

Cahaya Bebas HR Document Management System

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Abstract

Cahaya Bebas Sdn Bhd, a leader in road construction, resolved inefficiencies caused by traditional, paper-based HR processes by implementing a web-based HR document management system. This system automates tasks such as leave requests, pay slip distribution, and document management. Designed using an object-oriented approach and the prototyping model, it features modules for user login, employee management, leave management, pay slips, and report generation. User Acceptance Testing (UAT) was conducted to ensure the system met operational needs, gathering feedback from end-users for final refinements. Employees now apply for leave and access pay slips online, while HR digitally approves requests and manages records. The system has significantly improved efficiency, reduced paperwork, enhanced data security, and minimized environmental impact. By addressing the challenges of manual processes and geographically dispersed operations, the solution has successfully enhanced productivity and streamlined operations for Cahaya Bebas Sdn Bhd.

1. Introduction

Cahaya Bebas Sdn Bhd, established in 2022 under Director Onn Yii Boon, has quickly become a leader in road construction with 120 employees. However, reliance on traditional, paper-based management processes creates significant challenges, including workflow delays, data inaccuracies, redundancy, limited access to critical information, risk of data loss, and environmental impacts from paper waste. These inefficiencies hinder productivity and operational growth.

To address these problems, the company implemented a web-based management system. The system allows employees to check leave balances, apply for leave, upload documents for verification, and access pay slips online. Automated workflows streamline HR approvals and send real-time notifications, reducing processing times by 1–2 days. This transition to a digital solution has enhanced efficiency, data security, and accessibility, while significantly cutting paper waste. However, regular system maintenance, user training, and updates are essential to ensure consistent performance, address potential technical issues, and adapt to future organizational needs.

1.1 Problem Statement

In today's world, most companies are still using the same old manual system for their management. In this case, Cahaya Bebas has trouble managing 120 employees at a time and keeping all records stored properly and safely. Some of the major problems faced by the director are that Cahaya Bebas is still using the old way for employees to apply for leave. In the traditional system, employees need to get a form for leave at HQ and fill out the form before sending it to the HR department. This has resulted in some difficulties. One of the problems that usually

occurs is that employees don't have time to go to HQ to fill out the leave form, and at worst, the HR loses the leave forms that have been submitted by employees. This problem leads to a waste of paper.

The next problem regarding the usage of the traditional system is that the employees have no other way to get their pay slips other than getting them at HQ, which causes the time taken to get their pay slips to be longer, and sometimes HR department forget to generate their pay slips due to a lot of work. Thus, it would be helpful if the pay slips were auto generated by the system.

Moreover, it is hard to get document approval from the HQ. Because HQ is in Kuching, Sarawak, but the project construction that Cahaya Bebas covers is in the areas of Mukah and Limbang. Due to the long distance, important documents such as Departmental Wayleave, Owner Wayleave, and Notice letters often need to be posted to HQ for approval and then posted back to the original place. This process significantly prolongs the time taken to process and approve these documents.

1.2 Objective

The objectives of developing the Cahaya Bebas HR Document Management System.

- i. To design a Cahaya Bebas Hr Document Management System using an object-oriented approach.
- ii. To develop a Cahaya Bebas Hr Document Management System using a web-based system.
- iii. To test the functionality and user acceptance of the Cahaya Bebas Hr Document Management System.

1.3 Scope Project

The system will be used by two users which are the employee and Human Resource (HR) of Cahaya Bebas. The system will have exactly eight modules including Register module, Login module, user profile, manage employee, leave, pay slips, Document, Generate Report. Table 1 shows the modules of the system.

Table 1 Modules system of Cahaya Bebas HR Document Management System

Modules	Description	User
Register	Register new employee account by entering employee detail	HR
Login	Login into their own account by using username and password	Employee, HR
User Profile	Edit user profile	Employee
Manage Employee	Edit or delete employee detail	HR
Leave	Employee request leave HR Approve or Decline leave	Employee, HR
Pay Slips	Employee downloads pay slips HR update latest pay slips	Employee, HR
Document	Employee upload document HR stamp cop document and resubmit	Employee, HR
Generate Report	View overall report, leave monthly report, employee attendance and employee contribution	HR

2. Related System

Currently there are a lot of management systems available in the market. Thus, by conducting a study, this will help get a better understanding of the particular type of the system and perhaps can be a guideline when it comes to the development process. There 3 existing system were selected as the reviewed system which are Workforce Administration System using Django, Employee Database and Payroll Management System, and Knowledge Management System Analysis and Planning for Employee Recruitment and Training.

2.1 Workforce Administration System using Django

The paper delves into Workforce Management using the Django Framework, an open-source software application widely utilized by small-scale organizations unable to invest in expensive software solutions. While every organization, whether public or commercial, relies on information systems to maintain employee records, many

small-scale enterprises in India still rely on manual paper and pen methods. Despite the availability of sophisticated technology systems, they remain financially out of reach for these industries. This essay proposes a solution to address their challenges at a lower cost. Our Workforce Administration System offers four views: HR, Employee, Team Lead, and Fresher, catering to different categories of users. Each view provides various functionalities aimed at enhancing employee experience and fostering stronger bonds between the company and its staff through smooth interaction. (Rastogi, 2023)



Fig. 1 HR Dashboard

2.2 Employee Database and Payroll Management

The "Employee Database and Payroll Management System" aims to automate the existing manual system using computerized equipment and comprehensive software, meeting the organization's needs. This transition ensures the preservation of valuable data over an extended period with convenient access and manipulation. The required software is readily available and user-friendly. This web application effectively maintains and displays computerized records without redundancy, enhancing efficiency and user experience. The project details the management of user data to optimize performance and deliver superior client services. (Rozario, 2018).

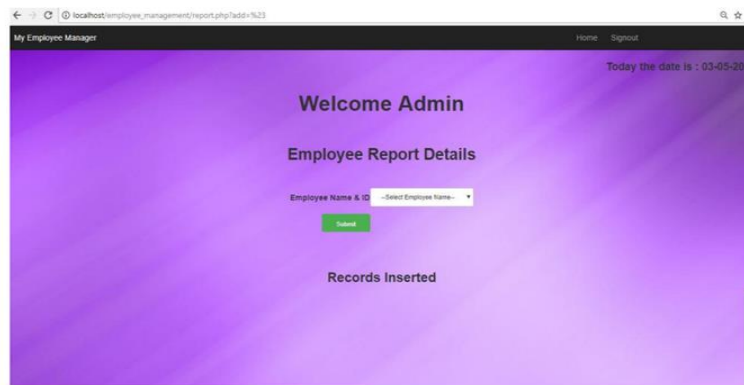


Fig. 2 Report page

2.3 Knowledge Management System Analysis and Planning For Employee Recruitment and Training

Palembang branch is a company engaged in the field of inspection and certification services. The problem faced by this company is that the process and media for sharing and transferring knowledge between colleagues is still small and not yet entrenched. This condition makes the company less effective in terms of producing and disseminating knowledge to staff quickly and accurately. Documentation of daily activities and routines are not carried out in a planned and integrated manner. Each department carries out its own activities in its own way, for example storing documentation on a CD, as well as a piece of paper. So, the authors are interested in analyzing and designing Web Knowledge Management System. The methods used were the object analysis and design method. While the tools for modelling used was Unified Modelling Language (UML). The result obtained is a prototype web Knowledge Management System (KMS) that can be a media of information and knowledge sharing related to employee acceptance and training. (Purwanto et al., 2020).



Fig. 3 Main Menu Knowledge Management System Analysis and Planning for Employee Recruitment and Training

2.4 Comparison between related system

A detailed comparison was conducted thoroughly to clarify the similarities and differences between the existing systems and the proposed system. Table 2 shows the comparisons from different perspectives for the 3 systems.

Table 2 comparison between the proposed system and the existing systems

Comparison/System	Workforce Administration System using Django	Employee Database and Payroll Management System	Knowledge Management and Planning for Employee Recruitment and Training	Cahaya Bebas HR Document Management System
Type of System	Web-based	Web-based	Web-based	Web-based
Register	Yes	Yes	Yes	Yes
Login	Yes	Yes	Yes	Yes
User profile	Yes	Yes	No	Yes
Manage employee	Yes	Yes	Yes	Yes
Leave	Yes	Yes	No	Yes
Pay slips	Yes	Yes	No	Yes
Document	No	No	No	Yes
Generate Report	Yes	Yes	Yes	Yes

3. Methodology

In the prototyping model, there are a total of six phases, each with its own assigned tasks and outputs, as depicted in Table 3. Throughout the project development process, these phases guide the creation and refinement of the prototype. Additionally, specific deadlines are allocated for completing the outputs associated with each phase. This object-oriented approach ensures that the development progresses smoothly and that key milestones are achieved within the designated timeframe. By adhering to the timeline and fulfilling the requirements of each phase, the project can advance systematically towards its goals. Appendix A show Gantt chart.

Table 3 Software development activities task

Phases	Task/Activities	Deliverables	Tools
Requirement analysis	i. Interview session	i. Software Requirement	i. MS Word
	ii. Verify the requirement	ii. Specification (SRS)	ii. TeamGantt.com
	iii. Schedule a timeline and task for project	iii. Gantt chart	
Design	i. Design architecture	i. Activity diagram	i.Draw.io
	ii. Design system database	ii. Sequence diagram	ii.Figma
	iii. Design interfaces of the system	iii. Unified Modelling Language (UML)	
		iv. Interface design	
		v. Database design	
Build a prototype	Develop prototype	i. First Prototype	i. Visual Studio Code

User evaluation	Evaluate the prototype	i.Feedback and Suggestion	ii XAMPP control panel Google form
Refining prototype	Improve the first prototype based on the feedback and suggestion	i. Second prototype ii. Final prototype	i. Visual Studio Code ii XAMPP control panel
Implementation and testing	Delivered the system Test the developed system	i. Test cases ii. Test report	i. Visual Studio Code ii XAMPP control panel

4. Analysis and Design

This section will discuss the analysis and design phases of the system, covering system requirement analysis, which includes both functional and non-functional requirements, database design, and implementation. The design phase involves detailing the components and interfaces to address these requirements and constraints.

4.1 System Requirement Analysis

The process of identifying the needs that a constructed system needs to meet and the expectations of users for the suggested system is known as requirement analysis. The system requirements include user requirements, system requirements, and functional and non-functional requirements. The functional needs and the proposed system's description are shown in Table 4, while the non-functional requirements and their descriptions are shown in Table 5.

Table 4 *Functional requirements*

No	Modules	Functionalities
1	Register	<ul style="list-style-type: none"> The system shall allow the HR to create an account using email and password
2	Login	<ul style="list-style-type: none"> The system shall alert the HR of any empty text field The system shall allow employee and HR to log in into the system using registered email and password The system shall alert the of any invalid input The system shall redirect the HR and Employee to the homepage after successful login
3	User Profile	<ul style="list-style-type: none"> The system shall allow the employee to manage their profile by updating personal details The system shall allow the employee to change password The system shall be able to validate and update user information accordingly
4	Manage employee	<ul style="list-style-type: none"> The system shall allow the HR to update employee details such as Salary, Position, Department and Employee ID.
5	Leave	<ul style="list-style-type: none"> The system shall allow the employee to check balance leave The system shall allow the employee to submit leave request The system shall allow the HR manage leave request information The system shall allow the HR to approve or reject the leave request The system shall allow the HR to manage employee leave balance The system shall allow the HR to monitor employee leave record
6	Pay slips	<ul style="list-style-type: none"> The system shall allow employee selects the desired month to view the payslip. The system displays the payslip details such as salary, deductions, and net pay for the selected month. The system shall allow employee reviews the payslip details. The system shall allow employee clicks the "Download" button to download the payslip. The system shall be able to sends a confirmation notification to the employee regarding the successful download. The system shall allow HR selects an employee or a group of employees for whom the payslip needs to be generated.

7	Document	<ul style="list-style-type: none"> • The system shall allow HR reviews and updates the necessary payslip details such as salary, deductions, and bonuses. • The system shall allow HR clicks the "Generate Payslip" button. • The system shall be able to sends a notification to the employee regarding the availability of the payslip. • The system shall allow employee credentials. • The system shall display the document submission page. • The system shall allow employee selects the document to be submitted and Click "Upload "Button. • The system shall allow employee to fills in necessary details such as document type and purpose. • The system shall allow employee click "submit" button for document to be processing. • The system shall be able to sends a confirmation notification to the employee regarding the successful submission. • The system shall display a list of pending documents requiring for Stamps Cop verification. • The system shall allow HR to review the document details and ensures all necessary information is provided. • The system shall allow HR to verify and stamp cop the document. • The system shall allow HR to resend the Stamps Cop document to employee. • The system shall allow HR to updates the document status in the system to indicate completion. • The system shall be able to pop-up a successful message regarding the completed document process.
8	Generate Report	<ul style="list-style-type: none"> • The system shall allow HR to access report page • The system shall allow HR choose type of report to be generated • The system shall allow HR to download the generated report

Table 5 Non-Functional Requirements

No	Requirements	Descriptions
1	Performance	The operating system should be expected to have reasonable operation and response times
2	Security	The system can only be accessed by users who are authenticated with a registered email and password
3	Operational	The system is compatible with various web browser such as Google Chrome and Microsoft Edge
4	Availability	The system can operate and remain accessible 24 hours a day

4.2 Design

Following the analysis of user requirements, the project progresses to the design phase, which focuses on developing the system interface and database structure. The primary goal is to present a visually clear depiction of the system, enabling stakeholders to grasp the planned structure before the actual coding build a prototype phase. The design phase marks a transition from conceptualization to visually representing the envisioned system.

4.3 Use Case Diagram

The use case diagram created during the analysis phase illustrates what the system is supposed to do and its components. It helps summarize how actors interact with the system's tasks. The goal is to demonstrate the system's dynamic aspects visually and straightforwardly, highlighting how it operates. The Cahaya Bebas HR Document Management System uses this diagram to describe the procedure and organize system requirements. Fig. 4 shows the Use Case Diagram for the Cahaya Bebas HR Document Management System.

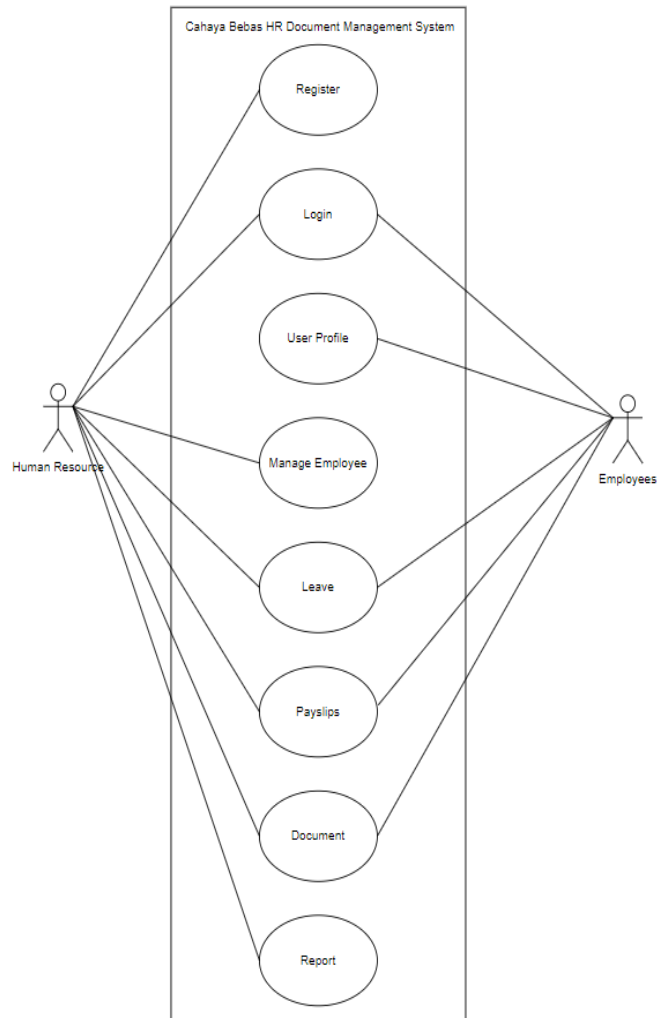


Fig.4 Use Case Diagram

4.4 Class Diagram

Class diagram, a type of diagram used in the Unified Modelling Language (UML), illustrates the classes, attributes, and relationships within a system to showcase its structure. It depicts the static structure of a system, not capturing its evolution over time, but rather its current state. Class diagrams can be used for both designing a system and documenting an already existing one. Fig 5 shows Class Diagram Cahaya Bebas HR Document Management System.

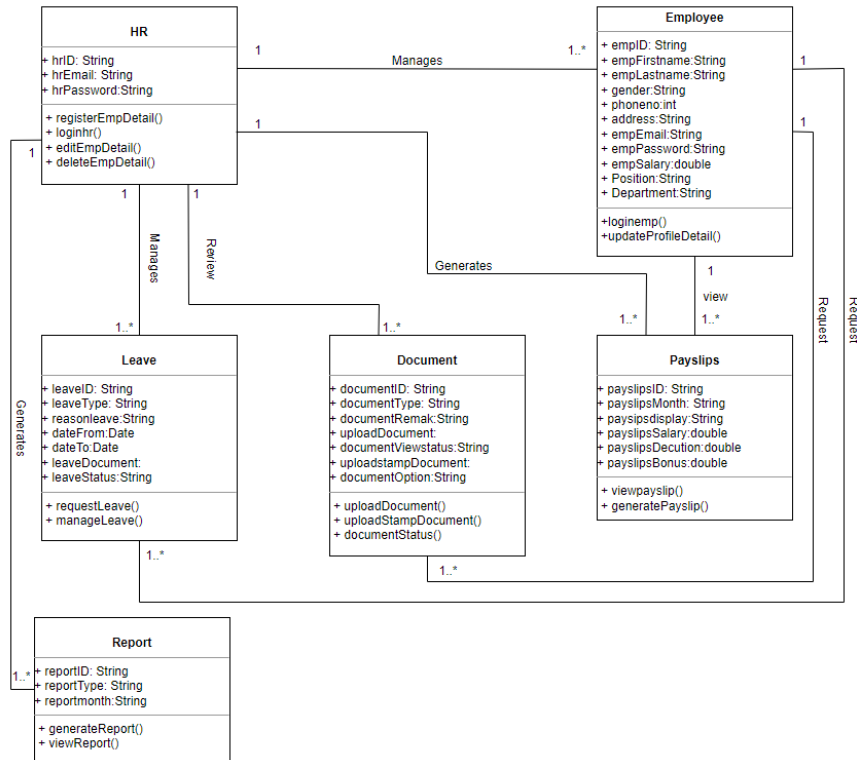


Fig. 5 Class Diagram

4.5 Use Case Specification

A use case specification is a document detailing the interactions between users and a computer system to achieve specific goals. It typically includes descriptions of the actors, the goals or objectives of the interactions, the steps required to achieve those goals, and any constraints or preconditions that must be met. For further visualization of the interaction flow, reference can be made to Appendix B, which contains the sequence diagram and activity diagram illustrating the sequential steps and activities involved in the use case scenario.

Use Case Specification for Login: The use case allows Employee and HR to log in to the system using their email and password, check text field either it empty or not, validate the email and password with database, redirect user to the homepage based on their roles and offer reset password. For a visual representation of the login process, please refer to Appendix B Fig B.1(a)and(b) for the activity diagram showcasing the activities performed during the login scenario and Appendix B Fig B.2 for the sequence diagram illustrating the sequential steps involved in the login process.

Use Case Specification for User Profile: The use case allows Employee to edit their user profile, validate the new information and update to the database. For a visual representation of user profile please refer to Appendix B Fig B.3 for the activity diagram of user profile and Appendix B Fig B.4 for the sequence diagram illustrating the sequential steps involved in user profile.

Use Case Specification for Leave: The use case allows Employee to apply for leave, check annual leave balance, upload support document, view application status and HR review the application, update application status and handle exception. For a visual representation of leave please refer to Appendix B Fig B.5(a)and(b) for the activity diagram of leave and Appendix B Fig B.6 for the sequence diagram illustrating the sequential steps involved in user profile.

4.6 Interface Design

The user interface is arguably the most important element of a computer-based system or product. If then interface is poorly designed, the user’s ability to tap the computational power of an application may be severely hindered. (Sridevi, 2014). In the context of the Cahaya Bebas HR Document Management System, interface design involves meticulously crafting the visual aspects and interactive elements of the web-based system. The goal is to provide an intuitive and user-friendly interface that allows HR and Employee to navigate effortlessly through processes

Login interface: Fig 6 shows the interface for the login Module. The login interface, where HR and Employee are required to enter their email and password based on account that have been made. The password field is crypted and hides the password to prevent any data leakage from anonymous users, ensure that all fields are filled, and the users click the “Login” button to be redirected to the Homepage. If the Employee forget their password, they can click the “forget password” then required to enter email address and employee id to set a new password.

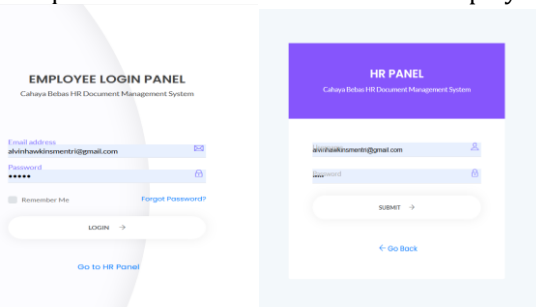


Fig. 6 Login interface

User Profile interface: Fig 7(a) shows the interface for user profile. The interface allows employee to edit and update their profile, including first name, last name, gender, email, phone no, password and address. The updated data will be saved and displayed to the employee as shown in fig(b) interface for edit user profile.

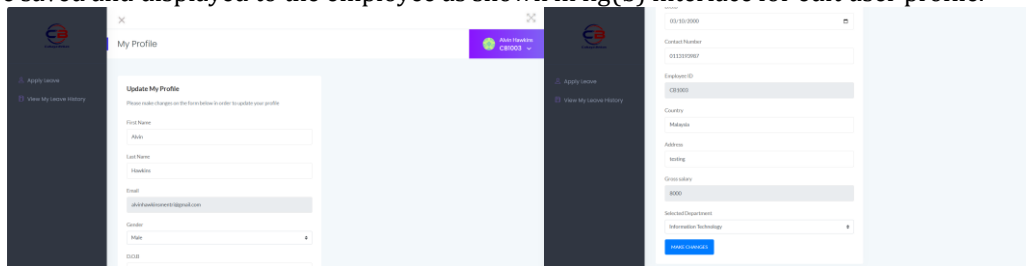


Fig.7(a)user profile interface ;(b) edit user profile interface

Leave interface: Fig 8(a) show the interface of leave application form. Fig 8(b) shows the interface of Manage Leave, in this interface HR shall be able to view list of leave that have been requested by employee, HR also can change the status by click action button and choose either approve or decline the request. After changes have been made the system should update it in the database.

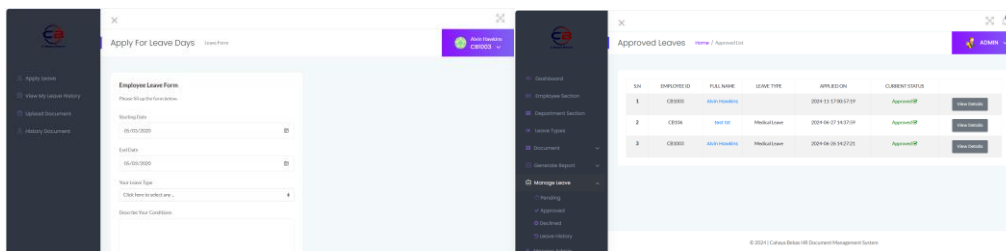


Fig.8(b) leave application form interface ; (c) manage leave interface

4.7 Implementation

The Cahaya Bebas Hr Document Management System is developed by using PHP languages, Visual Studio Code and MySQL are used to develop the web-based system. MySQL plays an important part in storing all the data information.

4.7.1 Database Connection

Fig.9 shows the demonstrates the implementation of a database connection in PHP using PDO(PHP Data Object) extension. It is designed to establish a secure and reliable connection to a MySQL database.

```

1 <code>try {
2     </code></pre>

```

Fig.9 MySQL database connection

4.7.2 Login Code Segment

Fig 10 shows the PHP code for admin panel login functionality. It initializes a session, includes a database connection, and processes form submissions by validating credentials against the admin table. The code securely hashes passwords with MD5, uses bindParam to prevent SQL injection, and checks for matches using rowCount. On success, the username is stored in a session, and the user is redirected to the dashboard. Invalid credentials trigger an alert. This ensures secure and efficient login handling.

```

<?php
session_start();
include("../includes/dbconn.php");
if(isset($_POST['signin']))
{
$username=$_POST['username'];
$password=md5(string($_POST['password']));
$sql = "SELECT username,Password FROM admin WHERE username=username and Password=password";
$query= $dbh->prepare($query);
$query->bindParam($param: array($username, $password, PDO::PARAM_STR));
$query->bindParam($param: array($password, $password, PDO::PARAM_STR));
$query->execute();
$results=$query->fetchAll(PDO::FETCH_OBJ);
if($query->rowCount() > 0)
{
$_SESSION['login']=$_POST['username'];
echo "<script type='text/javascript'> document.location = 'dashboard.php'; </script>";
}
else {
echo "<script>alert('Invalid Details');</script>";
}
}
}

```

Fig.10 Login Code Segment

4.7.3 User Profile Code Segment

Fig 11 shows PHP code for an employee profile update form, populated with data from the tblemployees table using the logged-in employee's session email (\$_SESSION['emplogin']). The form displays fields like name, email (read-only), gender, date of birth, contact, employee ID, country, address, salary (read-only), and department. Gender and department are dropdowns, with departments dynamically fetched from the tbldepartments table. Upon submission, the update action processes changes while protecting sensitive fields like email, salary, and employee ID.

```

<div class="form-group">
<input type="text" class="form-control" value="" placeholder="Employee ID" />
</div>
<div class="form-control" value="" placeholder="Employee ID" readonly required value=""></div>
</div>
<div class="form-group">
<input type="text" class="form-control" value="" placeholder="Country" />
</div>
<div class="form-control" value="" placeholder="Country" readonly required value=""></div>
</div>
<div class="form-group">
<input type="text" class="form-control" value="" placeholder="Address" />
</div>
<div class="form-control" value="" placeholder="Address" readonly required value=""></div>
</div>
<div class="form-group">
<input type="text" class="form-control" value="" placeholder="Salary" />
</div>
<div class="form-control" value="" placeholder="Salary" readonly required value=""></div>
</div>
<div class="form-group">
<input type="text" class="form-control" value="" placeholder="Department" />
</div>
<div class="form-control" value="" placeholder="Department" readonly required value=""></div>
</div>
<div class="form-group">
<input type="text" class="form-control" value="" placeholder="Description" />
</div>
<div class="form-control" value="" placeholder="Description" readonly required value=""></div>
</div>
<div class="form-group">
<input type="text" class="form-control" value="" placeholder="Attachments" />
</div>
<div class="form-control" value="" placeholder="Attachments" readonly required value=""></div>
</div>
</div>
</div>

```

Fig.11 User Profile Code Segment

4.7.4 Leave Code Segment

Fig 12 shows an employee leave application form allowing users to submit leave requests. It displays success or error messages via alerts and includes fields for Starting Date, End Date, a dropdown for Your Leave Type (fetched from the tblleavetype table), a description text area, and an optional file upload for attachments (.pdf, .doc, .jpg, .png). The form uses a card layout and ends with a SUBMIT button, ensuring a user-friendly process for requesting leave with relevant details and documents.

		display successful message		
TC-04-02	HR add new leave type	System will save new leave type and display successful message	System will save new leave type and display successful message	Passed
TC-04-03	HR delete department	System successful delete department type and display successful message	System successful delete department type and display successful message	Passed
TC-04-04	HR delete leave type	System successful delete leave type and display successful message	System successful delete leave type and display successful message	Passed
TC-04-05	HR edit user status	System displays successful message	System displays successful message	Passed
TC-04-06	HR edit user profile with valid details	System will update user profile and display successful message	System will update user profile and display successful message	Passed
TC-05 Leave				
TC-05-01	User fill leave form with valid details	System will display successful message	System will display successful message	Passed
TC-05-02	User fill leave form with invalid details	System will display error message	System will display error message	Passed
TC-05-04	HR view application	system will display all the application	system will display all the application	Passed
TC-05-05	HR approve leave application	System will display successful message and change the status to approve	System will display successful message and change the status to approve	Passed
TC-05-06	HR decline leave application	System will display successful message and change the status to decline	System will display successful message and change the status to decline	Passed
TC-06 Payslips				
TC-06-01	User Download Payslips	User will successfully download the selected payslips	User will successfully download the selected payslips	Fail
TC-06-02	HR able to edit the payslips	System allow hr to edit information in payslips and successful message display	System allow hr to edit information in payslips and successful message display	Fail
TC-07 Manage Document				
TC-07-01	Users download the document	User will successfully download the document	User will successfully download the document	Passed
TC-07-02	Users view the document	User will be able to view the document	User will be able to view the document	Passed
TC-07-03	User upload document	System will display successful message	System will display successful message	Passed
TC-07-04	HR upload document in type of document	System will display successful message	System will display successful message	Passed
TC-07-05	HR download document	HR will successfully download the document	HR will successfully download the document	Passed
TC-08 Generate Report				
TC-08-01	HR choose type of report	System will be redirected to type of report page	System will be redirected to type of report page	Passed
TC-08-02	HR generate report	System will display successful message	System will display successful message	Passed

TC-08-03	HR view the report	System will display a view of report	System will display a view of report	Passed
TC-08-04	HR download the report	HR successful downloaded report	HR successful downloaded report	Passed

4.8.2 User Acceptance Testing

This section summarizes the User Acceptance Test (UAT) results for the Cahaya Bebas HR Document Management System, focusing on the design interface, functionality, and user experience. The UAT was conducted via Google Forms with 10 respondents using a 1-5 rating scale (1 = "Very Poor," 5 = "Very Good"). For the design interface, 9 respondents rated it "Very Good," and 1 rated it "Good," praising the visual appeal, layout, and design consistency. Functionality was also rated "Very Good" by 9 respondents and "Good" by 1, with strengths noted in responsiveness, reliability, and error-handling. User experience received similar feedback, with 8 respondents rating it "Very Good" and 1 "Good," emphasizing intuitive workflows, ease of learning, and efficiency. Additionally, the director provided specific feedback in Appendix E fig B.9. While most modules passed hands-on testing, the **Payslips** module was marked as "Fail," indicating issues requiring immediate attention. Managers expressed high satisfaction with the other modules' performance and functionality. Overall, the UAT results confirm the system largely meets its functional and user requirements, with positive feedback on most aspects. However, improvements in the Payslips module are essential before deployment. Detailed test questions and response data are in Appendices D fig B.8 and C fig B.7 (a),(b),(C), respectively.

5. Conclusion

The development of the Cahaya Bebas HR Document Management System successfully addressed inefficiencies in the company's traditional management processes. By transitioning from paper-based to automated digital systems, the project enhanced overall operational efficiency. The newly implemented system allowed employees to apply for leave and manage important documents online, thereby reducing paperwork and processing times. However, the pay slip feature did not perform as expected, failing to meet the intended functionality and requiring further improvements. Despite this setback, the project met its objectives by improving data security, minimizing HR workload, and streamlining administrative tasks, ultimately leading to a more efficient and environmentally friendly HR management process for Cahaya Bebas Sdn Bhd.

5.1 Achievement of Overall Objectives

The Cahaya Bebas HR Document Management System successfully met its objectives, including designing an object-oriented, web-based solution and conducting thorough testing. Built using a prototype approach, the system is flexible and scalable for future needs. It effectively streamlines HR processes like leave requests and document approvals, reducing errors and processing times. User feedback confirmed its usability and efficiency. However, the ****Payslips**** module was marked as "Fail," requiring immediate improvements. Despite this, the system remains a robust and scalable solution aligned with Cahaya Bebas's goals and requirements.

5.2 Advantage and Disadvantage

Advantages:

- I. System reduced administrative delays and enhanced workflow efficiency.
- II. Improved data storage and retrieval streamline processes while reducing redundancy and the risk of data loss.
- III. Employees can easily access HR services like leave requests, pay slips, and document approvals from anywhere.
- IV. Transitioning to a digital system significantly reduced paper waste.

Disadvantages:

- I. The system relies heavily on stable internet connectivity and robust hardware to function properly.
- II. Employees might need additional training to use the system efficiently.
- III. Even with strong security measures in place, online systems can still be vulnerable to sophisticated cyberattacks.

5.3 Future Recommendations

To further enhance the system's efficiency and user experience, the following improvements are recommended:

- I. Add features for customizing user profiles and preferences, including the ability to save favourite reports or frequently accessed documents.
- II. Extend the system's functionality to a mobile application for enhanced accessibility and user convenience.
- III. Implement automated updates to efficiently manage backlogs related to documents or payroll systems.
- IV. Improve the notification system to provide timely updates on leave approvals, document statuses, and pay slip availability.

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Appendix A:

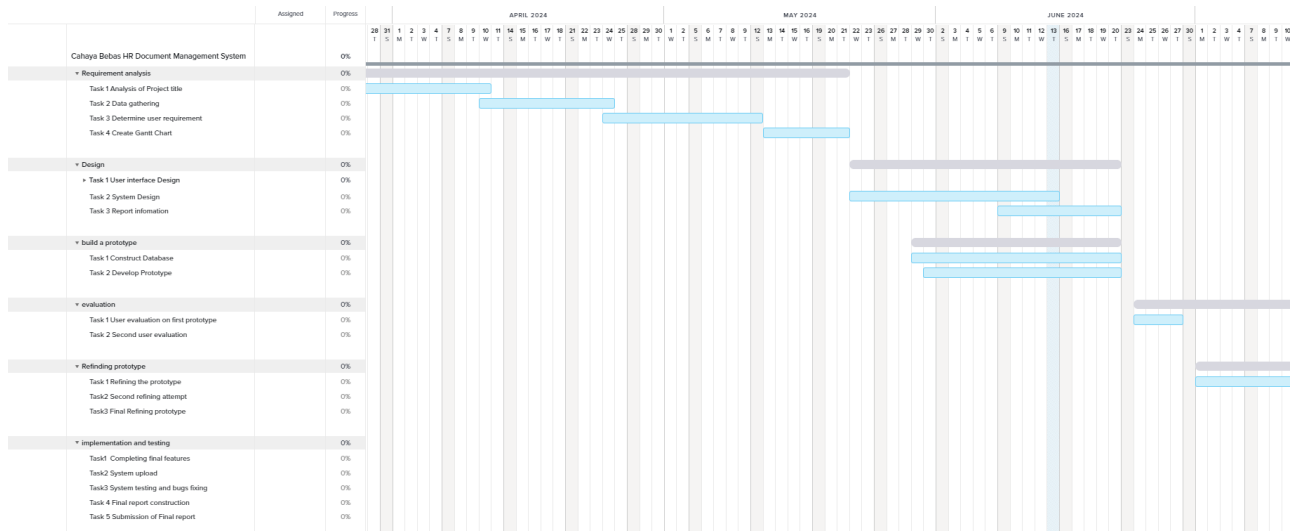


Fig. A Gantt Chart

Appendix B:

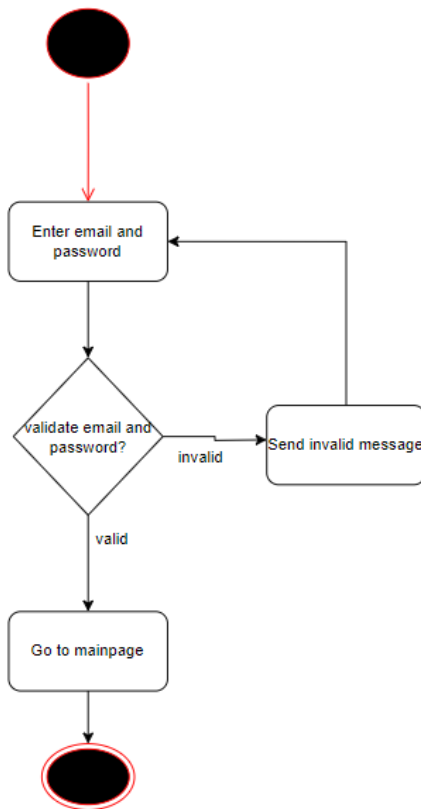


Fig. B.1 Login activity diagram

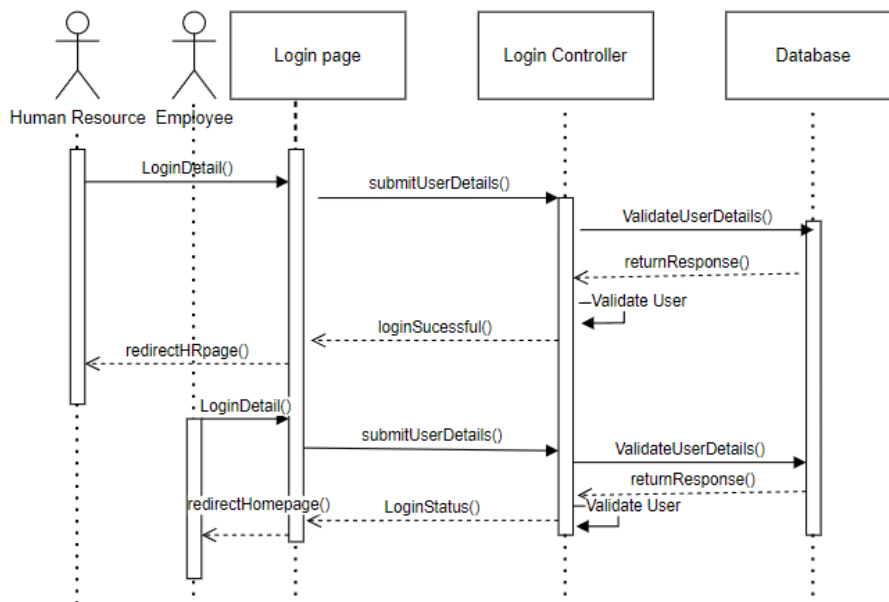


Fig B.2 login sequence diagram

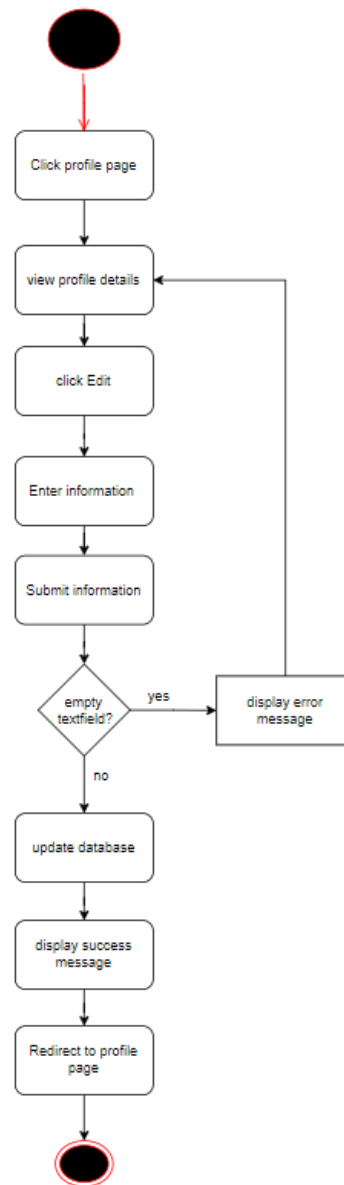


Fig B.3 user profile activity diagram

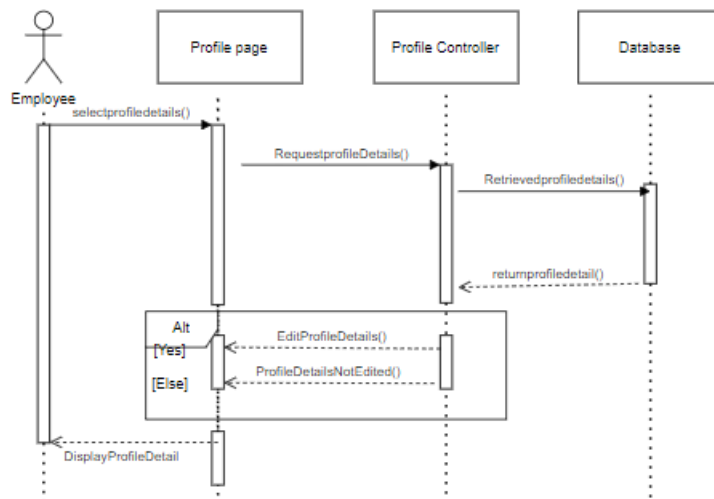


Fig B.4 user profile sequence diagram

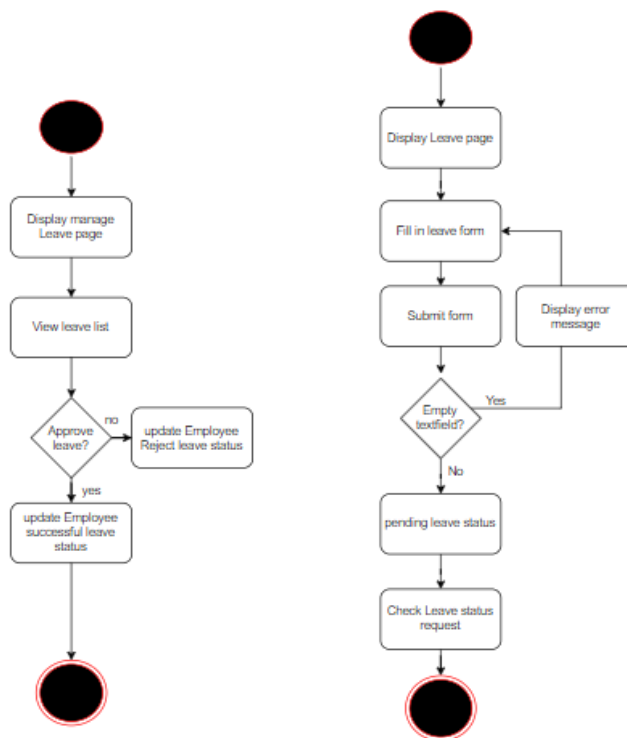


Fig B.5(a) HR leave activity diagram ; (b)Employee leave activity diagram

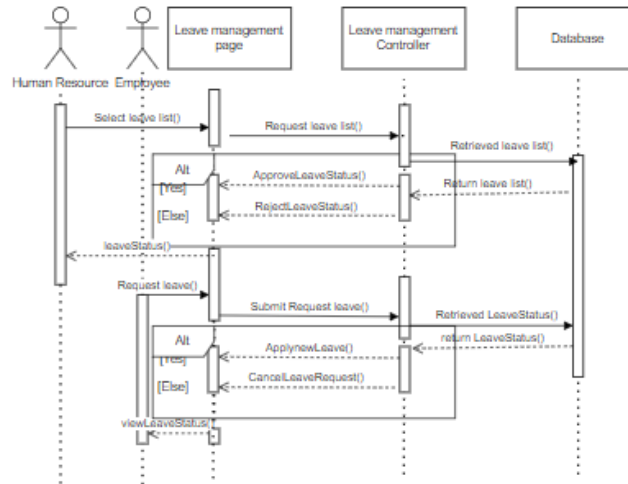


Fig B.6 leave sequence diagram

Appendix C:

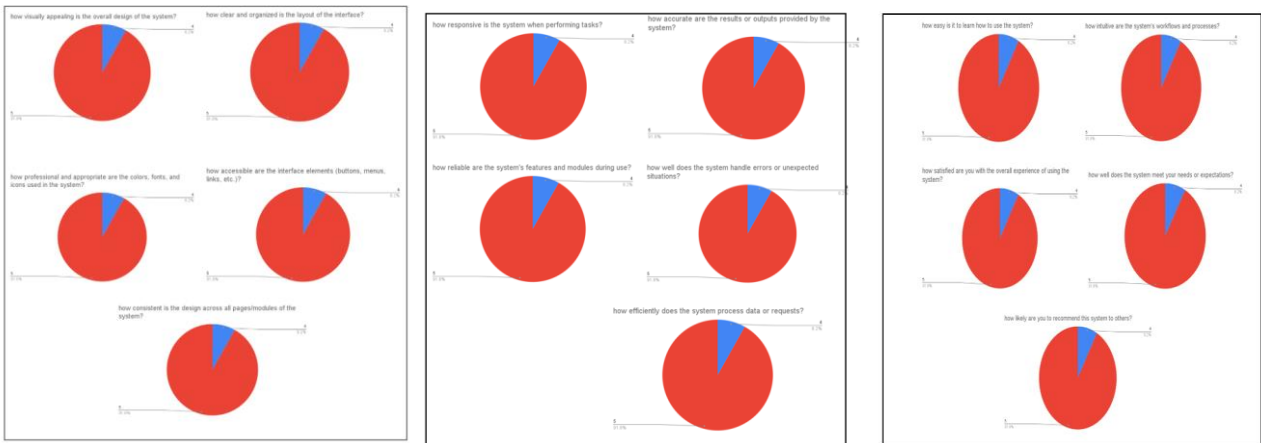


Fig B.7(a) Pie Chart for result question part 1 User Acceptance Testing; (b) Pie Chart for result Question Part 2 User Acceptance Testing (c) Pie Chart for result Question Part 3 User Acceptance Testing

Appendix D:

Fig B.7 Google Form

Appendix E:


USER ACCEPTANCE TESTING (UAT)
CAHAYA BH BAKS HR DOCUMENT MANAGEMENT SYSTEM


Name : Ong Yi Boon
Date : 27/12/2024
Phone Number : 019-2222859
Company : Cahaya Baks Sdn Bhd

No	Module Acceptance Criteria	Test Results		Remarks (If any)
		Pass / Fail		
1.	Register			
	There is a register page in the system	✓		
	I able to register new employee account	✓		
2.	Login			
	There is a login page in the system	✓		
	I able to login in the system	✓		
	I able to login as homepage after login	✓		
	Error message shown if wrong credential been entered	✓		
3.	User Profile			
	There is a user profile page in the system	✓		
	I able to update my personal detail	✓		
	I able to change my password	✓		
4.	Manage Employee			
	There is a manage employee page in the system	✓		
	I able to update employee detail	✓		
	I able to add type of department	✓		
5.	Leave			
	There is a leave page in the system	✓		
	I able to upload leave form	✓		
	I able to retrieve form from employee	✓		
	I able add leave type	✓		
	I able to add leave type	✓		
	I able to delete leave type	✓		
	I able to approve leave application	✓		
6.	Payroll			
	There is a payroll page in the system	✓		
	I able to select month to payroll	✓		
	I able to select employee payroll	✓		
	I able to track employee attendance	✓		
8.	Document			
	There is a document page in the system	✓		
	I able to add type of document	✓		

I able to add type of document	✓		
I able to delete type of document	✓		
I able to upload document	✓		
I able to download the document	✓		
I able to reupload the document	✓		
9. Generate Report			
There is a generate report page in the system	✓		
I able to choose type of report	✓		
I able to generate report	✓		
I able to download report in pdf/excel/xls format	✓		

I am Ong Yi Boon hereby declare that the information provided is true and correct.

Agreed by: 
Name: Ong Yi Boon
Position: 07/REC/IN
Date: 27/12/2024

Witnessed by: 
Name: ALVIN HAWFINS MAM MENTEL
Position: DEVELOPER
Date: 27/12/2024




Fig B.8 Director UAT form