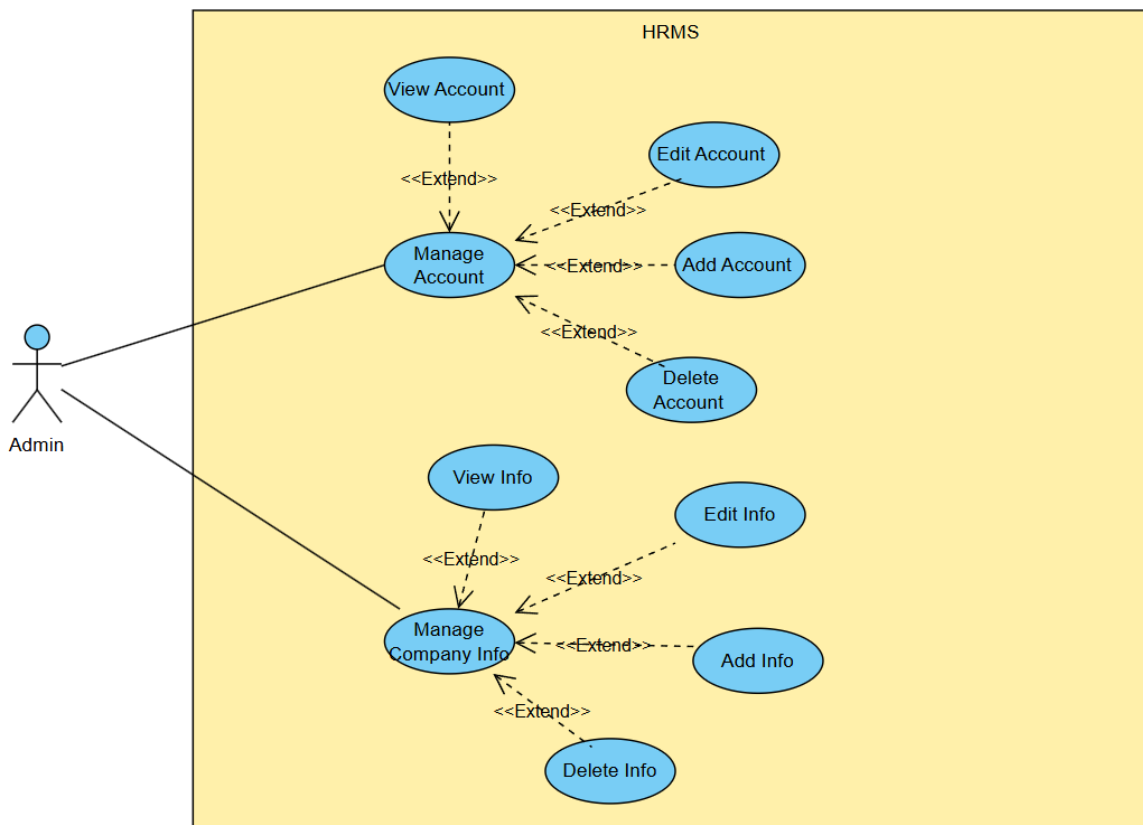
ID	Feature	Use Case	Description
1	Organisational Management	Manage Company Info	Admin can View, Add, Edit or Delete company information
2	Organisational Management	Manage Account	Admin can View, Add, Edit or Delete any account.
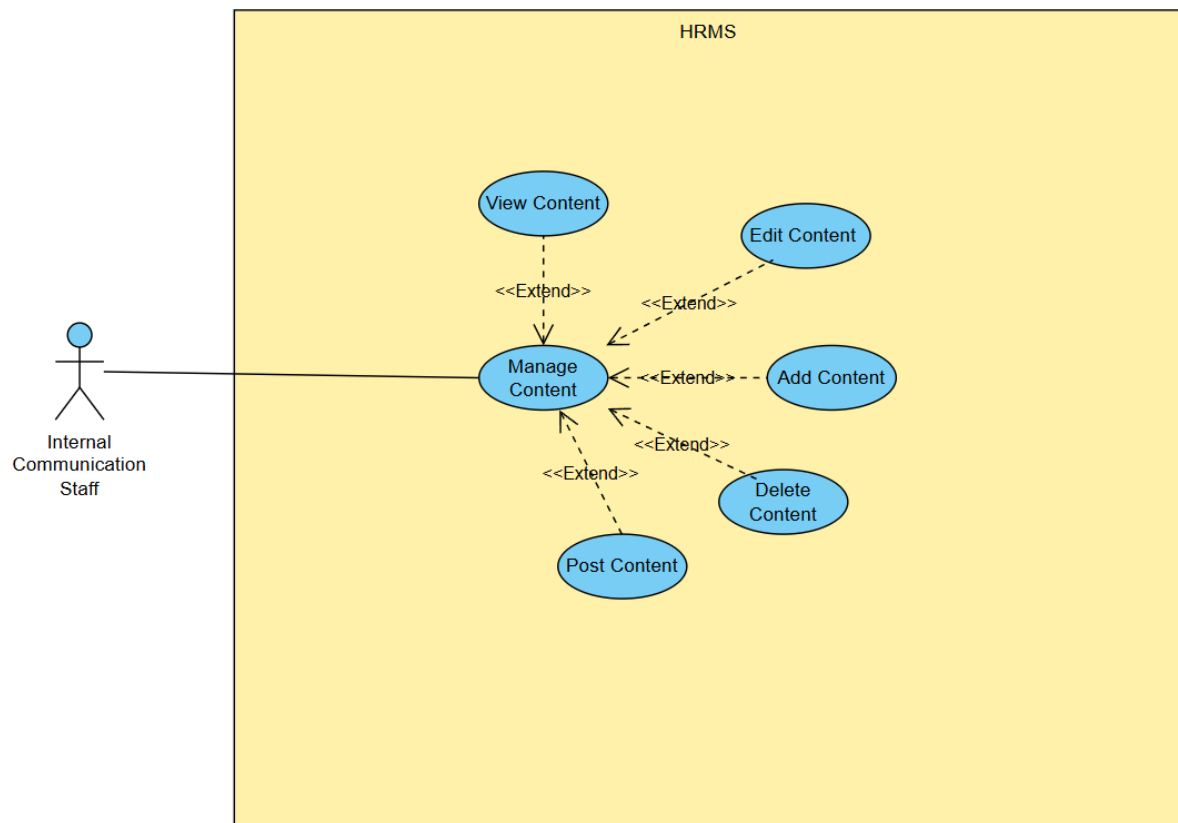
ID	Feature	Use Case	Description
1	Post Management	Manage Post	ICS can View, Add, Edit, Delete or Post content to the system.
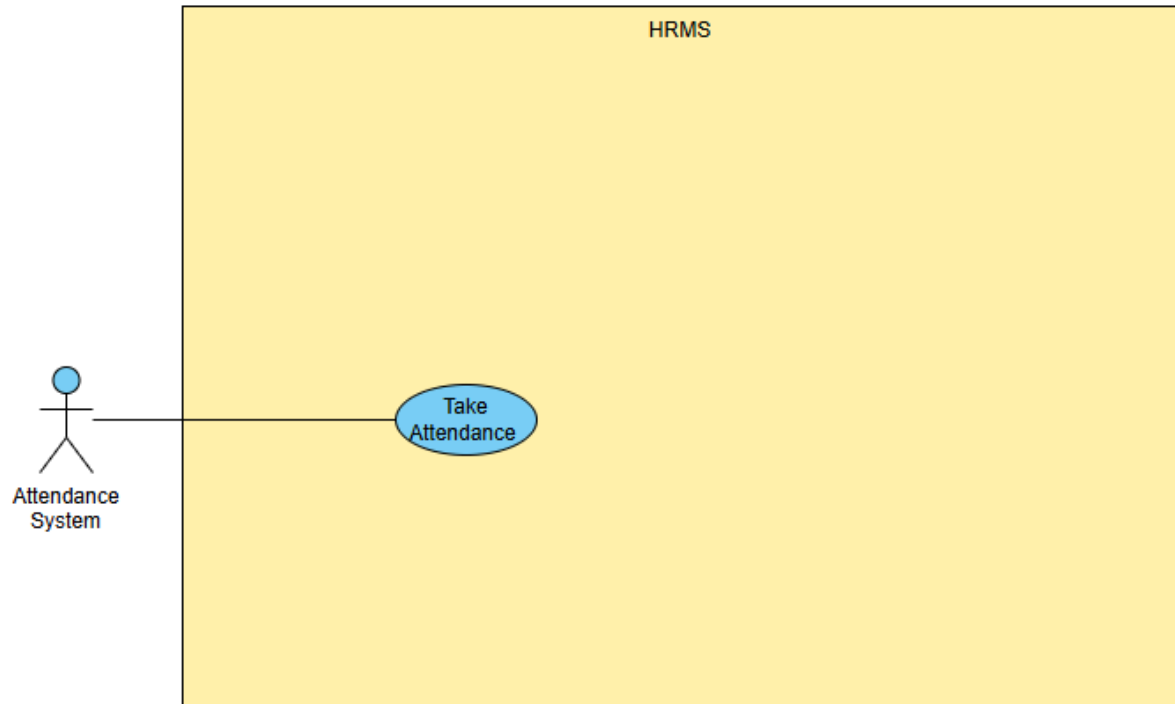
ID	Feature	Use Case	Description
1	Employee Management	Take Attendance	Attendance System can take Employee's attendance.
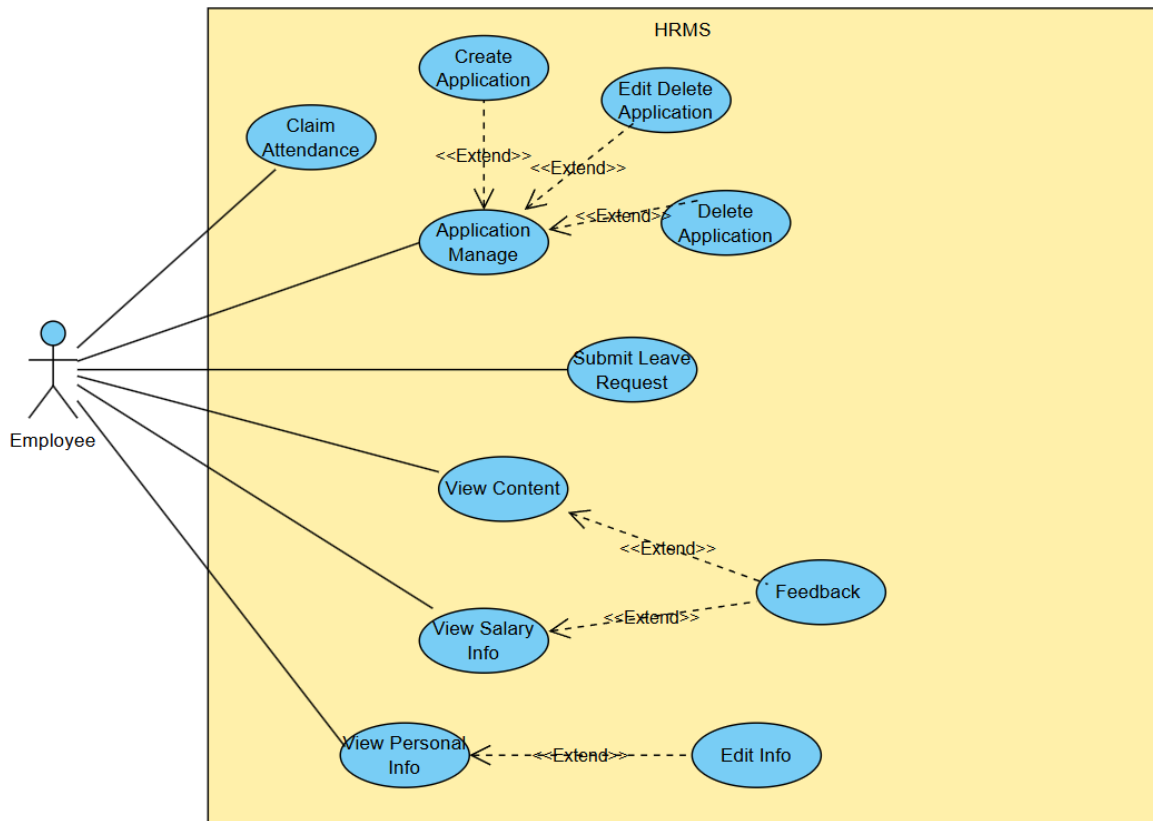
ID	Feature	Use Case	Description
1	Employee Management	Application Manage	Employee can Create, Delete or Edit an application
2	Employee Management	View Content	Employee can view and feedback content posted by ICS
3	Employee Management	View Personal Info	Employees can view and edit their information.
4	Employee Management	View Salary Info	Employees can view their salary and provide feedback.
5	Employee Management	Claim Attendance	Employees can claim their attendance.
6	Employee Management	Submit Leave Request	Employees can submit a request to leave the company.

4.3 Roles and Permission

Function	Administrator	Manager	Employee	High Manager	Internal Communication Staff	Attendance System	HR
Approve Payroll							X
Send Payroll				X			X
View Payroll				X			X
Calculate Salary							X
Get Timekeeping Info							X
Manage Employee							X
Request Application		X					
Confirm Application		X					
View Employee		X					
Conduct Meeting		X					
Manage Info	X						
Manage Account	X						
Manage Post					X		
Take Attendance						X	
Application Manage		X					
View Content		X					
View Personal Info		X					
View Salary Info		X					
Claim Attendance		X					

5. Assumptions & Dependencies

Assumptions:

1.User Authentication:

- The system requires users to log in using email and password.

- User passwords are encrypted before being stored.

2.Role-Based Access Control:

- Each user can only access functions and data within their scope of authority.
- Permissions are clearly divided into roles: Administrator, HR, Accountant, Manager, Employee, and Internal Communication Staff.

3.Data Privacy & Security:

- Personal and salary information of employees is secured, and only authorised personnel can view or modify it.
- The system stores the history of changes in a format that users cannot directly read.

4.Data Accuracy:

- Information about salaries, allowances, insurance, and attendance is accurately calculated based on the data entered into the system.

5.Salary calculation formulas are ensured to be correct:

- Salary = Basic Salary + Business Salary + Other Allowances (if any) – Insurance – Personal Income Tax – Union Fee – Debt (if any).
- If an employee takes unpaid leave, their salary will be deducted accordingly.
- If an employee takes paid leave, they will still receive their normal salary.

6.Approval Workflow:

- Department Heads approve leave requests from employees. Department Heads can delegate approval rights to Deputy Heads.
- Directors approve payroll. Directors can delegate approval rights to others.
- Once approved, payroll cannot be modified unless it is reverted to a rejected status.

7.Leave Management:

- Employees are entitled to 1 day of leave per month, with leave carried over until the end of March of the following year.
- If an employee takes more than 3 consecutive days off, the leave request must be approved by the Director after being approved by the Department Head.

8.Communication & News Management:

- Internal Communication Staff manage internal news articles.
- Articles can be commented on and voted on by employees.

Dependencies

1.Database:

- The system requires a database to store information about the company, employees, departments, articles, and change history.

2.Authentication Service:

- User authentication service to manage login, registration, and password resets.

3.Email Service:

- The system sends authentication emails, approval notifications, and other important information.

4.Payroll Calculation Service:

- A service to calculate monthly salaries based on defined formulas.

5.Attendance System:

- An attendance system that provides daily check-in/check-out information for employees.

6.Hosting & Deployment:

- The system is deployed on a server or cloud environment, ensuring continuous access and data security.

7.Backup & Recovery:

- Backup and recovery mechanisms ensure data is not lost in case of a system failure.

8.Audit Logs:

- Record the history of changes, payroll approvals, leave approvals, and other significant activities within the system.

6. Limitations and Exclusions
1. The HRMS will not include features for managing contractor or freelance worker data.
2. The extent of customization options for different organisational needs is not specified. Limitations in customization may hinder the product's ability to adapt to diverse business requirements.

3. Without scalable features and infrastructure, the product may struggle to accommodate growing user bases or expanding organisational needs.
4. Real-time integration with all third-party applications might not be feasible initially.

7. Business Rules

ID	Category	Rule Definition
BR1	Company Information	Company name, tax code, address, and legal representative information can only be managed by the system administrator.
BR2	Employee Information	HR can add, edit, and delete employee personal information (Employee ID, name, department, position, work location, DOB, ID number, issue date, issue place, current address).
BR3	Salary Information	Salary calculation formula: Employee salary = Basic salary + Business salary + Other allowances - Insurance - Personal income tax - Union fees - Debt (if any).
BR4	Salary Information	Accountants can only download the payroll after it is approved by the director.
BR5	Salary Information	Approved payroll cannot be edited; if edits are needed, it must be reverted to rejected status.
BR6	Leave Management	Each employee gets 1 leave day per month, and it can be accumulated; previous year's leave days can be carried over until the end of March of the following year.
BR7	Leave Management	Unpaid leave will result in salary deduction proportional to the number of unpaid leave days.
BR8	Leave Management	Employees can submit leave requests, which need to be approved by the department head or an authorised person.
BR9	Leave Management	Leave requests exceeding 3 days need approval from the director after department head approval.
BR10	Leave Management	Leave requests can be submitted retroactively after the leave days
BR11	Organisational Structure	Administrators can add, edit, delete departments, and establish relationships between departments.
BR12	Role Management	HR manages employee information, attendance, and payroll, and sends payroll to the director for approval.
BR13	Role Management	Accountant views payroll information and prints payroll after approval.
BR14	Role Management	Managers view personal information of employees in their department and approve leave requests.

BR15	Role Management	Employees can only view their personal information and salary history, and manage their own leave requests.
BR16	Role Management	Internal communication staff manages internal news articles; employees can comment and vote on articles.
BR17	System Access and Security	Users must log in with email and password to access the system.
BR18	System Access and Security	Users can only access functions and data within their scope of responsibility.
BR19	System Access and Security	Users can change their password or reset it if forgotten.
BR20	System Access and Security	Passwords must be encrypted before being stored.
BR21	System Logging and History	Record history of changes to salary information, payroll approval, and leave approval in files that users cannot read directly.
BR22	System Logging and History	Calculate and store salary payment history for employees.

II. Use Case Specifications

1. Approve payroll sent by HR

Payroll Approval

HRM

Payroll Detail

Payroll Name: PR-EM001
Create Date : dd/MM/yyyy
Send Date : dd/MM/yyyy
Approve Date: dd/MM/yyyy

Description:

Note:

PAYROLL LIST

🔍 Payroll Id

ID	Payroll Name	Content	Action	
01	PR-EM001	PR-EM001.xlsx	☑ Approve	☐ Reject
02	PR-EM002	PR-EM002.xlsx	☐ Approve	☑ Reject
03	PR-HR001	PR-HR001.xlsx	☑ Approve	☐ Reject
04	PR-EM003	PR-EM003.xlsx	☑ Approve	☐ Reject
05	PR-EM004	PR-EM004.xlsx	☐ Approve	☑ Reject
06	PR-EM005	PR-EM005.xlsx	☐ Approve	☑ Reject
07	PR-MK001	PR-MK001.xlsx	☐ Approve	☐ Reject
08	PR-HR002	PR-HR002.xlsx	☐ Approve	☐ Reject
09	PR-EM006	PR-EM006.xlsx	☐ Approve	☐ Reject
10	PR-EM007	PR-EM007xlsx	☐ Approve	☐ Reject
11	PR-IT001	PR-IT001.xlsx	☐ Approve	☐ Reject
12	PR-IT002	PR-IT002.xlsx	☐ Approve	☐ Reject

Report   Save

Reject Detail

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

Close   Send

UI Requirement

Field Name	Field Type	Description
HRM	button	Back to homepage
Payroll Detail	text	Show detail of the selected payroll
Payroll List	table	Show payroll in a list

Seach	text	Search payroll by id, name, content or checked action
Report	button	Report a selected payroll back to HR
Save	button	Save changes
Reject Detail	text	Pop-up window that takes payroll reject reason
Close	button	Close Reject Detail window
Send	button	Send reject detail

UC Detail

ID and Name:	**FE-01: Approve payroll**		
Created By:	Nguyen Minh Nhat	Date Created:	09/06/2024
Primary Actor:	High Manager	Secondary Actors:	HR
Description:	As a High Manager, I want to be able to approve payroll sent by HR.		
Trigger:	When the High Manager wants to approve a payroll.		
Preconditions:	PRE-1. High Manager is logged into the HR system. PRE-2. HR accessed the [Payroll Approval] tool.		
Postconditions:	POST-1. The High Manager successfully approved/rejected a payroll. POST-2. The system successfully tracked the Activity Log.		

Normal Flow:	1. High Manager clicks on the "Payroll Approval" button in the homepage.
	 2. The system returns the "Payroll Approval" screen.
	 3. The High Manager can:
	    - Clicks on a row to see payroll details.
	    - Clicks on the .xlsx file to see payroll content.
	 4. The High Manager approves the pending payroll.
	 5. The High Manager clicks on the "Save" button to confirm all changes.
	 6. The system forwards the approved payroll to the accountants.(see E01)		

	7. Activity Log is updated to reflect the approval of a new payroll.(see E02)
	8. The system confirms the successful approved payroll.
Alternative Flows:	1. See Normal FLow step 1, 2, 3
	2. The High Manager rejects the pending payroll.
	3. "Reject Detail"window pop-up.
	4. High Manger enter the reject causes.
	5. The High Manager hit "Send", pending the input data.
	6. The High Manager clicks on the "Save" button to confirm all changes.
	7. The system forwards the rejected payroll with cause to the HR.(see E01)
	8. Activity Log is updated to reflect the approval of a new payroll.(see E02)
	9. The system confirms the successful rejected payroll.
Exceptions:	**E01.System Forward Failure:**
	If the system encounters an issue while forwarding the data, it notifies Admin about the failure.
	The system returns High Manager to step 2 at the normal flow.
	E02.Activity Log Update Failure:
	If there is an issue updating the Activity Log after approving/rejecting a payroll, Admin is notified about the failure.
	The system returns High Manager to step 2 at the normal flow.
Priority:	High
Frequency of Use:	Every month
Business Rules:	BR-04, BR-05
Other Information:	The system should adhere to data security protocols to safeguard payroll information. Encryption and secure authentication mechanisms should be implemented to protect the confidentiality and integrity of the data.
Assumptions:	None

2. Manage employees

2.1 List Employee

List Employee

http://ListEmployee

≡ HRM   Log Out

| User List | List Employee | | | | | search |
| | | | | | | Add New Employee |

Employee	Phone	Status	Email	
Nguyen Van A Employee	0123845625	Active	Employee1@gmail.com	👁 ✎ 🗑
Nguyen Van B Employee	0123845625	Active	Employee2@gmail.com	👁 ✎ 🗑
Nguyen Van C Employee	0123845625	Active	Employee3@gmail.com	👁 ✎ 🗑

< prev 1 2 3 **4** 5 6 7 ... 14 15 next >

Field Name	Field Type	Description
Logout	button	Back to login page
User List	button	Back to user list page
Employee information	label	Name, mobile, status, email.
Search	textbox	Enter the information HR want to search
View, Update, Delete	button	Return to view, update, delete page
Pagination	button	Pagination list of employee
Add employee	button	Return to add employee screen.

2.2 Add Employee

Mockup

UI Requirement

Field Name	Field Type	Description
logout	button	Back to login page
User List	button	Back to user list page
Name	textbox	Enter name of employee
Email	textbox	Enter email of employee
Mobile	textbox	Enter mobile of employee

Avatar	textbox (file input)	Upload file avatar
Gender	radio	Select the gender of employee
Role	select	Select role of employee
Status	radio	Select status of employee
Add	button	Add employee
Cancel	button	Back to employee list

UC Detail

ID and Name:	**UC-FE02: Add employee**		
Created By:	Nguyen Ngoc Anh	Date Created:	08/06/2024
Primary Actor:	HR	Secondary Actors:	Employee
Description:	As an HR, I want to be able to add a new employee when the company hires someone new. This is to ensure effective employee management.		
Trigger:	When HR wants to add a new employee		
Preconditions:	PRE-1. HR is logged into the HR system. PRE-2. HR accessed the list of employee screen.		
Postconditions:	POST-1. HR adds an employee to the system successfully. POST-2. The system successfully tracked the Activity Log.		
Normal Flow:	10. HR clicks on the "Add Employee" button in the list of employees screen. 11. The system returns the "Add Employee" screen. 12. HR enters the employee's information into the system. 13. HR clicks on the "submit" button to confirm. 14. The system verifies the entered information.(see E01) 15. If information is verified, the system adds the employee to the database.(see E02) 16. Activity Log is updated to reflect the addition of a new employee.(see E03)		

	17. The system confirms the successful addition of the employee and announces it to HR.
Alternative Flows:	**None**
Exceptions:	**E01.System Verification Failure:**
	If the system encounters an issue while verifying the entered information, it notifies HR about the verification failure.
	The system returns HR to step 3 at the normal flow.
	E02.Database Addition Failure:
	If the system fails to add the employee to the database, HR receives an error notification.
	HR should contact the system administrator or technical support for assistance.
	The system returns HR to step 3 at the normal flow.
	E03.Activity Log Update Failure:
	If there is an issue updating the Activity Log after adding the employee, HR is notified about the failure.
	HR should report this to the system administrator for resolution.
	The system returns HR to step 3 at the normal flow.
Priority:	High
Frequency of Use:	Twice a year, flexible based on the company's recruitment time.
Business Rules:	BR-02
Other Information:	1. HR users must have the necessary permissions to access the "Add Employee" functionality. Access controls should be in place to ensure that only authorized personnel can perform this action.
	2.The system should adhere to data security protocols to safeguard sensitive employee information. Encryption and secure authentication mechanisms should be implemented to protect the confidentiality and integrity of the data.
	3.The system should maintain an audit trail to record all activities related to adding employees. This includes details such as the date, time, and user responsible for each addition. This helps in tracking changes and ensures accountability.
	4.The system should be designed to handle potential increases in the frequency of adding new employees, especially during peak recruitment periods. Scalability considerations should be part of the system architecture.

Assumptions:	None

2.3 Calculate Salary

Mockup

UI Requirement

Field Name	Field Type	Description
Salary component data	text	Total Work Days, Salary, CommuteDay, debt,.........
View	button	View detailed employee salary information
Edit	button	Edit employee salary information
Save	button	Save application data

Field Name	Field Type	Description
Salary component data	text	Total Work Days, Salary, CommuteDay, debt,.........
View	button	View detailed employee salary information
Edit	button	Edit employee salary information
Back	button	Return previous screen

UC Detail

ID and Name:	**UC-FE02: Calculate Salary**		
Created By:	Nguyen Ngoc Anh	Date Created:	08/06/2024
Primary Actor:	HR	Secondary Actors:	High Manager
Description:	HR calculates salaries and sends payroll to the High Manager for review and approval to pay salaries to employees in the company		
Trigger:	HR wants to calculates payroll		
Preconditions:	PRE-1. The HR logged into the HR Account.		
Postconditions:	POST-1.The system stores salary data. POST-2. The payroll is sent to the High Manager with status "Sent".		
Normal Flow:	1. HR retrieves data from timesheets by "Download TimeSheets " From Attendance System. 2. Attendance System send TimeSheets. 3. HR opens "Calculate Salary" on the system. 4. The system displays a screen for HR to see salary calculation information. 5. HR checks and corrects the mistake in the salary information for each specific employee. 6. HR click button "Save" 7. The system performs recalculations.(See E1.1) 8. When all records are calculated , the system displays Payroll. 9. HR downloads payroll.		

	10. HR click "Send Application"
Alternative ni Flows:	1.1. - The salary schedule is approved by the High Manager. - The application's status is "Accepted" . 1.2. - The salary schedule is rejected by the High Manager. - The application's status is "Rejected" . - HR must recalculate salary.
Exceptions:	E1.1. Some the record was calculated incorrectly or could not be calculated.(Notice and return Step 3)
Priority:	High
Frequency of Use:	Used at the end of the month
Business Rules:	BR-03, BR-04, BR-05
Other Information:	None
Assumptions:	None

3.View and Export Payroll

Report Detail

Error Type ▾

Transparency
Typo
Rule Violation
Missing
Misc.

sit amet, consectetur adipisicing elit, sed do eiusmod tempor
et dolore magna aliqua. Ut enim ad minim veniam, quis
ullamco laboris nisi ut aliquip ex ea commodo consequat.
Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu
fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in
culpa qui officia deserunt mollit anim id est laborum.

Close   Send

UI Requirement

Field Name	Field Type	Description
HRM	button	Back to homepage
Payroll Detail	text	Show detail of the selected payroll
Payroll	table	Show payroll in a list
Seach	text	Search payroll by id, name, content or status
Report	button	Report a selected payroll back to High Manager
Export	button	Export payroll to an Excel file
Report Detail	text	Pop-up window that takes payroll report reason
Report Type	select	Drop down list of error type
Close	button	Close Report Detail window

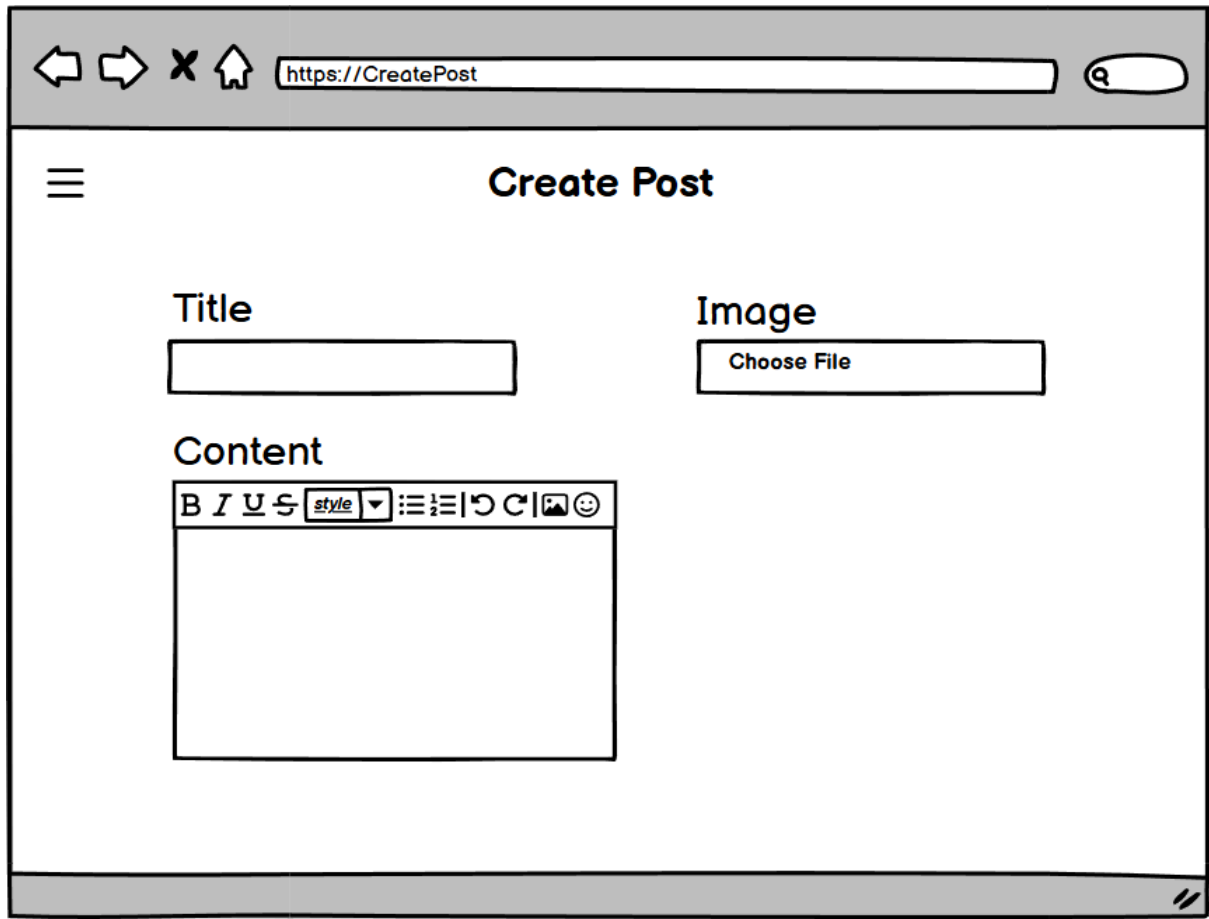| Send	button	Send Report detail

UC Detail

ID and Name:	**FE-03: View approved payroll**		
Created By:	Nguyen Minh Nhat	Date Created:	09/06/2024
Primary Actor:	Accountant	Secondary Actors:	High Manager
Description:	As an Accountant, I want to be able to view and export payroll approved by the High Manager..		
Trigger:	When the Accountant wants to view and export a payroll.		
Preconditions:	PRE-1. Accountant is logged into the HR system. PRE-2. Accountant accessed the [Payroll View] tool.		
Postconditions:	POST-1. The Accountant successfully exported a payroll. POST-2. The system successfully tracked the Activity Log.		
Normal Flow:	1. Accountant clicks on the "Payroll View" button in the homepage. 2. The system returns the "Payroll View" screen. 3. The Accountant clicks on a row to see payroll details. 4. The Accountant clicks on the .xlsx file to see payroll content. 5. Accountant exports the pending payroll. 6. The system exports Excel files to the Accountant PC.(see E01) 7. Activity Log is updated to reflect the payroll has been exported.(see E02) 8. The system confirms the successful payroll export.		
Alternative Flows:	1. Accountant clicks on the "Payroll View" button in the homepage. 2. The system returns the "Payroll View" screen. 3. The Accountant clicks on a row to see payroll details. 4. The Accountant clicks on the .xlsx file to see payroll content. 5. Accountant clicks on "Report". 6. The system returns a pop-up "Report Detail" window. 7. Accountant uses the drop down list to select the report type. 8. Accountant enters report cause. 9. The Accountant clicks on "Send". 10. The system forwards the reported payroll with the cause back to the High Manager. 11. Activity Log is updated to reflect the payroll has been reported.(see E02) 12. The system confirms the successful payroll report.		
Exceptions:	**E01.System Export Failure:**		

	If the system encounters an issue while exporting the data, it notifies the Accountant about the failure.
	The system returns Accountant to step 2 at the normal flow.
	E02.Activity Log Update Failure:
	If there is an issue updating the Activity Log after export/report a payroll, Accountant is notified about the failure.
	The system returns Accountant to step 2 at the normal flow.
Priority:	Medium
Frequency of Use:	Once every month, after High Manager approve any new payroll
Business Rules:	BR-04
Other Information:	None
Assumptions:	None

4.Manage Post Feature

4.1 Create Post

Mockup

UI Requirement

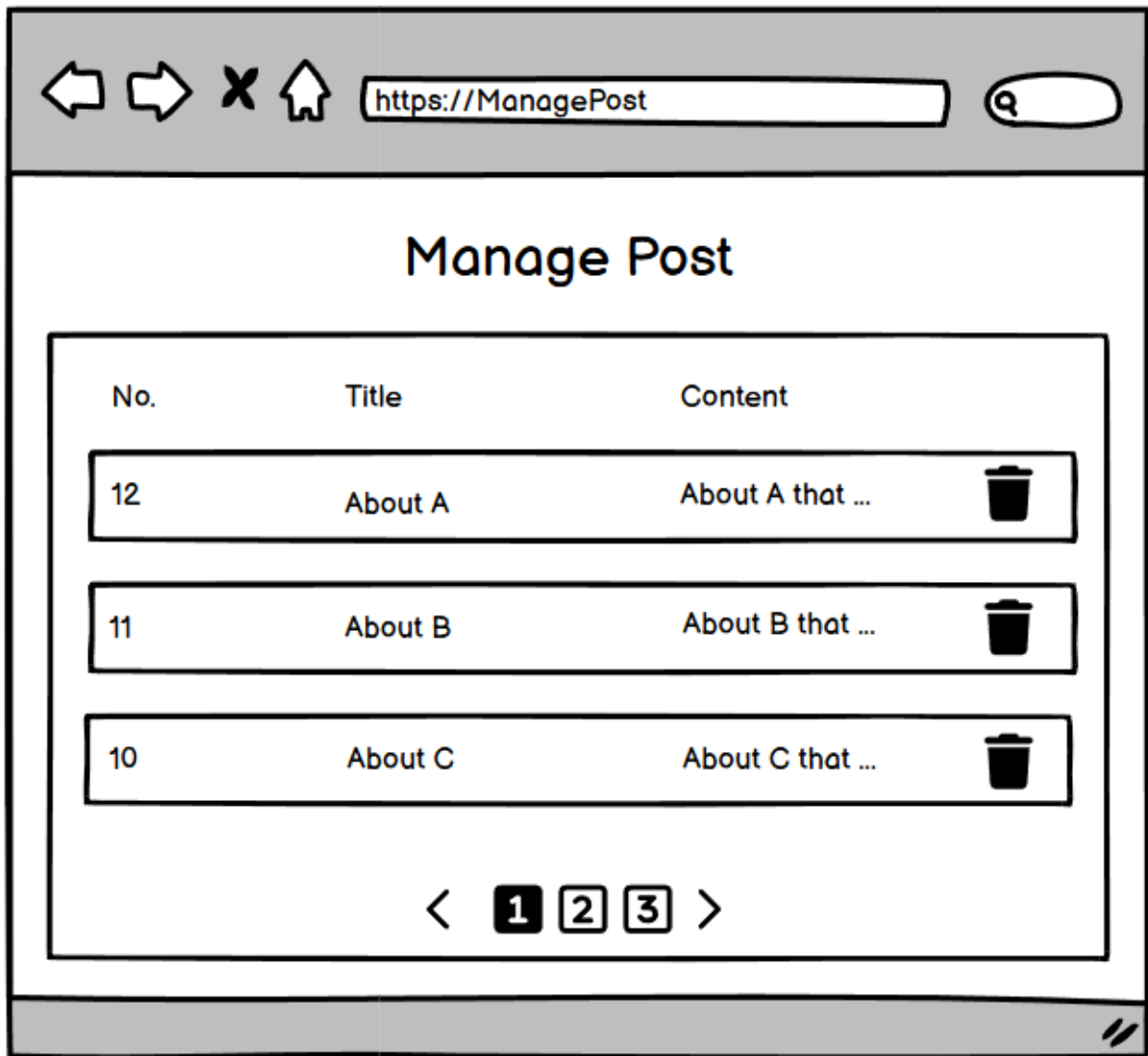| Field Name	Field Type	Description
Title	Text	This is for user to input post's title
Image	Image file	This is for user to choose image file from device
Content	Text	This is for user to input post's content
Create	Button	User clicks to create new post
Menu	Slidebar	User clicks to see other options
Search	Button	User clicks in and redirect to the search bar

UC Detail

ID and Name:	UC-FE07: Create a Post		
Created By:	Tran Quang Huy	Date Created:	9/6/24

Primary Actor:	Internal Communication Staff (ICS)	Secondary Actors:	None
Description:	A ICS accesses the HRMS Platform from their account, creates a new post. The post can include text, images, videos, or links.		
Trigger:	When ICS needs to create a new post.		
Preconditions:	PRE-1: ICS is logged into the HRMS Platform. PRE-2: ICS has appropriate permissions to create posts.		
Postconditions:	POST-1: Post is successfully created and stored in the platform. POST-2: Employees can view the post.		
Normal Flow:	1. ICS selects the option to create a new post. 2. The system returns the "Create Post" screen. 3. ICS enters the post title. 4. ICS chooses image for post. 5. ICS enters the post content. 6. ICS confirms the post creation. 7. The system displays a confirmation message and the newly created post.		
Alternative Flows:	None		
Exceptions:	None		
Priority:	Medium		
Frequency of Use:	Varies based on ICS todo.		
Business Rules:	BR-5: Posts must comply with community guidelines. BR-6: Maximum post length is 280 characters.		
Other Information:	ICS can edit or delete their posts after creation. Posts can be tagged with relevant topics or hashtags.		
Assumptions:	Assume that ICS are familiar with the platform's interface and features.		

4.2 Manage Post

Mockup

UI Requirement

Field Name	Field Type	Description
Detail	Button	User clicks on post to redirect to post detail page
Delete (🗑)	Button	User clicks to delete post
Menu	Button	User clicks to show slide bar contain other options
Search	Button	User clicks in and redirect to the search bar

UC Detail

ID and Name:	**UC-FE07: Manage a Post**		
Created By:	Tran Quang Huy	Date Created:	9/6/24
Primary Actor:	Internal Communication Staff (ICS)	Secondary Actors:	None

Description:	The ICS interacts with the Post Management Page to perform various actions related to posts. These actions include listing all posts, viewing details of a specific post, updating post content, and deleting posts.
Trigger:	When ICS needs to manage posts.
Preconditions:	PRE-1: ICS is logged into the Post Management Page. PRE-2: ICS has appropriate permissions for managing posts.
Postconditions:	POST-1: Post-related actions (list, view, update, delete) are successfully executed.
Normal Flow:	1. ICS selects the option to list all posts. 2. System retrieves and displays a paginated list of posts. 3. ICS selects a specific post from the list. 4. System displays detailed information about the selected post (e.g., content, author, creation date). 5. ICS can choose to update the post content. 6. If ICS decides to update, they modify the post content. 7. System confirms the update and displays the updated post. 8. ICS can choose to delete the post. 9. If the User decides to delete, the post is removed from the system.
Alternative Flows:	None
Exceptions:	None
Priority:	Medium
Frequency of Use:	Varies based on ICS activity.
Business Rules:	BR-7: Posts must adhere to community guidelines. BR-8: Maximum post length is 1000 characters.
Other Information:	Users can search for specific posts based on keywords or filters. Deleted posts are archived but no longer visible to other users.
Assumptions:	Assume that ICS are familiar with the platform's interface and features.

5. Performance Review Feature

5.1 Conduct Performance Review

Mockup

UI Requirement:

Field Name	Field Type	Description
Logout	Button	Back to login page
User List	List	Display the list of users/employees
Employee Name	Label	Display the name of the employee
Review Period	Date Picker	Select the period for the review
Review Comments	Textarea	Enter review comments and feedback
Performance Rating	Select	Select performance rating
Submit	Button	Submit performance review
Cancel	Button	Cancel and return to the previous screen

a. Functional Description

ID and Name:	**UC-FE05: Conduct Performance Review**		
Created By:	Trịnh Hoàng Việt	Date Created:	09/06/2024

Primary Actor:	Manager	Secondary Actors:	HR, Employee

Description:	As a manager, I want to conduct performance reviews for my team members to provide feedback and evaluate their performance.

Trigger:	When a manager wants to review an employee's performance.

Preconditions:	PRE-1. Manager is logged into the HR system. PRE-2. Manager accessed the employee performance review screen.

Postconditions:	POST-1. Performance review is added to the system. POST-2. Employee is notified of the completed review.

Normal Flow:	1. Manager clicks on the "Conduct Performance Review" button. 2. System returns the performance review screen. 3. Manager selects the review period and enters review comments and feedback. 4. Manager selects the performance rating. 5. Manager clicks on the "Submit" button to confirm. 6. System verifies the entered information (see E01). 7. If information is verified, the system adds the performance review to the database (see E02). 8. Employee is notified of the completed performance review. 9. System confirms the successful submission of the performance review and notifies the manager.

Alternative Flows:	1. Manager Cancels Review
	    a. The system discards the entered review information.
	    b. The system navigates the manager back to the performance review list screen.
	2. Review Data Entry Error
	    a. The manager corrects the data and saves the review again.
	    b. The system updates the review accordingly.

Exceptions:	**5.0.E1 System Verification Failure** 1. If the system encounters an issue while verifying the entered information, it notifies the manager about the verification failure and returns to step 3. **5.0.E2 Database Addition Failure** 1. If the system fails to add the performance review to the database, the manager receives an error notification and should contact the system administrator or technical support. The system returns the manager to step 3.
Priority:	Medium
Frequency of Use:	Regularly, based on company policy (e.g., quarterly, annually).
Business Rules:	BR-14, BR-15
Other Information:	1. Managers must have the necessary permissions to access the "Conduct Performance Review" functionality. 2. The system should adhere to data security protocols to safeguard sensitive information. Encryption and secure authentication mechanisms should be implemented to protect the confidentiality and integrity of the data. 3. The system should maintain an audit trail to record all activities related to performance reviews, including details such as the date, time, and user responsible for each review.
Assumptions:	1. Managers have the necessary permissions to conduct performance reviews. 2. The system provides a user-friendly interface for entering and submitting reviews. 3. The system securely stores review data and protects it from unauthorised access.

6. Leave Management Feature

6.1 Submit Leave Request

Mockup

← → C https://Submit-Leave-Request   ☺ ⋮

☰ **HRMS**   Log Out

Submit Leave Request

Leave type: Select... ▾   From: 09/06/2024
             Sick Leave
             Casual Leave   To: 11/06/2024
             Earned Leave
             Other...

Reason: COVID-19

Submit   Cancel

UI Requirement:

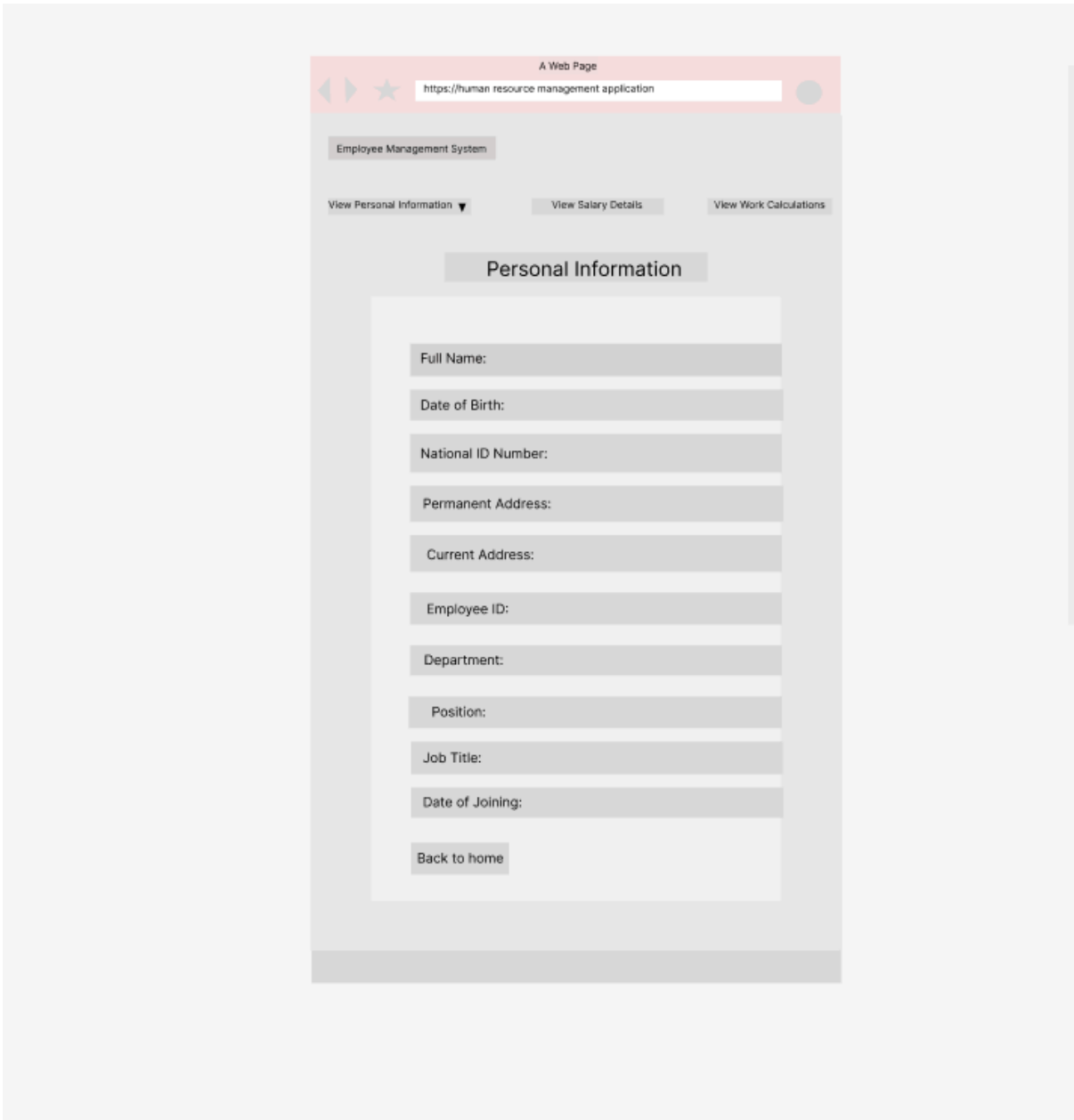| Field Name	Field Type	Description
Logout	Button	Back to login page
Leave Type	Select	Select the type of leave
Start Date	Date Picker	Select the start date of leave
End Date	Date Picker	Select the end date of leave
Reason	Textbox	Enter the reason for leave
Submit	Button	Submit leave request
Cancel	Button	Cancel and return to the previous screen

a. Functional Description

ID and Name:	**UC-FE03: Submit Leave Request**		
Created By:	Trịnh Hoàng Việt	Date Created:	09/06/2024

Primary Actor:	Employee	Secondary Actors:	Manager, HR
Description:	As an employee, I want to be able to apply for leave so that I can take time off for personal reasons.		
Trigger:	When an employee wants to take a leave.		
Preconditions:	PRE-1. Employees are logged into the HR system. PRE-2. Employee accessed the leave application screen.		
Postconditions:	POST-1. Leave request is added to the system. POST-2. Manager is notified of the leave request.		
Normal Flow:	1. Employee clicks on the "Submit Leave Request" button. 2. System returns the leave application screen. 3. Employee selects the leave type, start date, end date, and enters the reason for leave. 4. Employee clicks on the "Submit" button to confirm. 5. System verifies the entered information (see E01). 6. If information is verified, the system adds the leave request to the database (see E02). 7. Manager is notified of the leave request for approval. 8. System confirms the successful submission of the leave request and notifies the employee.		

Alternative Flows:	1. Employee Cancels Leave Request
	   a. The system discards the entered leave information.
	   b. The system navigates the employee back to the leave management screen.
	2. Leave Request Modification
	   a. The system allows the employee to edit the request before approval.
	   b. Employee resubmits the leave request for approval.
	3. Manager decides to reject the leave request.
	   a. The system notifies the employee of the rejection.		

	b. The system provides a reason for the rejection.
	c. Employees can either resubmit the request with modifications or accept the rejection.
Exceptions:	**5.0.E1 System Verification Failure** 1. If the system encounters an issue while verifying the entered information, it notifies the employee about the verification failure and returns to step 3. **5.0.E2 Database Addition Failure** 1. If the system fails to add the leave request to the database, the employee receives an error notification and should contact the system administrator or technical support. The system returns the employee to step 3.
Priority:	High
Frequency of Use:	Regularly, based on employee needs.
Business Rules:	BR-06, BR-08, BR-09
Other Information:	1. Employees must have the necessary permissions to access the "Submit Leave Request" functionality. 2. The system should adhere to data security protocols to safeguard sensitive information. Encryption and secure authentication mechanisms should be implemented to protect the confidentiality and integrity of the data. 3. The system should maintain an audit trail to record all activities related to leave applications, including details such as the date, time, and user responsible for each application.
Assumptions:	1. Employees and managers have the necessary permissions to manage leave requests. 2. The system provides a user-friendly interface for submitting and managing leave requests. 3. The system securely stores data and protects it from unauthorised access.

7. View Employee's Information

UI Requirement

Field Name	Field Type	Description
Full Name	Text	Enter the full name of the employee.
Date of birth	Date	Select or enter the date of birth.
National ID Number	Text	Enter the national identification number.
Permanent Address	Text	Enter the permanent address of the employee.
Current Address	Text	Enter the current address of the employee.

Employee ID	Text	Enter the unique employee identifier.
Department	Text	Enter the department of the employee.
Position	Text	Enter the position or role of the employee.
Job Title	Text	Enter the job title of the employee.
Date of Joining	Date	Select or enter the date when the employee joined.
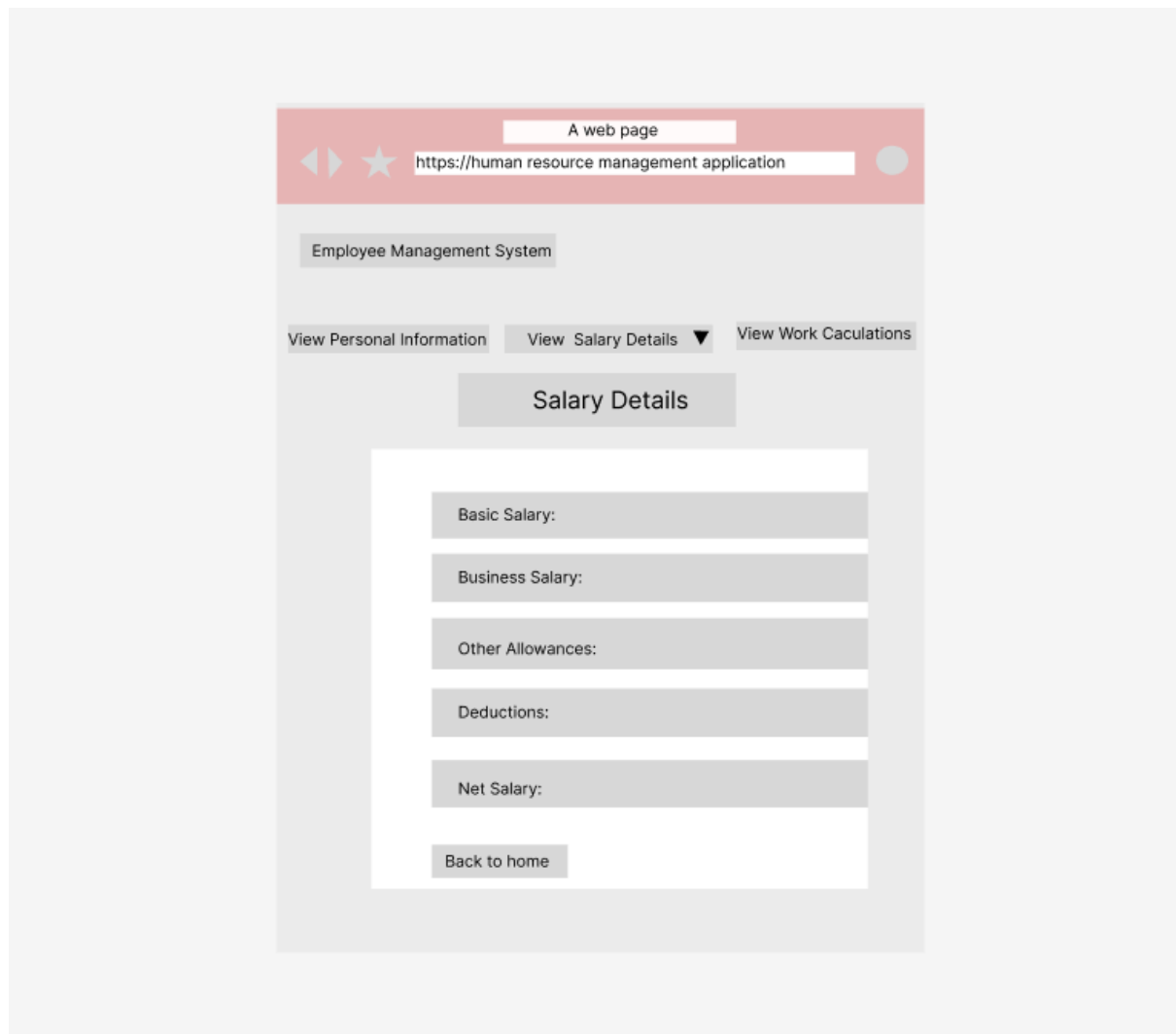
UI Requirement

Field Name	Field Type	Description
Basic Salary	Currency	Enter the basic salary amount.
Bonus Salary	Currency	Enter the bonus or business salary amount.
Other Allowances	Currency	Enter any other allowances or benefits.
Deductions	Currency	Enter any deductions from the salary.

Net Salary	Currency	Display the calculated net salary after deductions.
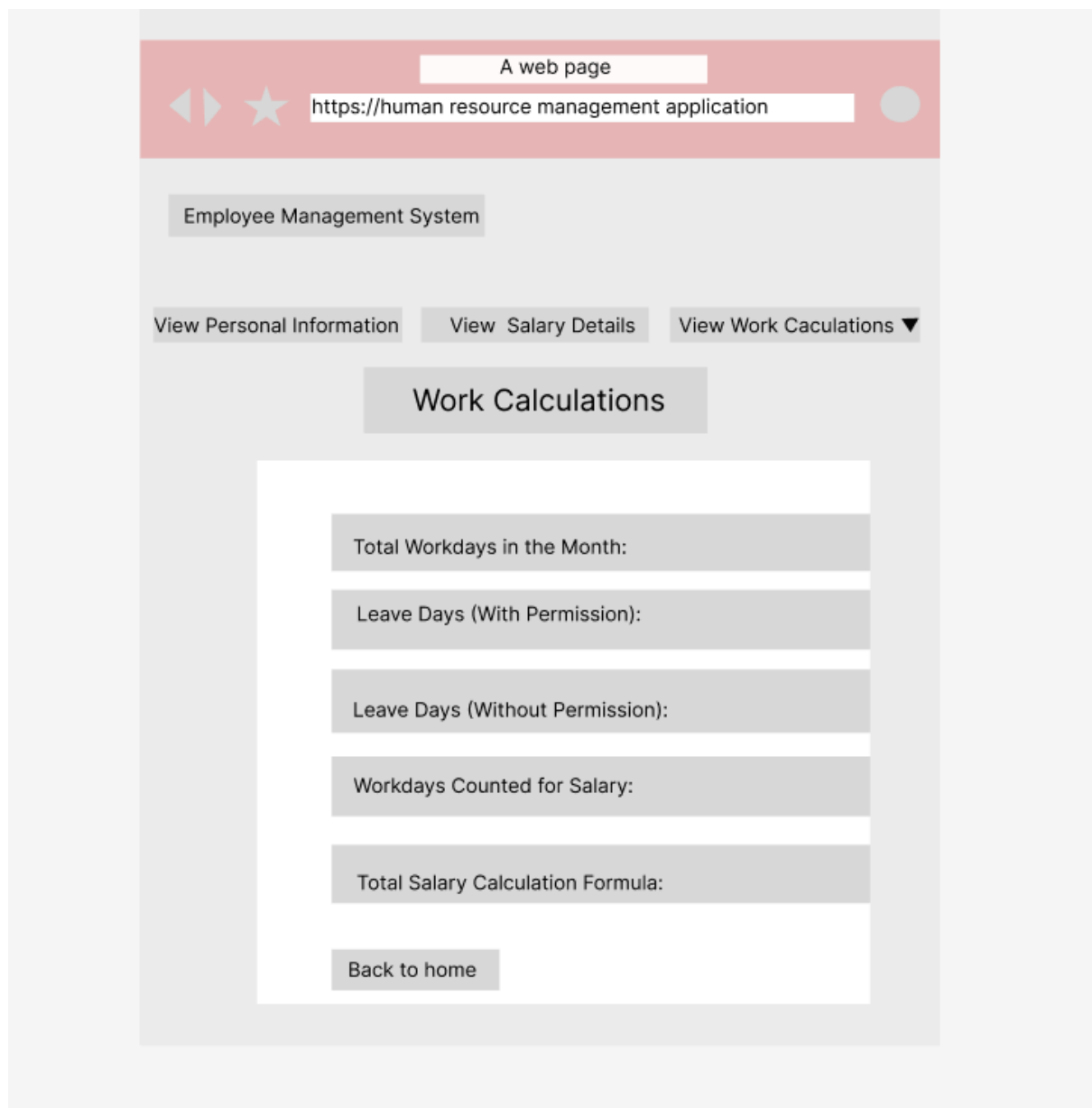
UC detail:

UI Requirement

| Field Name	Field Type	Description
Total Workdays in the Month	Number	Enter the total number of workdays in the month.
Leave Days (With Permission)	Number	Enter the number of leave days with permission.
Leave Days (Without Permission)	Number	Enter the number of leave days without permission.
Workdays Counted for Salary	Number	Display the number of workdays counted for salary calculation.
Total Salary Calculation Formula	Text	Display or enter the formula used for calculating the total salary.

UC Detail

ID and Name:	**UC-08 View Employee's Information**
Created By:	Thân Văn Quyến Date Created: 9/6/2024
Primary Actor:	Employees Secondary Actors: none
Description:	This feature allows authorised users to view detailed information about employees stored in the company database.
Trigger:	User selects the "View Employee's Information" option from the application menu.
Preconditions:	1. Users must be authenticated and have appropriate access rights. 2. Employees' information must be stored and accessible in the database.
Postconditions:	Users can view the selected employee's information on the screen.
Normal Flow:	1. User selects the "View Employee's Information" option. 2. System prompts users to enter or select the employee ID or name. 3. User enters the employee ID or selects from a list. 4. System retrieves and displays the employee's detailed information, including:Name,Contact information,Department,Position,Salary details,Employment status,Other relevant data 5. Users can review the information displayed.
Alternative Flows:	- If the employee ID or name entered by the user is not found - System displays an error message and prompts the user to enter a valid ID or name.
Exceptions:	- Database connection error - System displays a message indicating the issue and prompts the user to retry or contact support.

Priority:	High (Critical for daily operational use)
Frequency of Use:	Multiple times daily
Business Rules:	- Access to employee information is restricted based on user roles and permissions. - Information retrieval must be efficient to support real-time operational needs.
Other Information:	- Integration with other modules such as payroll and HR management systems might be necessary. - Ensure compliance with data protection regulations (e.g., GDPR, HIPAA) when handling sensitive employee information.
Assumptions:	- Users have received proper training on using the system. - The database is regularly updated with accurate employee information.

III. Functional Requirements

1. System Functional Overview

1.1 Screen Flow
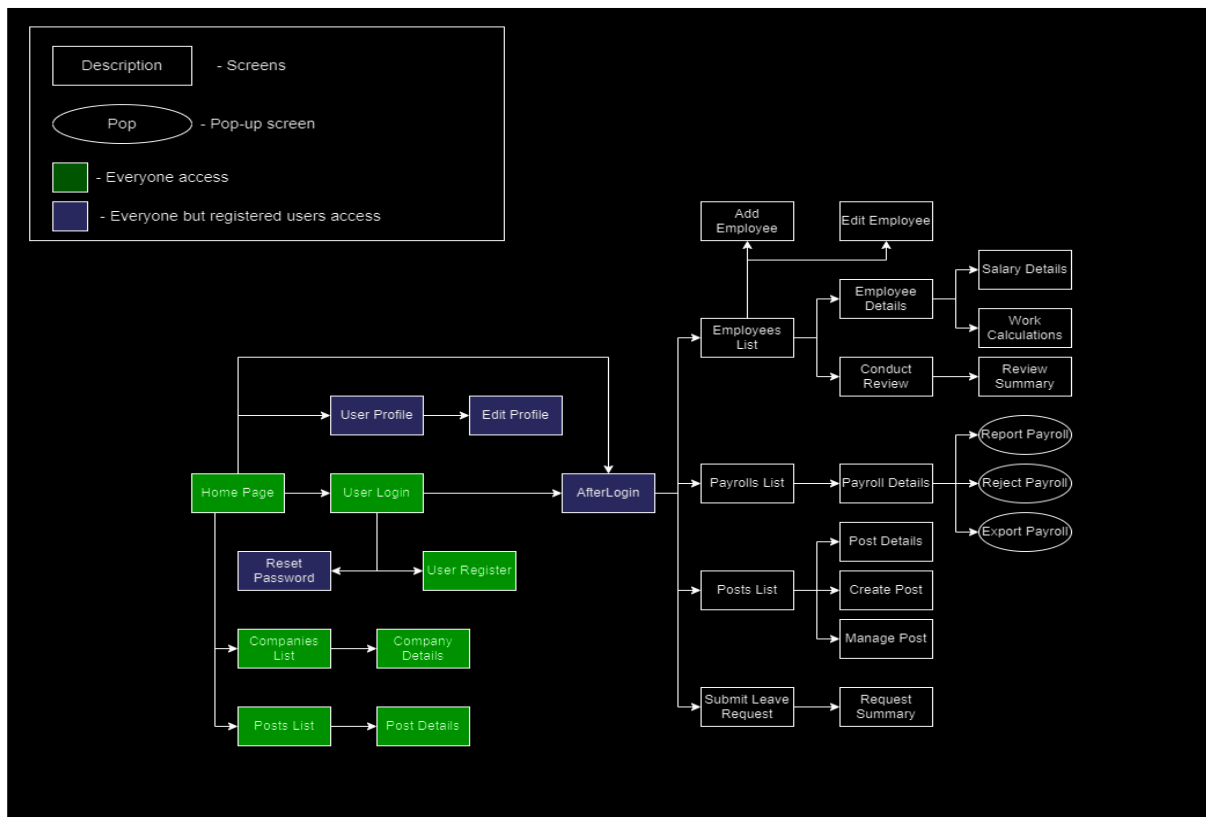
1.2 Screen Descriptions

#	Feature	Screen	Description
1	Public Information	Home Page	A home page with general info like news, login, about,...
2	Public Information	Company List	Show all company in charge of the organisation
3	Public Information	Company Detail	Show details about the company like address, email, hot-line,..
4	Public Information	Post List	Show list of post posted by the Internal Communication Staff
5	Public Information	Post Detail	Show details about a post like title, headline, content, files, feedback,...
6	Public Information	User Login	Interface for user to login to the system
7	Public Information	Reset Password	Interface allow user to reset their password
8	Public Information	User Register	Allow user to enter their basic information to create a new account
9	Public Information	User Profile	Show details about a user (name, email, phone, avatar,...)
10	Public Information	Edit Profile	Interface for user to edit their information
11		After Login	Show homepage with more information for logged in users.
12	Employee Management	Employee List	Show a list of all employee (all or only in charge based on the user's role)
13	Employee Management	Add Employee	Interface with fields like employee selection card, role, department,...
14	Employee Management	Edit Employee	Interface allow user to edit an existing employee or their own information (based on the user's role)
15	Employee Management	Employee Detail	A screen that shows an employee's details like name, age, department, role, phone, mail, salary,...
16	Employee Management	Salary Detail	A screen that shows the details about salary like amount, payday, penalty, bonus,...
17	Employee Management	Work Calculation	Show the detail about employee's work in a month
18	Team Management	Conduct Review	A screen allow user to conduct a review with basic fields like review name, reason, time, attending permission
19	Team Management	Review Summary	Show the summary of the review
20	Payroll Management	Payroll List	Show all the payroll into a list.
21	Payroll Management	Payroll Detail	Shows details of a payroll like author, is approved or not, create date,...
22	Payroll Management	Report Payroll	A pop-up window that allow user to report a payroll with report reason
23	Payroll Management	Reject Payroll	A pop-up windows allow user to enter reason why the payroll is rejected

24	Payroll Management	Export Payroll	A pop-up window allow user to export the payroll to their computer
25	Post Management	Post List	Show all post in a list form
26	Post Management	Post Detail	Show the details of a post like title, headline, content, author, date,...
27	Post Management	Create Post	Show the fields like title, content, file attachment,... allows the user to create a new post.
28	Post Management	Manage Post	An interface allows users to manage all or their own post based on the user's role.
29	Employee Management	Submit Leave Request	Show fields allow users to enter the reason why they leave.
30	Employee Management	Request Summary	Show details about a request.

1.3 Screen Authorization

Screen	PU	E	ICS	M	HM	HR	Admin	AS
Home Page	View	View	View	View	View	View	View	View
Company List	View	View	View	View	View	View	View	N/A
Company Detail	View	View	View	View	View	View	View	N/A
Post List	View	View	View	View	View	View	View	N/A
Post Detail	View	View	View	View	View	View	View	N/A
User Login	View	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Reset Password	View	View	View	View	View	View	View	N/A
User Register	View	N/A	N/A	N/A	N/A	N/A	N/A	N/A
User Profile	N/A	View/Edit Own	View/Edit Own	View/Edit Own	View/Edit Own	View/Edit Own	View/Edit Own	N/A
Edit Profile	N/A	Edit Own	Edit Own	Edit Own	Edit Own	Edit Own	Edit Own	N/A
After Login	N/A	View	View	View	View	View	View	N/A
Employee List	N/A	N/A	N/A	View	View	View	View	N/A
Add Employee	N/A	N/A	N/A	N/A	N/A	Create	Create	N/A
Edit Employee	N/A	Edit Own	N/A	Edit	Edit	Edit	Edit	N/A
Employee Detail	N/A	View Own	N/A	View	View	View	View	N/A
Salary Detail	N/A	View Own	N/A	View	View	View	View	N/A
Work Calculation	N/A	View Own	N/A	View	View	View	View	View

| Screen	PU	E	ICS	M	HM	HR	Admin	AS
Conduct Review	N/A	N/A	N/A	Create	Create	N/A	N/A	N/A
Review Summary	N/A	N/A	N/A	View	View	N/A	View	N/A
Payroll List	N/A	N/A	N/A	View	View	View	View	N/A
Payroll Detail	N/A	N/A	N/A	View	View	View	View	N/A
Report Payroll	N/A	N/A.	N/A	Create	Create	Create	Create	N/A
Reject Payroll	N/A	N/A	N/A	Create	Create	Create	Create	N/A
Export Payroll	N/A	N/A	N/A	Create	Create	Create	Create	N/A
Post List (Mgmt)	N/A	N/A	View/Edit/Delete Own	N/A	N/A	N/A	View/Edit/Delete	N/A
Post Detail (Mgmt)	N/A	N/A	View/Edit/Delete Own	N/A	N/A	N/A	View/Edit/Delete	N/A
Create Post	N/A	N/A	Create	N/A	N/A	N/A	N/A	N/A
Manage Post	N/A	N/A	View/Edit/Delete Own	N/A	N/A	N/A	View/Edit/Delete	N/A
Submit Leave Request	N/A	Create	N/A	N/A	N/A	N/A	N/A	N/A
Request Summary	N/A	View Own	N/A	View	View	View	View	N/A

Role:
- **Public User**: PU.
- **Employee**: E.
- **Internal Communication Staff**: ICS.
- **Manager**: M.
- **High Manager**: HM.
- **HR**: HR.

- **Admin**: Admin.
- **Attendance System**: AS.

Summary:
- **Public User**: Can only view public information, login, and register.
- **Employee**: Can view and edit their own profile, view their own salary and work details, and submit leave requests.
- **Internal Communication Staff**: Can manage their own posts and view relevant details.
- **Manager**: Can view and manage employee details, conduct reviews, manage payroll, and oversee leave requests.
- **High Manager**: Has higher privileges than managers, with similar but more comprehensive access.
- **HR**: Can manage employee records, view and manage payroll, and handle leave requests.
- **Admin**: Has full access to all screens and functionalities.
- **Attendance System**: Limited to viewing work calculation details.

1.4 Entity Relationship Diagram
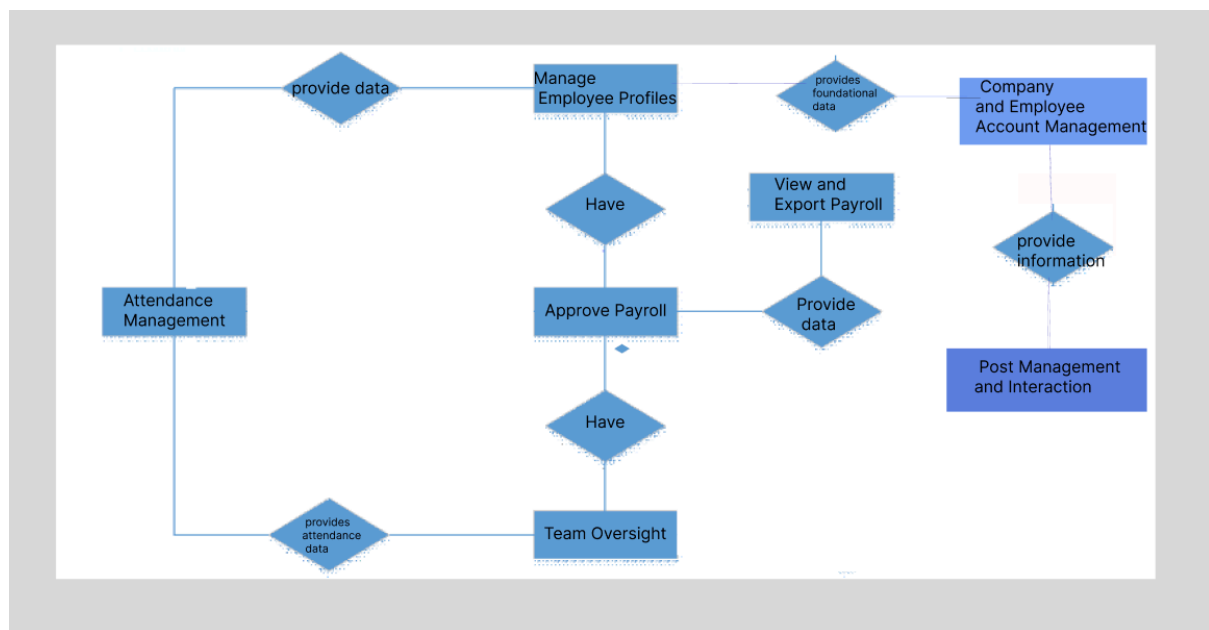
Entities Description

#	Entity	Description
1	Manage Employee Profiles	Handles employee information and profiles.
2	View and Export Payroll	Allows viewing and exporting payroll data.
3	Company and Employee Account Management	Manages company and employee accounts.
4	Post Management and Interaction	Manages posts and interactions within the system.
5	Attendance Management	Manages and tracks employee attendance data.
6	Approve Payroll	Allows approval of payroll transactions.
7	Team Oversight	Provides oversight and management of teams.

1.5 Data Dictionary

User

Field Name	Description	Data Type	Length	Format	Allowed Values
UserID	Unique identifier for the user	INT	10	N/A	Positive integers
Username	Username of the user	VARCHAR	50	Alphanumeric	N/A
Password	Password for user login	VARCHAR	255	Alphanumeric	N/A
Role	Role of the user (e.g., admin)	VARCHAR	20	Alphanumeric	'Admin', 'Employee', 'HR'
Email	Email address of the user	VARCHAR	100	Email format	N/A
CreatedAt	Account creation timestamp	DATETIME	N/A	YYYY-MM-DD HH:MM	N/A
UpdatedAt	Last account update timestamp	DATETIME	N/A	YYYY-MM-DD HH:MM	N/A

Employee

Field Name	Description	Data Type	Length	Format	Allowed Values
EmployeeID	Unique identifier for employee	INT	10	N/A	Positive integers
FirstName	First name of the employee	VARCHAR	50	Alphabetic	N/A
LastName	Last name of the	VARCHAR	50	Alphabetic	N/A

	employee				
Email	Email address of the employee	VARCHAR	100	Email format	N/A
Phone	Phone number of the employee	VARCHAR	15	Alphanumeric	N/A
Position	Job position of the employee	VARCHAR	50	Alphanumeric	N/A
Department	Department name	VARCHAR	100	Alphanumeric	N/A
HireDate	Date of hiring	DATE	N/A	YYYY-MM-DD	N/A
Salary	Salary of the employee	DECIMAL	10,2	Numeric	N/A
UserID	Identifier of the employee's account	INT	10	N/A	Positive integers

Payroll

Field Name	Description	Data Type	Length	Format	Allowed Values
PayrollID	Unique identifier for payroll	INT	10	N/A	Positive integers
EmployeeID	Identifier of the employee	INT	10	N/A	Positive integers
Period	Payroll period	DATE	N/A	YYYY-MM	N/A
TotalAmount	Total amount paid	DECIMAL	10,2	Numeric	N/A
CreatedAt	Record creation timestamp	DATETIME	N/A	YYYY-MM-DD HH:MM	N/A
UpdatedAt	Last record update	DATETIME	N/A	YYYY-MM-DD HH:MM	N/A

	timestamp				

Post

Field Name	Description	Data Type	Length	Format	Allowed Values
PostID	Unique identifier for the post	INT	10	N/A	Positive integers
Title	Title of the post	VARCHAR	255	Alphanumeric	N/A
Image	URL of the post image	VARCHAR	255	URL format	N/A
Content	Content of the post	TEXT	N/A	Alphanumeric	N/A
TotalAmount	Total amount paid	DECIMAL	10,2	Numeric	N/A
DatePublished	Date the post was published	DATETIME	N/A	YYYY-MM-DD HH:MM	N/A
AuthorID	Identifier of the post author (user)	INT	10	N/A	Positive integers

ApplicationRequest

Field Name	Description	Data Type	Length	Format	Allowed Values
RequestID	Unique identifier for the application request	INT	10	N/A	Positive integers
EmployeeID	Identifier of the employee making the request	INT	10	N/A	Positive integers
RequestType	Type of request (e.g., leave, equipment)	VARCHAR	50	Alphanumeric	'Leave', 'Equipment', etc.

RequestDate	Date the request was made	DATE	N/A	YYYY-MM-DD	N/A
Status	Status of the request	VARCHAR	20	Alphanumeric	'Pending', 'Approved', 'Rejected'
Description	Detailed description of the request	TEXT	N/A	Alphanumeric	N/A
ApprovedBy	Identifier of the approver	INT	10	N/A	Positive integers
ApprovalDate	Date the request was approved	DATE	N/A	YYYY-MM-DD	N/A
CreatedAt	Record creation timestamp	DATETIME	N/A	YYYY-MM-DD HH:MM	N/A
UpdatedAt	Last record update timestamp	DATETIME	N/A	YYYY-MM-DD HH:MM	N/A

Attendance

Field Name	Description	Data Type	Length	Format	Allowed Values
AttendanceID	Unique identifier for the attendance record	INT	10	N/A	Positive integers
EmployeeID	Identifier of the employee	INT	10	N/A	Positive integers
Date	Date of the attendance	DATE	N/A	YYYY-MM-DD	N/A

CheckInTime	Check-in time of the employee	TIME	N/A	HH:MM	N/A
CheckOutTime	Check-out time of the employee	TIME	N/A	HH:MM	N/A

IV. Non-Functional Requirements

1. External Interfaces

This section ensures that the HRMS will communicate properly with users and external hardware or software/system elements.

1.1 User Interfaces:

- The system will provide a web-based interface accessible through standard web browsers such as Chrome, Firefox, and Edge.
- The user interface will support multi-language capabilities, with English as the default language.
- The system will have a responsive design to ensure usability on various devices, including desktops, tablets, and smartphones.

1.2 Hardware Interfaces:

- The system will integrate with standard input devices like keyboards, mice, and barcode scanners (if used for employee ID scanning).
- The system will interface with printers for printing reports and pay slips.

1.3 Software Interfaces:

- The system will integrate with third-party payroll software for automated payroll processing.
- The system will interface with external email services (e.g., SMTP servers) to send notifications and alerts to users.
- The system will provide APIs for integration with other HR systems or enterprise software.

1.4 Communication Interfaces:

- The system will support secure communication protocols such as HTTPS for data transmission.
- The system will be able to communicate with external databases for data import/export purposes.

2. Quality Attributes

2.1 Usability

The user interface must be intuitive and easy to navigate, ensuring that new users can quickly learn to perform basic tasks such as login, logout, view - add - edit - delete employees information…without extensive training.

The system must provide clear and concise error messages to guide users in case of incorrect inputs or system errors, helping to minimise user frustration and support efficient troubleshooting.

2.2 Reliability

The system must operate stably and reliably. Service interruptions due to software or hardware failures should not exceed 30 minutes per month.

Backup and recovery procedures shall be established to safeguard employee data from accidental loss or corruption, with scheduled backups conducted regularly to prevent data loss in case of system failure.

2.3 Performance

At least 98 percent of the time, the system must maintain a response time of under 4 seconds for routine employee data queries, ensuring fast and efficient access to information for users across different departments.

During peak usage hours, the system must be able to efficiently process a minimum of 1000 concurrent user requests without experiencing notable performance degradation, ensuring consistent responsiveness under heavy workload conditions.