EMPLOYEE ATTENDANCE MANAGEMENT SYSTEM

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EMPLOYEE ATTENDANCE MANAGEMENT SYSTEM

MUDHAFAR DLER RASHAD

A thesis submitted in fulfilment of the
requirements for the award of the degree of
Bachelor of Computer Science (Software Engineering)

School of Computing
Faculty of Engineering
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DEDICATION

This thesis is dedicated to my father, who taught me that the best kind of knowledge to have is that which is learned for its own sake. It is also dedicated to my mother, who taught me that even the largest task can be accomplished if it is done one step at a time.

ACKNOWLEDGEMENT

In preparing this thesis, I was in contact with many people, researchers, academicians, and practitioners. They have contributed towards my understanding and thoughts. In particular, I wish to express my sincere appreciation to my main thesis supervisor, Dr. MUHAMMAD SHIHAB, for encouragement, guidance, critics and friendship. Without his continued support and interest, this thesis would not have been the same as presented here.

My fellow student should also be recognised for their support. My sincere appreciation also extends to all my colleagues and others who have provided assistance at various occasions. Their views and tips are useful indeed. Unfortunately, it is not possible to list all of them in this limited space. I am grateful to all my family member.

ABSTRACT

One of the most fundamental and important requirements for the entire educational system is attendance. The manual attendance system has been used in the majority of educational institutions over the years. This study focuses on designing a web-based attendance management system that will be applied on any computer using Qaiwan International University -UTM Franchise as a case study in order to address the issue of manual attendance. The major goal of this project is to conduct a thorough analysis of the current attendance management system and develop a computerized approach that will reduce storage space requirements and maintain all records on the computer for future use. In order to retain simple access to information from the database, this system is being built. The application uses the Laravel PHP Framework, the MySQL database, HTML, and Cascading Style Sheets. It records every aspect of a staff member's attendance. The traditional way of recording attendance through file system signature takes a lot of time, is unsafe, and is therefore ineffective. The purpose of this study is to investigate the application of Employee Attendance Management System (EAMS). Employee Attendance Management is a critical factor within any organization which has employees. Information gathered through attendance management reporting style helps in determining if an organization is on the right track as well as if it moving toward a successful future. The workforce is a key resource that a business should know the way to keep track of their attendance and time. Through monitoring attendance, it is easier for a company to determine which employees arrive on time, early or constantly late. Employees from different organizations are found to involve in fake leaves that cause negative impact on the performance of the organization. As a result, organization uses different types of management techniques to maintain the performance of their employees in various business organizations as well as in banking sectors. In order to determine the correlation between the two variables: attendance management and employee performance the paper used an online survey questionnaire to collect information about the research topic under investigation. The collected data is analysed using the Statistical Package for the Social Sciences using frequency descriptive tables. To test the reliability of the collected data results a Pearson's correlation analysis test is used.

ABSTRAK

Salah satu keperluan yang paling asas dan penting untuk keseluruhan viector viectorvievin ialah kehadiran. Sistem kehadiran manual telah digunakan di kebanyakan institusi viectorvievin selama ini. Kajian ini memfokuskan kepada mereka bentuk viector pengurusan kehadiran berasaskan web yang akan diaplikasikan pada mana-mana viectorvie menggunakan Francais Universiti Antarabangsa Qaiwan -UTM sebagai kajian kes bagi menangani isu kehadiran manual. Matlamat utama projek ini adalah untuk menjalankan analisis menyeluruh viector pengurusan kehadiran semasa dan membangunkan pendekatan berkomputer yang akan mengurangkan keperluan ruang penyimpanan dan mengekalkan semua rekod pada viectorvie untuk kegunaan masa hadapan. Untuk mengekalkan akses mudah kepada maklumat daripada pangkalan data, viector ini sedang dibina. Aplikasi ini menggunakan Rangka Kerja PHP Laravel, pangkalan data MySQL, HTML, dan Lembaran Gaya Cascading. Ia merekodkan setiap aspek kehadiran kakitangan. Cara tradisional merekod kehadiran melalui tandatangan viector fail mengambil banyak masa, tidak selamat, dan oleh itu tidak berkesan. Tujuan kajian ini adalah untuk menyiasat aplikasi Sistem Pengurusan Kehadiran Pekerja (EAMS). Pengurusan Kehadiran Pekerja adalah viector kritikal dalam mana-mana organisasi yang mempunyai pekerja. Maklumat yang dikumpul melalui gaya pelaporan pengurusan kehadiran membantu dalam menentukan sama ada organisasi berada di landasan yang betul serta sama ada ia bergerak viectorvi masa depan yang viectorvi. Tenaga kerja ialah sumber utama yang perniagaan harus tahu cara untuk menjejaki kehadiran dan masa mereka. Melalui pemantauan kehadiran, lebih mudah bagi sesebuah syarikat untuk menentukan pekerja yang tiba tepat pada masanya, awal atau sentiasa lewat. Pekerja daripada organisasi yang berbeza didapati terlibat dalam daun palsu yang menyebabkan kesan viectorvie terhadap prestasi organisasi. Akibatnya, organisasi menggunakan pelbagai jenis viector pengurusan untuk mengekalkan prestasi pekerja mereka dalam pelbagai organisasi perniagaan dan juga dalam viector perbankan. Untuk menentukan korelasi antara dua pembolehubah: pengurusan kehadiran dan prestasi pekerja kertas itu menggunakan soal selidik tinjauan dalam talian untuk mengumpul maklumat tentang topik penyelidikan yang sedang disiasat.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

RFID	-	Radio Frequency Identification
HRIS	-	Human Resource Information System
EAMS	-	Employee Attendance Management System

LIST OF APPENDENCIES

CHAPTER 1

INTRODUCTION

1.1 Introduction

Nearly all companies in the world employees the face-to-face approach in taking attendance for their companies with some electronic aid. In the workplace of the employee taking attendance and any aspects of the employee while they are working in their workspace is very important in ensuring the knowledge acquisition and retention can be achieved. In the world not being on time for your work will cause a huge cut from your salary or even get fired.

Currently, keep tracking of employee is not that efficient since most of the companies are just taking attendance manually or if they know someone high rank that they could do something for them with a small return everything could be changed and get fixed for them in seconds. Unfortunately, this method is not reliable nor secure and have too many flaws which could affect the attendance and tracking of the employee. An efficient and accurate way of taking attendance is needed, and the Employee Attendance Management System is proposed.

Employee Attendance Management System is a Human Resource Information System (HRIS) based system that will collect the data of the employee whenever they entered their workspace or took a break. While there are many different approaches available like Radio Frequency Identification (RFID), HRIS will provide more accurate and cheaper solution.

1.2 Problem Background

During worktime in the workspace the manager will have an attendance sheet. This attendance sheet will have the name list of the employees and start worktime and end of the day they have to go back to the manager to finish the attendance sheet and make sure that they have signed it next to their name and the end time for their work when they are done. After gathering and studying the existing Employee Attendance Management System, some problems were found when the user tries to manage their employees. The issues are the follow:

Time-consuming to record the employees in bulk. Administrator needs to retrieve the employees name one by one from the on paper. Unfortunately, some employees will be on time, it will take too much of their time till they can find the manager and after that start their own work. Sometimes they cannot even find the manager in time and their time will be lost or the load of the employees coming together at the same time just to take attendance so that they could start their work.

Sadly, in the traditional way the attendance sheet might get missing. If that's the case, it will be hard to recovered it since the manager needs to review and search of the actual paper itself, and he didn't find it then he needs to print it again and fill the attendance sheet all over again, that means he need to bring back the employees and ask them again and they need to fill it truthfully. We could say it is not reliable nor secure. Employee Attendance Management System is a system that uses HRIS which can help the businesses meet their goal by improving workforce productivity and use data to make better decisions for the companies and all the data will be stored in a database safely without worrying that this data would be lost or corrupted. The users find it challenging to store the record and retrieve the recipient's and event's data since they keep the taking the records on paper.

1.3 Project Aim

The project's aim is to create a system that keeps trace of the employees and take attendance of the employee in an organization without any confliction that will

accurately get and store data of the employee, safe and secure. Those data that would be stored would be managed by the administrator. In addition, the employees can retrieve their data easily by accessing the Employee Attendance Management System and ask for their records.

1.4 Project Objectives

The objective of this project includes:

a) To elicit and analysis the requirement and needs of Admin and Employee for Rozza company.
b) To design the MVC architectural models, user interface and database for the developed EAMS system based on the elicited requirements and design models.
c) To develop the EAMS system based on the designed models
d) To evaluate and validate the developed EAMS system by applying Black-box testing and user interface testing.
e) To study and identify the problems experienced by the existing systems.
f) To design based on the existing systems.
g) To implement based on the existing systems.
h) To test and evaluate the developed HRIS for accuracy, better decision and effectiveness based on the requirements.

1.5 Project Scope

The project will be run within the following scopes:

a) The system will focus the development on the companies who are willing to track their employees.
b) This system is built for midsized companies.

c) The platform that supports this system is any device who have access to internet and has a browser.
d) Collaboration option with other organizers for a program is not available.
e) Customizing user profile is limited.

1.6 Project Importance

This project will significantly enhance the way keeping track of employees was taking ex: attendance and increase its accuracy. Is also very important for any companies if they are concerned about their employees and want to improve their work and statues for boosting up the company make it better and go forward.

1.7 Report Organization

In this chapter we are focusing more about the basics of the project, point out the problem background where it needed to be fix and what is the source of the problem. Setting up the goal of the proposed system the aim, objective, scope and the importance of the project.

In chapter 2 we are going to work on literature review where we are going to talk about Inter-organization case study, and we some questioner to gather user information and talk about the existing system that are available with similar functionality and a Comparison between the systems and the proposed system and talk about the technology that would be used.

In chapter 3 we will discuss more about the methodology which one would be best for our system and implementing that methodology to improve our system while developing.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

In chapter 2 we will evaluate literature relevant to the EAMS. It's about theories, concepts, approaches, methodologies and techniques that are applicable to the project, and also take users information by applying survey technique to gather information.

2.2 Inter-Organization Case Study

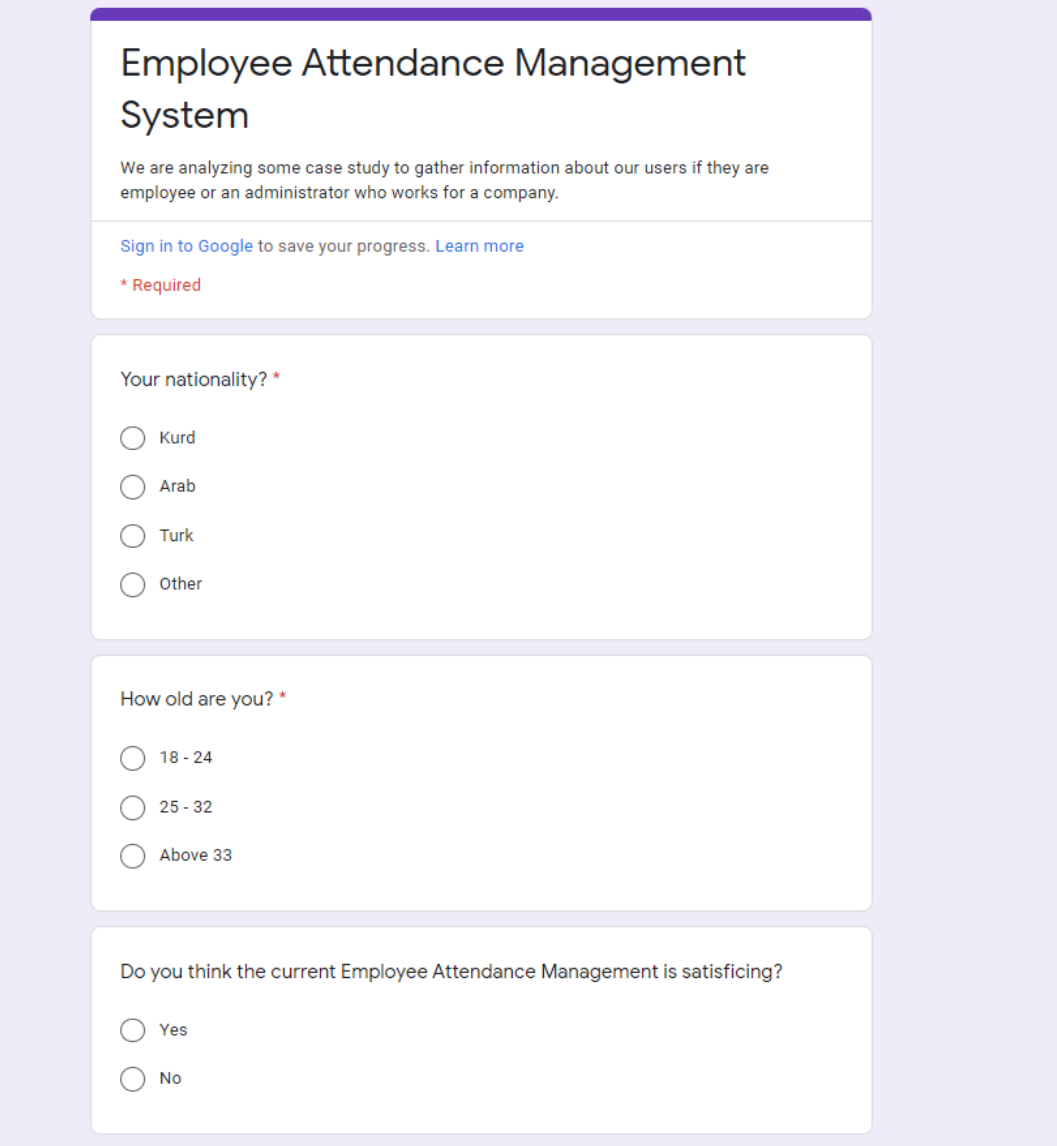
An organization or corporation with a large number of people who works and manages a larger amount of data. Without a more experienced technology to store and retrieve data, this activity can be difficult to manage. The evolution of HR technology can be used to investigate the various levels of sophistication. There are four stages of development that can be identified:

- Paper-based systems
- Personal Computers
- Electronic databases
- Web-based technology

The benefits of automation are becoming well known to HR and other areas of the business. To achieve effectiveness and efficiencies, the focus has turned to automating as many transactions as feasible. The future of technology will be about quick access to current, correct data, and the ability to access this data across many platforms will provide businesses a strategic advantage. HR is required to relinquish its position as the only owner of HR data so that managers and employees can utilize it to address their own problem using Web-based systems. Because they use

technology efficiently, high-performing firms spend 25% less on HR than their peers, according to recent research by Hackett Group, a business process advising firm. This system has been up for a long time and a lot of people are using it, first when people were not familiar with technology, they were using paper-based systems where the administrator were taking attendance of managing the work flow of the employees where all done on paper, and people were suffering throw this traditional method of system. Which we all know it's not reliable, with not database and no security at all.

For this system the users want a system which they could store their data effectively without risking to lose their data and their privacy. Below is the survey Questions that we asked:



If you are an employer do you struggle managing your employees?

- ◯ Yes
- ◯ No

Work experience (if applicable) ?

- ◯ Less that 2 years
- ◯ 2 - 5 years
- ◯ 5 - 10 years
- ◯ Above 10 years

Monthly Salary (if applicable)

- ◯ below 500$
- ◯ 500$ - 1000$
- ◯ 1000$ - 2000$
- ◯ Above 2000$

Do you think the current employee management systems need change? *

	1	2	3	4	5	
Strongly Agree	◯	◯	◯	◯	◯	Strongly Disgree

Do you believe in employee rights? *

	1	2	3	4	5	
Strongly Agree	◯	◯	◯	◯	◯	Strongly Disagree

Do you believe that technology should be involved in business management? *

	1	2	3	4	5	
Strongly Agree	◯	◯	◯	◯	◯	Strongly Disagree

Do you know anyone who was an employee and did not like their management system? *

- ◯ Yes
- ◯ No

Do you believe that traditional management systems are secure? *

	1	2	3	4	5	
Strongly Agree	◯	◯	◯	◯	◯	Strongly Disagree

Do you believe that traditional management systems are time consuming? *

	1	2	3	4	5	
Strongly Agree	◯	◯	◯	◯	◯	Strongly Disagree

Are traditional attendance taking methods effective? *

	1	2	3	4	5	
Strongly Agree	○	○	○	○	○	Strongly Disagree

Do traditional systems negatively effect workforce productivity? *

	1	2	3	4	5	
Strongly Agree	○	○	○	○	○	Strongly Disagree

Do you believe there should be a new employee system? *

	1	2	3	4	5	
Strongly Agree	○	○	○	○	○	Strongly Disagree

Do you believe in a new system would be able to keep trace of their employee and affect their employees? *

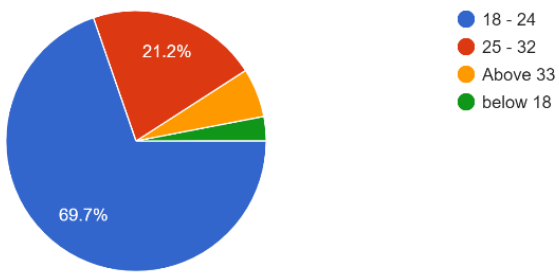
	1	2	3	4	5	
Strongly Agree	○	○	○	○	○	Strongly Disagree

The analysis of the survey:

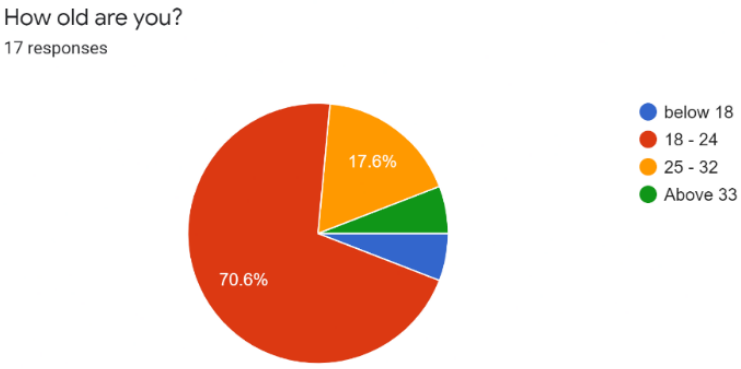
Q1: The majority of them answered their nationality as Kurds.

How old are you?

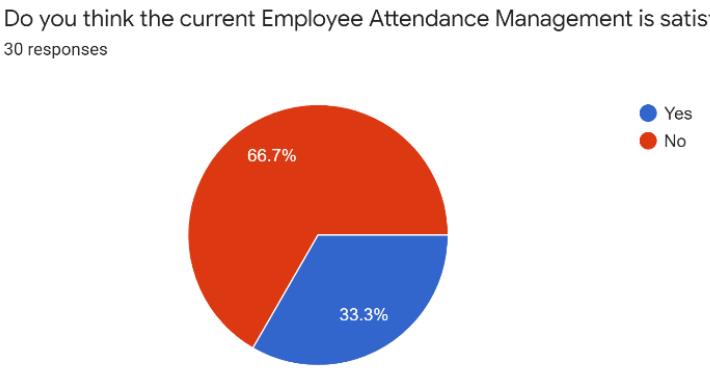
33 responses



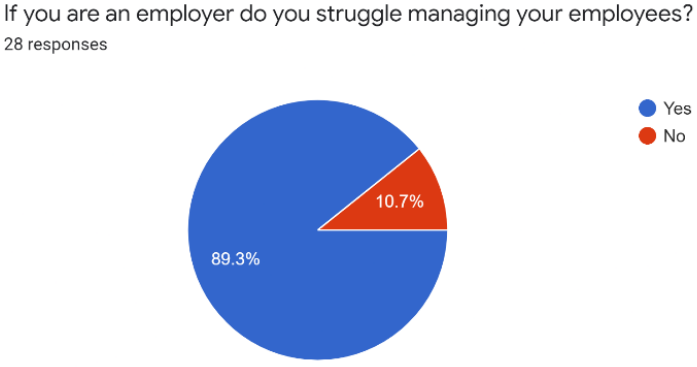
Q2: The majority of them answered they are in rage of 18-24 years old



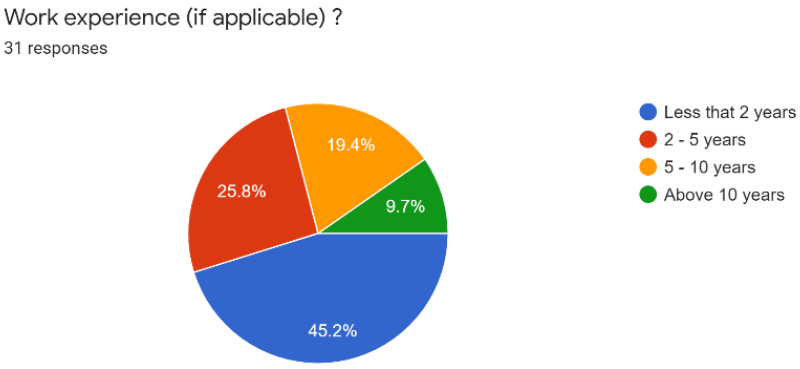
Q3: The majority thinks that Employee Attendance management is not satisficing.



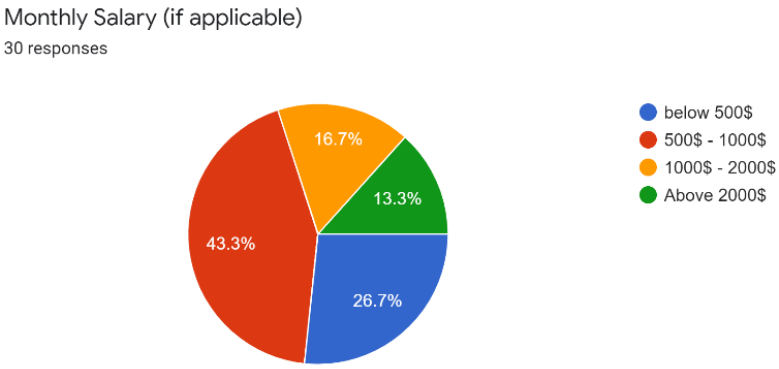
Q4: The majority thinks that yes, they do struggle managing their employee.



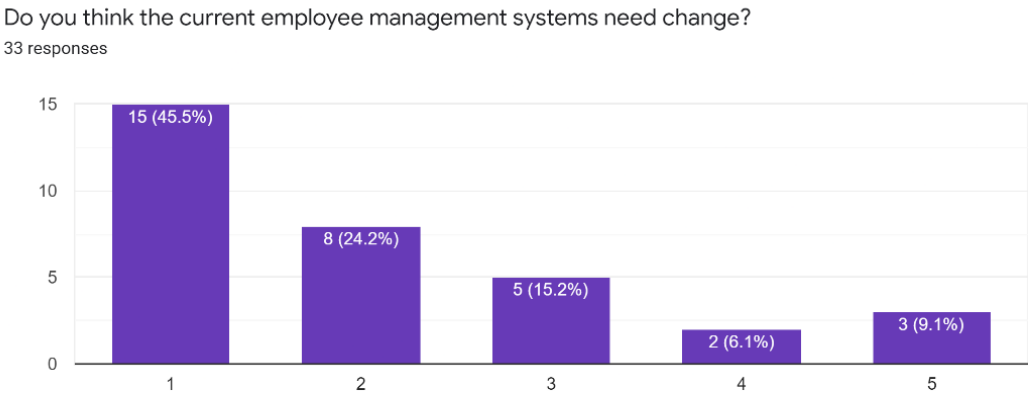
Q5: Most of the response was from less than 2 years.



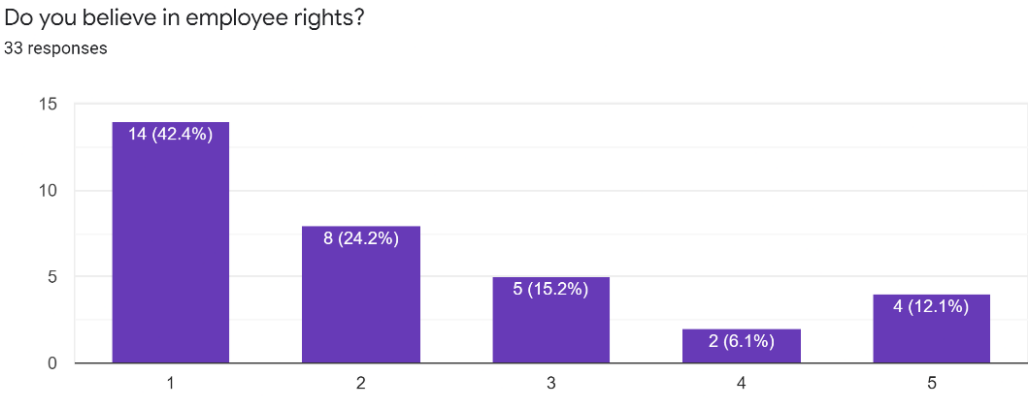
Q6: The majority of them answered that their monthly salaries is below 500$.



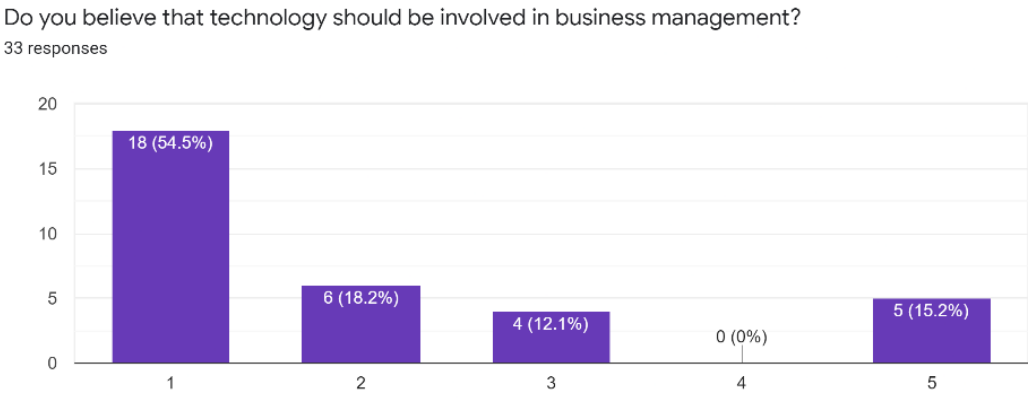
Q7: The majority thinks that the current system needs to change.



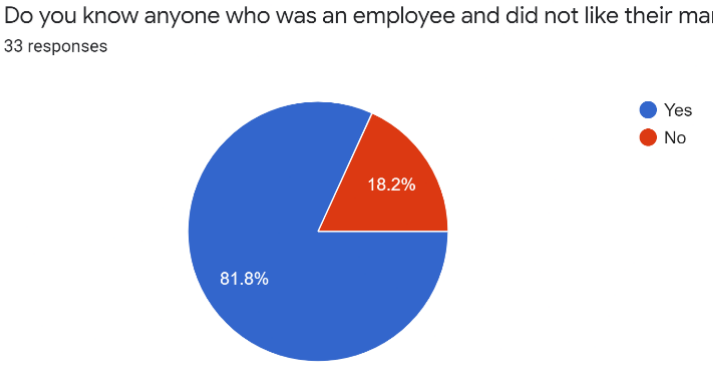
Q8: The majority of them answered as they do believe in employee rights.



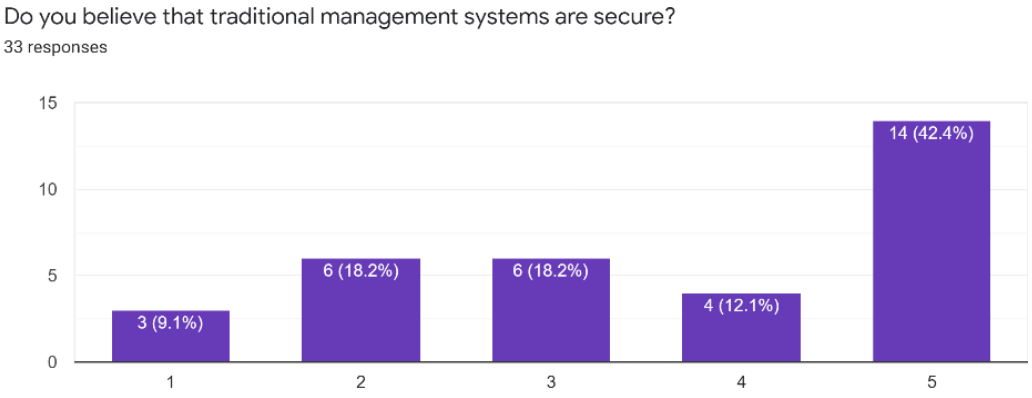
Q9: The majority of them answered as they think that technology should be involved in business management.



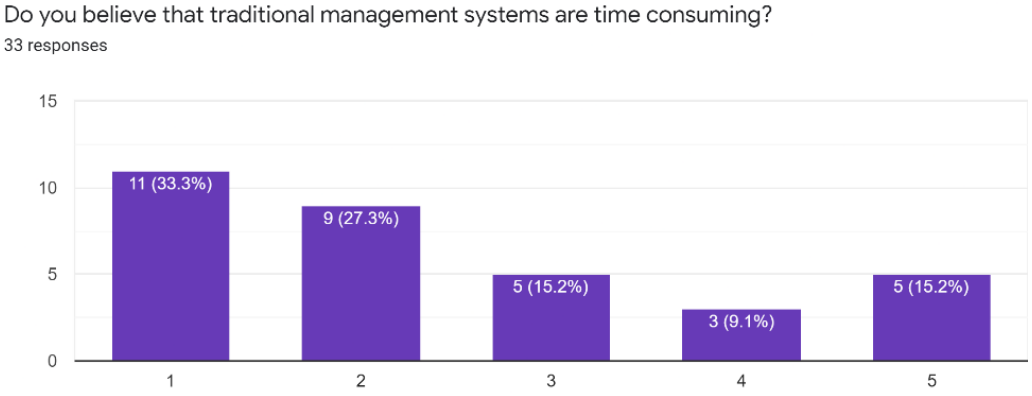
Q10: The majority of them answered as yes, they know someone who doesn't like their management system.



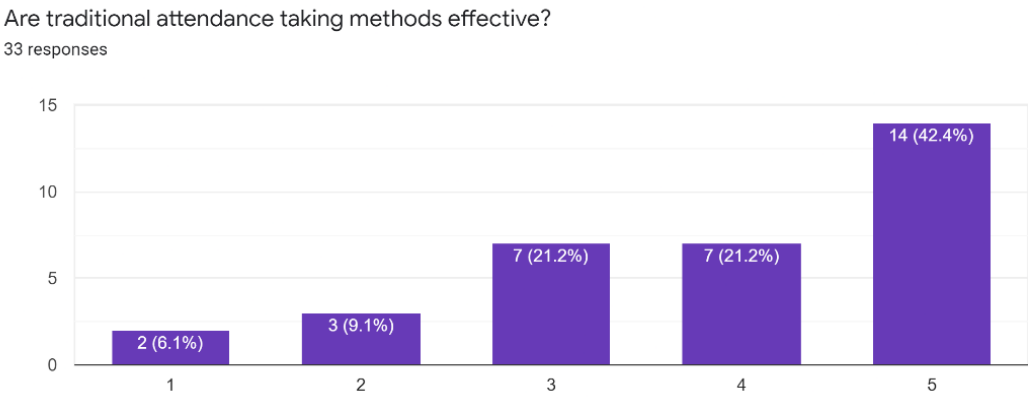
Q11: The majority of them answered as strongly disagree for traditional management system if it is secure.



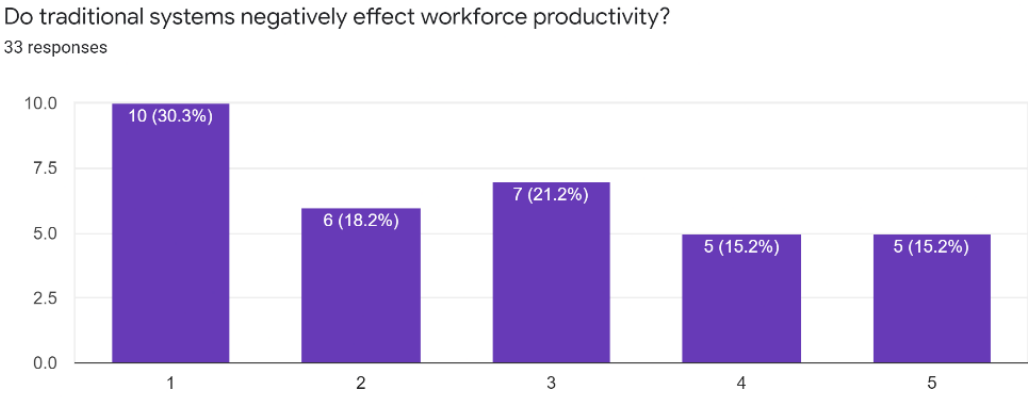
Q12: The majority of them answered as strongly agree for traditional management system it is time consuming.



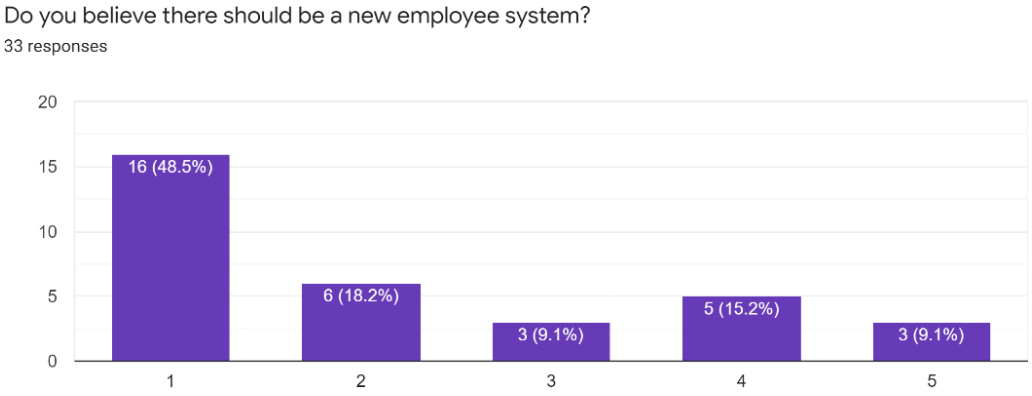
Q13: The majority of them answered as strongly disagree for traditional attendance to be effective.



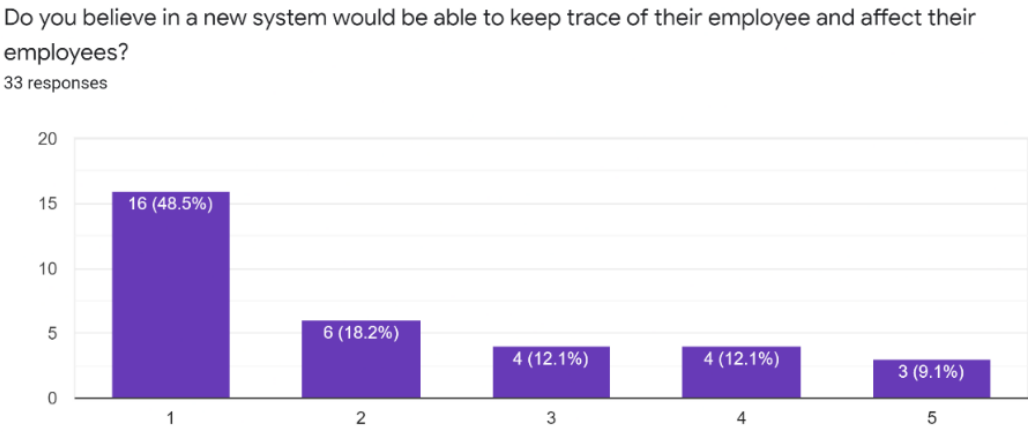
Q14: The majority of them answered as strongly agree for negativity of traditional systems.



Q15: The majority of them answered as strongly agree if there should be a new system.



Q16: The majority of them answered as strongly agree for a new system to be effective.



The discussing of the survey:

There are some general questions that we asked some of the employees to know them better and there are some specific questions to gather information based on the proposed system.

In Question 3 we asked our employees if the current employee attendance management is satisficing and most of the responses that we got back based on this question was no, the current system is not satisficing.

In Question 4 we wanted to know if an employer is struggling to manage their employees. And they responded with yes, most of them are struggling.

In Question 6 we asked the employees how much is their monthly salaries and the we got the most respond below 500$.

In Question 7 we wanted to know if the current employee management system needs to change and the majority responded with strongly agree, which means they want another system.

In Question 8 we asked if they believe in employee rights and the majority responded with strongly agree which means they do believe in employee rights.

In Question 9 we asked if technology should be used involving this new system, and the majority responded with strongly agree.

In Question 10 we asked if they knew someone who doesn't like their management system and the majority responded with yes, they know someone who does not like their current system.

In Question 11 we asked if the traditional system is secure and the majority responded with strongly disagree which means it is not secure.

In Question 12 we asked whether the traditional management system is time consuming and they responded which strongly agree which means yes, the traditional system is time consuming.

In Question 13 we asked if the traditional management system is taking methods effective and the majority responded with strongly disagree which means no, the traditional system is not taking method effective.

In Question 14 we asked if the traditional management system negatively affect workforce productivity and the majority responded with strongly agree which means yes, the traditional system is negatively affect workforce productivity.

In Question 15 we asked if there should be a new system and the majority responded with strongly agree which means they think they need a new system to be developed.

In Question 16 we asked if a new system would be able to keep trace of their employee and affect their employees and the majority responded with strongly agree.

2.3 Current System Analysis

There are some systems out there, we are just going to talk about a few of them which are:

Traditional way for employee attendance management system that we had before, in which technology was not involved at all. The users of that system which they use before was not reliable nor secure, it was not a system which they could have accesses anywhere and whenever they wanted or modify the data that they have.

There was not to money features involved within this system, only taking attendance for the employees by using pen and paper (paper-based system)

OrangeHRM is a powerhouse resources tool, which is perfect for a small or midsized company, you may either download and install the system on your own

hardware or purchase a hosted service with that system. To receive their hosted solution, go to their request a quotation page and send them an email.

The setup is straightforward. OrangeHRM can be installed on any platform using a self-extracting Windows installer or a full-source installation for Windows, Mac, and Linux. Support plans and modifications are also available for purchase.

[1] Charithra (2017) states that OrangeHRM has module-based architecture which enables the client to have a vast scop of HR feature, and their client will achieve choice, afford-ability and flexibility.

[2] Rasmus (2007) states that OrangeHRM is ideal for small and medium sized organization often limited in resources and in demand of the low-cost solution.

[3] Jean (2015) states that OrangeHRM is adapted some label to meet users need and that the users do not need to have any programming skills.

[4] Juliet (2018) states that this system It's not simple to set up, and it's also not very stable. There's a chance the system will crash, and the user will lose all of their data.

SimpleHRM's professional platform is available in an open-source version. This version of time management is available for both Windows and Linux servers.

SimpleHRM, once deployed, provides your HR department with all of the following features: Employee data, leave management, travel management, cost management, benefit management, and task reporting are all available.

[5] Raj (2015) states that SimpleHRM is a easy to use and affordable open source system, and provides many features, and SimpleHRM provides a good HR foundation for most small and medium sized organization.

[6] HRMSWorld (2012) states that SimpleHRM software is a free to download platform, users can install the software on their computer.

WayPoint HR is the HR software for any small or midsized business looking for a platform that can be used by practically any user with any degree of experience. Employee data can be managed using WayPoint HR, which includes:

To change the way a picture fits in your document, click it and a button for layout options appears next to it. When you work on a table, click where you want to add a row or a column, and then click the plus sign. Reading is easier, too, in the new Reading view. You can collapse parts of the document and focus on the text you want. If you need to stop reading before you reach the end, Word remembers where you left off - even on another device. Video provides a powerful way to help you prove your point. When you click Online Video, you can paste in the embed code for the video you want to add. You can also type a keyword to search online for the video that best fits your document. To make your document look professionally produced, Word provides header, footer, cover page, and text box designs that complement each other. For example, you can add a matching cover page, header, and sidebar.

There features:

- Personal details
- Discipline and grievance records
- Performance appraisals
- Exit interviews
- A five-step add employee wizard
- Save reports to PDF
- Multi-site facility layering

[7] Jace (2017) states that WayPoint HR let the user to store employee's information in a secure cloud database, which is accessible from web browser, and that WayPoint HR manages the servers, the database, the software and their network security.

[7] Grace (2010) states that it is best for small or midsized organization WayPoint HR is one of the best systems out there that works really well with not too crowded organization.

2.4 Comparison between existing systems

There are current systems that perform similarly to EAMS in terms of functionality, domain, and development, according to additional elicitation. As in 2.3 we have talked about the existing systems and their features, the table below is the competition between all of the systems in terms of functionality and their limitation.

Table 2.1 Comparison Between Existing and Proposed System

System Functionality	OrangeHRM	SimpleHRM	Waypoint HR	EAMS (our system)
Free Trial	✓	✓	✓	✓
Free version	×	✓	✓	✓
Best for (num of user)	11 - 1000	1 - 1000	1 - 1000	1 – 5000
Applicant Tracking	✓	✓	✓	✓
Compensation Management	×	✓	×	✓
Cloud, SaaS, Web-Based	✓	✓	✓	✓
Easy to setup	×	✓	×	✓
Notification	×	×	×	✓
Employee Request	×	×	×	✓

2.5 Literature Review of Technology Used

Information regarding the software, programming language, and technology will be based on internet searches, computational books, and articles. The information gathered is analyzed and related to the system's development. There will be more information regarding the software, programming language, and technologies.

2.5.1 Operating System

Since our project is web-based there for any operation system with an internet connection and a browser would be able to access the system.

2.5.2 Languages

There are many varieties of languages that are powerful to build the proposed system such as PHP, Bootstrap and JavaScript. Below is a short description of languages that will be using to develop EMP.

- **Visual Studio Code**: It features a lighting fast source code editor, it's a perfect editor which supports hundreds of languages, and it helps with instantly productivity with syntax highlighting, racket-matching, auto-indentation, box-selection, snippets and etc.
- **PHP**: It's a general-purpose scripting language that may be used to create interactive and dynamic webpages. It was one of the first server-side languages to be integrated in HTML, making it easy to add functionality to web sites without having to access other files directly.
- **Xampp**: It allows a local host or server to test a website's functionality and clients before releasing it to the main server. It's a cross-platform software that includes phpMyAdmin, OpenSSL, MediaWiki, WordPress, and many other modules. It's very simple to set up and utilize.

- **JavaScript**: Reduces the code length, which improves the performance of websites and web apps. With the use of different built-in functions for loops, DOM access, and so on, the code has reduced overhead.
- **SaaS**: For a variety of reasons, it is possible to save a significant amount of money. One of the reasons is that it removes both the initial purchase and installation costs, as well as ongoing costs such as maintenance and upgrades. SaaS applications can be readily downloaded and maintained instead of spending a lot of money on hardware installation.
- **Bootstrap**: It's an HTML, CSS, and JS library aimed at making the creation of informative web pages easier. It's simple to set up and master, with a large number of components, a strong grid system, styling for numerous HTML elements ranging from typography to buttons, and JavaScript plugin compatibility, making it even more versatile.

2.6 Chapter Summary

In this Chapter we have learned our system more and how we interacted with our users and gather information from them (Inter-Organization case study) which we conducted a survey for the information gathering and talked more about the previous systems that we had the normal traditional way and along with some other systems that are already available for the users, a brief explanation for each of the available systems with their strength and weaknesses, and a comparison between them with their limits along site with the system that we are presenting, and also talk about some of the tool that is going to be used in this system.

CHAPTER 3

SYSTEM DEVELOPMENT METHODOLOGY

3.1 Introduction

The process of developing systems is also referred to as the framework for Organizing, trying to organize, and managing the creation of an information system, is a sequence of phases used in software development that include some tasks to better manage and plan. The acceptably defined technique provides numerous benefits, including more time to change, earlier risk identification, a safe system, and a transparent grasp of the work ahead. Agile approaches, incremental and iterative development, spiral development, and waterfall development are only a few examples.

It's critical to pick the right methodology. Otherwise, as time goes on, numerous concerns become more and more prevalent. As an example. The built systems do not meet the users' expected needs, causing delays in the project and sometimes exceeding the budget. As a result, adhering to the process reduces these occurrences.

3.2 Methodology Choice and Justification

When it comes to software development, the right methodology is crucial. Other professional software development firms today employ a variety of approaches. Each of the approaches picked has benefits and drawbacks that must be weighed in order to determine the best methodology for the Employee Attendance Management System.

3.2.1 Waterfall Model

Waterfall modeling is a classic engineering strategy that may be applied to the creation of software. The development of software proceeds in a straight line, with the future step starting only when the earlier one has been completed completely. As a result, after a phase is completed, this approach does not allow for a return to a prior phase. The waterfall model's "inflexibility" has been challenged by advocates who prefer the "flexible" model's approach.

The use of a waterfall model has a number of advantages. For instance, an organized sequence of development phases and stringent controls for ensuring the acceptance of documentation and design reviews improve the maintainability, quality, and reliability of the developed software. This traditional paradigm is also ideal for project managers or team members who are new to project management. This paradigm does, however, have significant drawbacks. Changes to this methodology are tough to overcome. Because the adjustments are made later in the life cycle, they will be more expensive.

3.2.2 Agile Methodology

Active participants can alter their actions to address circumstances that develop during the project management process using agile approaches. Scrum Development process is an example of agile methodology that works well for complicated and innovative projects. Scrum development begins with brief preparation, meetings, and concludes with a conclusion. It's an ideal methodology since it swiftly gets even the slowest-moving projects back on track.

Scrum has a number of advantages. Scrum, for example, permits a huge and scalable project to be broken down into easily achievable tasks. Furthermore, because every sprint is reviewed before going on to the next, this technique recognizes the conditions for making modifications to the project's direction or field. Despite the fact that this agile methodology may be used to nearly any project, Scrum adoption is in

huge teams difficult because the methodology can only be effective with team members who have experience.

3.2.3 Prototyping Software Development Method

The prototyping process allows developers to create merely a prototype of a solution in order to demonstrate its usability to users and create necessary improvements before moving forward with the full application. Users can be included in the development process using prototype approaches, which raises the likelihood of user approval of the last product.

One of the prototype method's advantages is that realistic modeling can be done using it key components of a system at each stage of the typical life cycle. It can boost user participation in system development and improve collaboration amongst project participants because the user is participating in the process. This is due to the user's participation in resolving ambiguous objectives and validating user needs. While this process aids developers in demonstrating the system prototype, it can also lead to incorrect assumptions. This is due to clients' erroneous belief that the system is "finished," while it isn't. In terms of interfaces, the system only looks well enough, but the functionality isn't complete.

3.2.4 Comparison Methodology

Table 3.1 compares the techniques of the Waterfall, Agile, and Prototype models.

Table 3.1 Methodology Comparison Table

Methodology	**1. Waterfall Model**	**2. Agile**	**3. Prototype**
Advantages	Project under firm control.	A large project can divide into	Able to demonstrate the prototype.

	Perfect for less experienced team members	manageable sprints. Reviews are done at each sprint.	Reduce the risk of failure.
Disadvantages	Not possible for changes happened. Reduce manageability because less iteration	Need experienced team members. Non-stop reviews and meetings required solid resources.	Encourage excessive change requests.

After researching system development methodology. Prototype methodology have been chosen for developing Employee Attendance Management System. Prototype is the best option since the purpose of a throwaway prototype is to gain a better understanding of the requirements. This prototype was created based on the currently known requirements derived from the problem analysis, in order to satisfy the users of the system.

3.3 Phases of the Chosen Methodology

There are several phases in Prototype. The methodology phase starts with determine objectives, developing the prototype, show the prototype to the user for the evaluation process, refining the prototype after getting the feedback from users, and proceed to the last phase which implements the proposed system and maintain it. Figure 3.1 Prototyping Model Phases shows the step to be done when implement Prototype methodology.

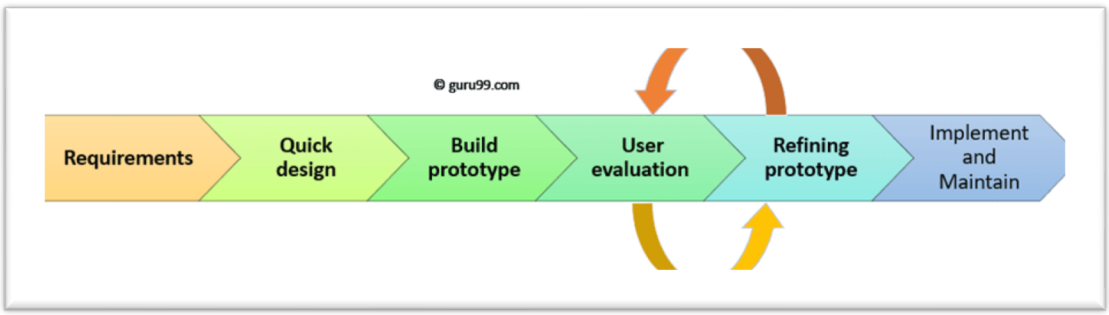


Figure 3.1 Shows Prototyping Model Phases

3.3.1 Phase 1: Requirement Gathering and Analysis

The needs of the system are defined in depth during requirement analysis, which is the first step in the prototyping process. During the process, company administrators were questioned to learn what they expected from the system. There are various methods that have been used, such as the internet.

3.3.1.1 Informational Interview

The purpose of the interview was to gather the requirements directly from the administrators to understand the needs better. During the interview, the users told the manual operation they usually would do, problems arise during the process, the weakness of the manual operation, and their expectation of the proposed system.

3.3.1.2 Internet

The goal of searching the internet is to gain a general understanding and knowledge of the Employee Attendance Management System.

3.3.2 Phase 2: Quick Design

The second phase is a rapid design, in which the system's basic design is created.

3.3.2.1 Software Design

Together with the corporate managers, we came up with the idea of transforming the requirements into software and recommending the finest tools for achieving a fantastic outcome, such as programming languages, libraries, frameworks,

and databases. PHP was selected as the cire programming language, while JavaScript was mainly programming language for the discussion. MySQL was used as a database service with the implementation of the phpMyAdmin tool.

3.3.3 Phase 3: Build a Prototype

In this stage, a prototype has been built by writing simple code based on the requirements gathered from phase 1. This is early version only and was shown to the users for them to give their comments and current progress of Employee Attendance Management System.

3.3.4 Phase 4: Initial User Evaluation

The proposed system was presented to users for the initial evaluation process after the small prototype was developed. By discovering the strengths and weaknesses of the functional prototype early on, this technique helps to lower the likelihood of failure.

3.3.5 Refining Prototype

If the users are unhappy with the existing prototype, it will be improved based on their input and suggestions to guarantee that the system fits their needs. After the users committee approved the refined prototype, another feature was added, and the procedure returned to the previous phase, which included the evaluation. This phase didn't conclude until the users' criteria were met.

3.3.6 Implement Product and Maintain

A final system was constructed based on the authorized final prototype after the users agreed and were satisfied with it. The system has been properly tested and is now in use. Users were asked to provide comments after using the system as part of the testing process. Furthermore, the system is subjected to frequent maintenance in order to reduce downtime and avoid large-scale breakdowns.

3.4 Technology Used Description

There are many varieties of languages that are powerful to build the proposed system such as PHP, Bootstrap and JavaScript. Below is a short description of languages that will be using to develop EMP.

Visual Studio Code: It features a lighting fast source code editor, it's a perfect editor which supports hundreds of languages, and it helps with instantly productivity with syntax highlighting, racket-matching, auto-indentation, box-selection, snippets and etc.

PHP: It is referred to as a general-purpose scripting language that may be used to create interactive and dynamic webpages. It was one of the first server-side languages that HTML could incorporate, making it simpler to add functionality without actually calling other files.

Xampp: A dynamic and interactive website can be made using this general-purpose scripting language. It was one of the first server-side languages to be integrated into HTML, making it simple to add functionality to websites without directly referencing other files.

JavaScript: Reduces the code length, which improves the performance of websites and web apps. With the use of different built-in functions for loops, DOM access, and so on, the code has reduced overhead.

Bootstrap: It's an HTML, CSS, and JS package designed to make the process of creating educational web pages simpler. With a huge variety of components, a solid grid system, styling for many HTML elements, from buttons to typography, and interoperability with JavaScript plugins, it is easy to set up and master.

3.5 System Requirement Analysis

3.5.1 Hardware Requirement

The Employee Attendance Management System is run on a laptop or desktop computer. The minimum hardware and software necessary to run the system is required to achieve the best possible performance. Table 3.2 lists the hardware used in the system development as well as its specifications.

Table 3.2 Minimum Hardware Requirements

No	Hardware	Hardware Specification
1.	Laptop or desktop	Personal laptop or desktop
2.	Operating System	Windows version: 7
3.	Networking connection	Wi-Fi or 4G (data service)

3.5.2 Software Requirement

The need for software is critical in the development of a suggested system. Choosing the correct software specification will result in a smooth development process. Table 3.3 shows the bare minimum for software needs.

Table 3.3 Minimum Software Requirements

No	Software	Hardware Specification
1.	PHP	A programming language that has built-in web services support
2.	Xampp	Abbreviation for cross-platform
3.	phpMyAdmin	Database
4.	Bootstrap	Design framework
5.	JavaScript	Scripting language

3.6 Chapter Summary

Finally, selecting the proper system technique is critical for keeping the project on track and within budget. Furthermore, adopting the appropriate approach will contribute to the development of the suggested system's success. Many aspects and comparisons must be examined when selecting a system approach, including project needs, intended end result, and project complexity.

CHAPTER 4

REQUIREMENT ANALYSIS AND DESIGN

4.1 Introduction

The requirement analysis and system design will be covered in this chapter. The following parts will be included: requirement analysis which will contain the Use Case Diagram. Sequence Diagram, and Activity Diagram of the system. System Design which contains the class diagram and the overall system architecture. In Database Design, the Entity Relationship Diagram (ERD) of the system database is explained. Then, System Interface Design of the prototype system are explained. And finally, a Summary of the whole chapter is presented as well.

4.2 Requirement Analysis

In this section the proposed system requirement is analyzed, those analysis include Use Case Diagram, Sequence Diagram, and the Activity Diagram.

4.2.1 Use Case Model

Is graphical representation of a user's potential interactions with a system is called a use case diagram. A use case diagram, which is frequently complemented by other types of diagrams, displays the numerous use cases and user types the system has. The suggested system's use case diagram is shown in Figure 4.1 which shows the Actors of the system and their Functions/Actions, and shows the relationship between the Functions/Actions.

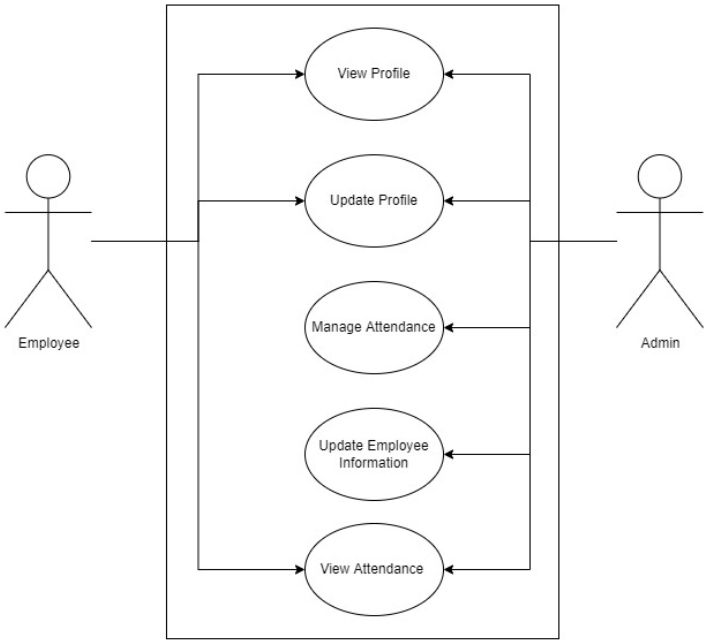


Figure 4.1 Shows Use case Diagram of Employee Attendance Management System

4.2.1.1 Action Description

The figure below shows that there are (2) actors whom are involved in using the proposed system: Admin and Employee. Those two actors play admins with full power over the system and employees who work on certain areas of the system.

The Actor Description table displays a summary of the roles and actions of the actors in the system.

Table 4.1 Actor Description Table

No	Actor	Role
1.	Admin	Admin plays a significant role in this project, they would be able to update employees' information, manage attendance, update profile, view profile and view attendance.
2.	Employee	Employee is responsible for update their profile, view profile and view attendance.

4.2.1.2 Use Case Description

Table 4.2 Use Case Table

No	Actor	Role
1.	View Profile	Admin and Employee would be able to view their profiles.
2.	Update Profile	Admin and Employee would be able to update their profiles.
3.	Manage Attendance	Admin will be able to do the attendance and manage the employee's attendance.
4.	Update Employee Information	Admin will the ability to manage their employee's information such as job, title department and on duty time.
5.	View Attendance	Admin and Employee would be able to View the attendance record.

4.2.2 Activity Diagram

Figure 4.2 represents the Activity Diagram of the system which shows the flow of the actions within the system which are performed by both Employee and Admin. It shows the steps of the process when the admin generates salary for the employee and how the employee would be able to showcase his salary record. Follow SRS for full activity diagram of both users.

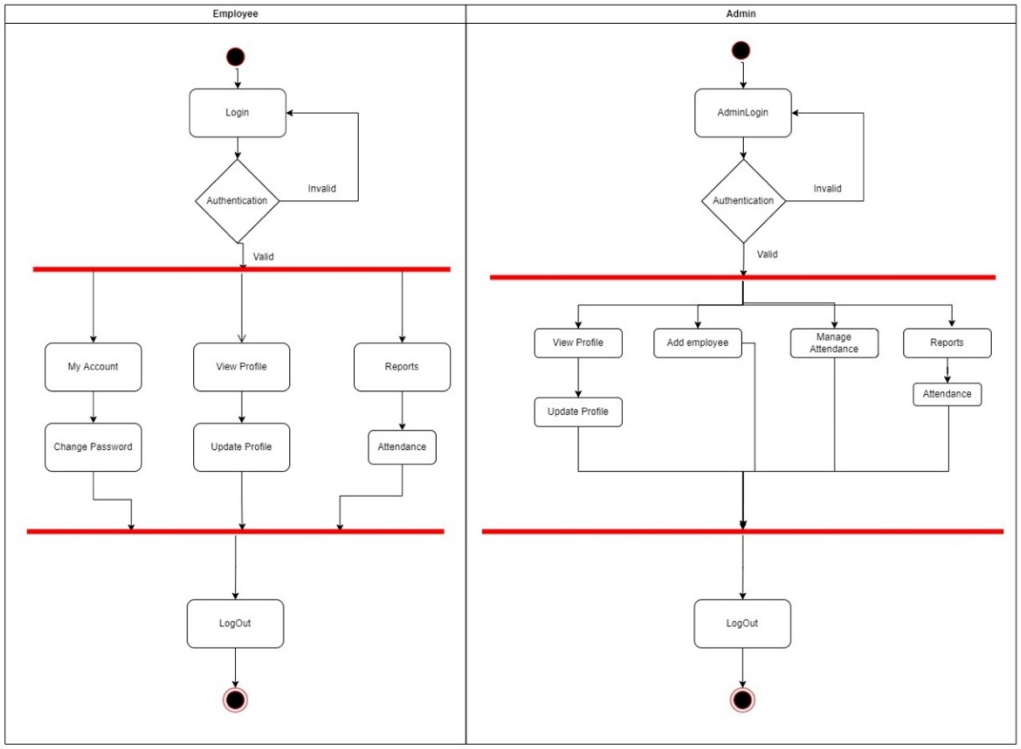


Figure 4.2 Shows Activity Diagram for Employee and Admin

4.2.3 Sequence Diagram

Figures 4.3 and 4.4 represent the sequence diagrams of the system, which one of them is for the Employee and another one is for the Admin. The sequence diagram shows what the items do in relation to each other in the system in a time frame. This are also available at SRS.

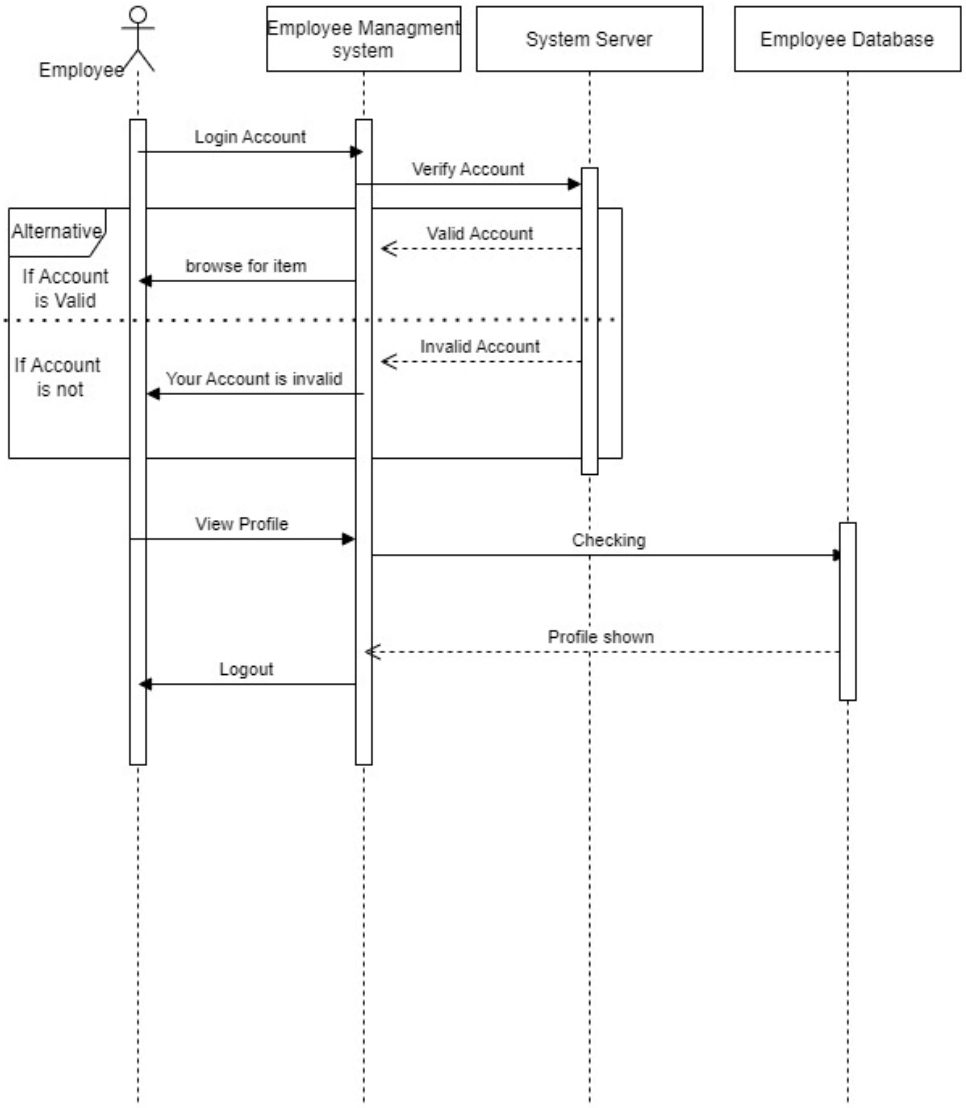


Figure 4.3 Shows Sequence Diagram for Admin View Profile Use case

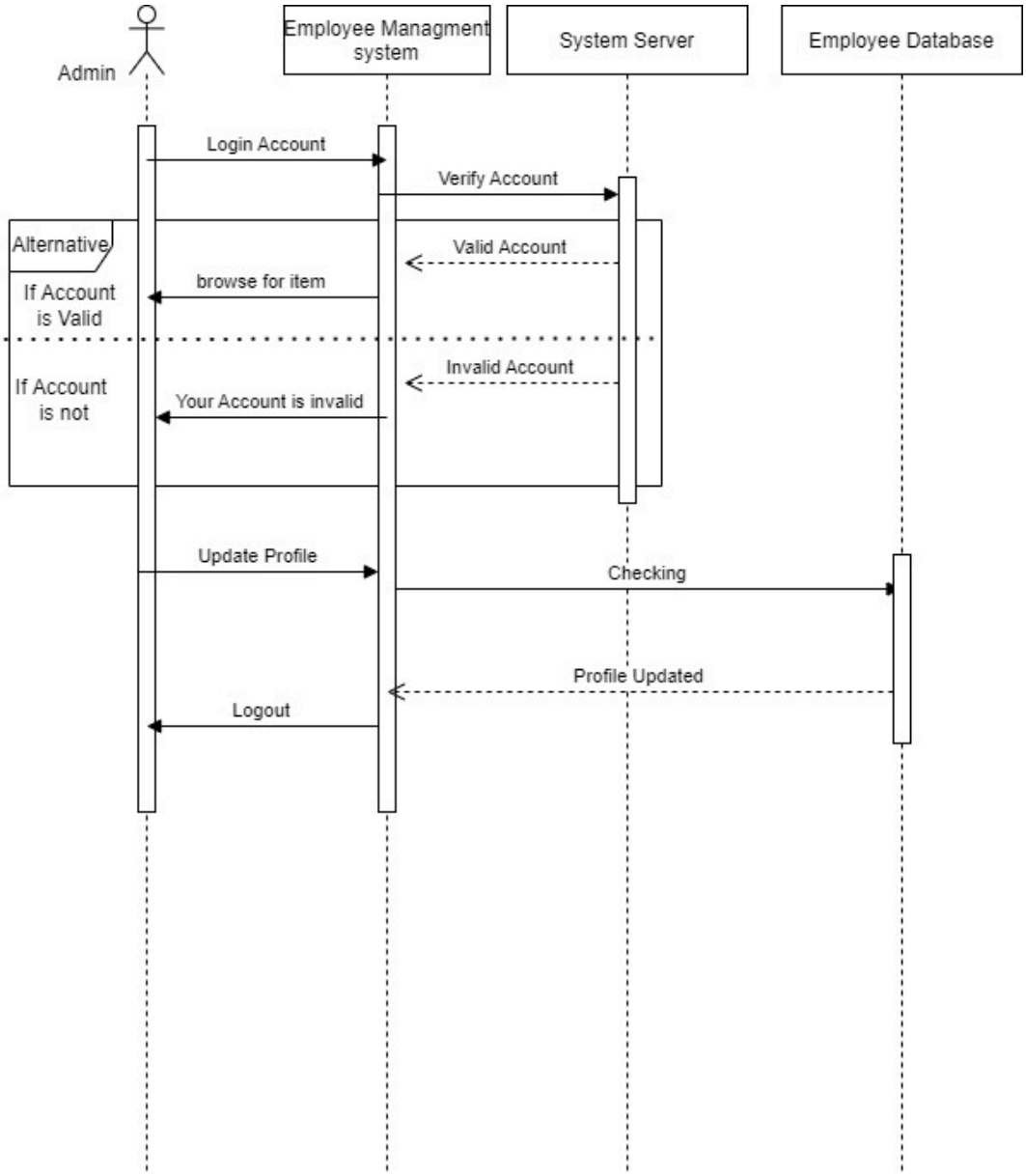


Figure 4.4 Shows Sequence Diagram for Admin Update Profile Use case

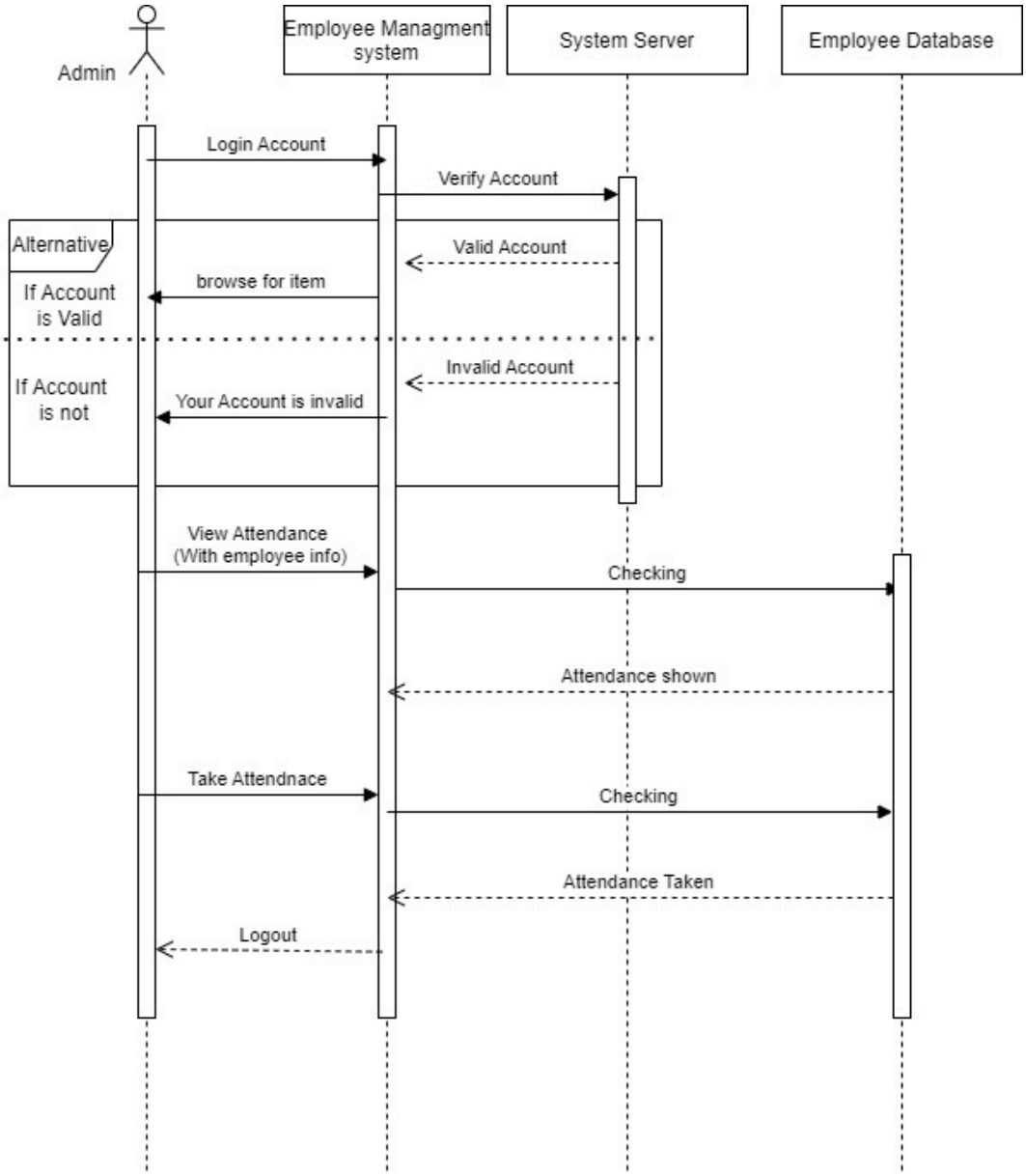


Figure 4.5 Shows Sequence Diagram for Admin Manage Attendance Use case

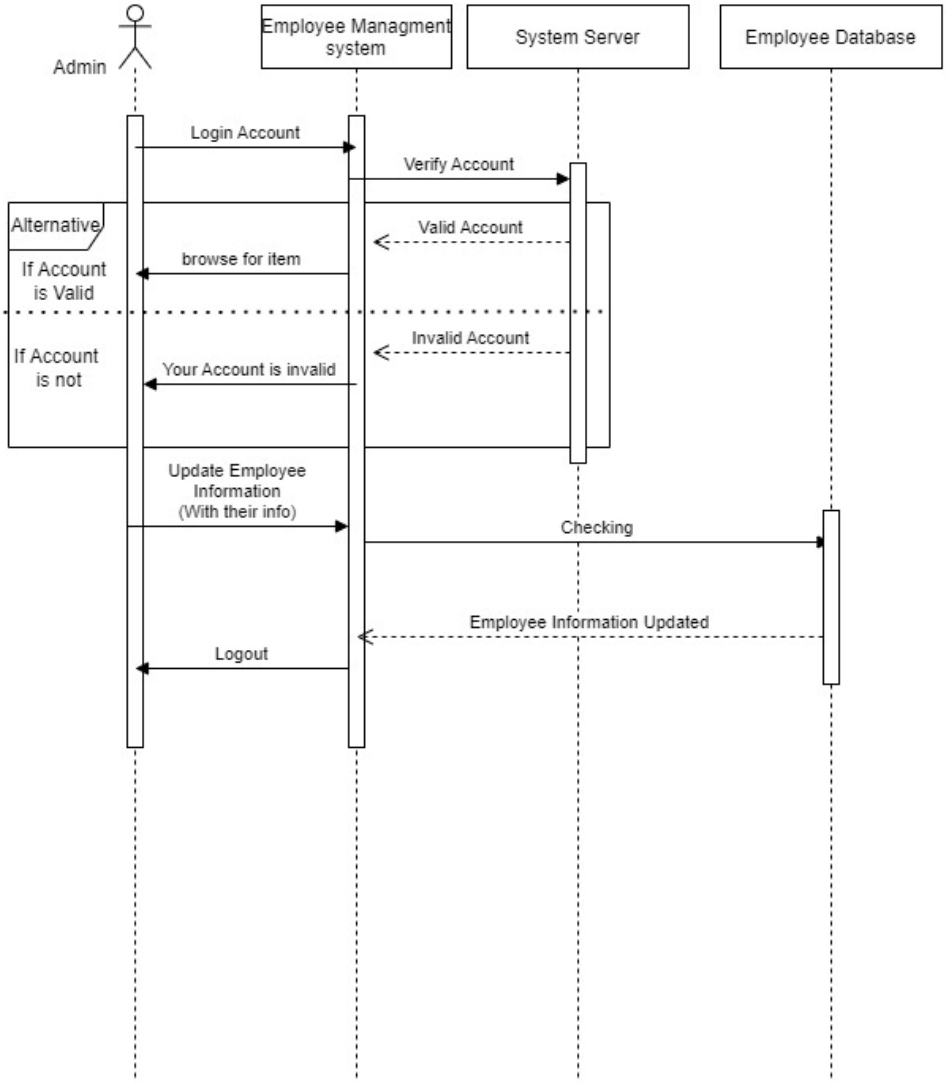


Figure 4.6 Shows Sequence Diagram for Admin Update Employee Information Use case

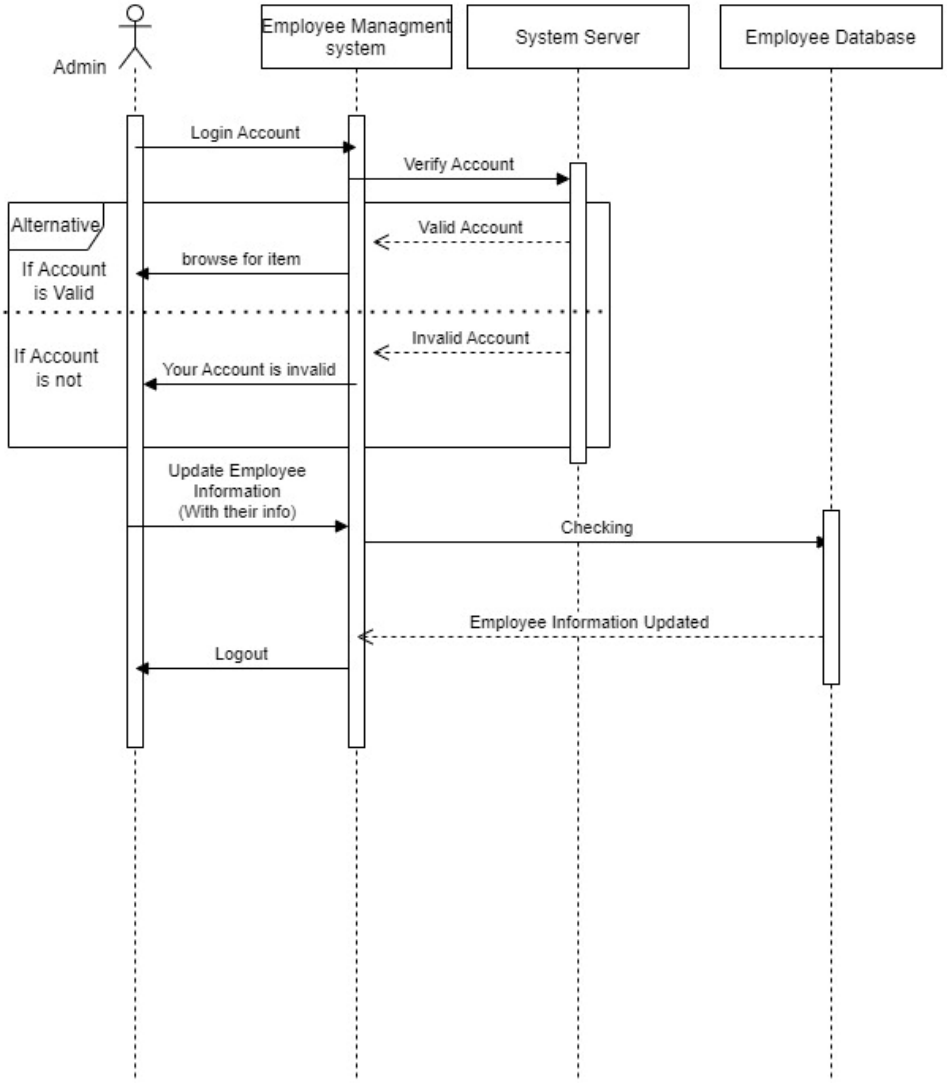


Figure 4.7 Shows Sequence Diagram for Admin View Attendance Use case

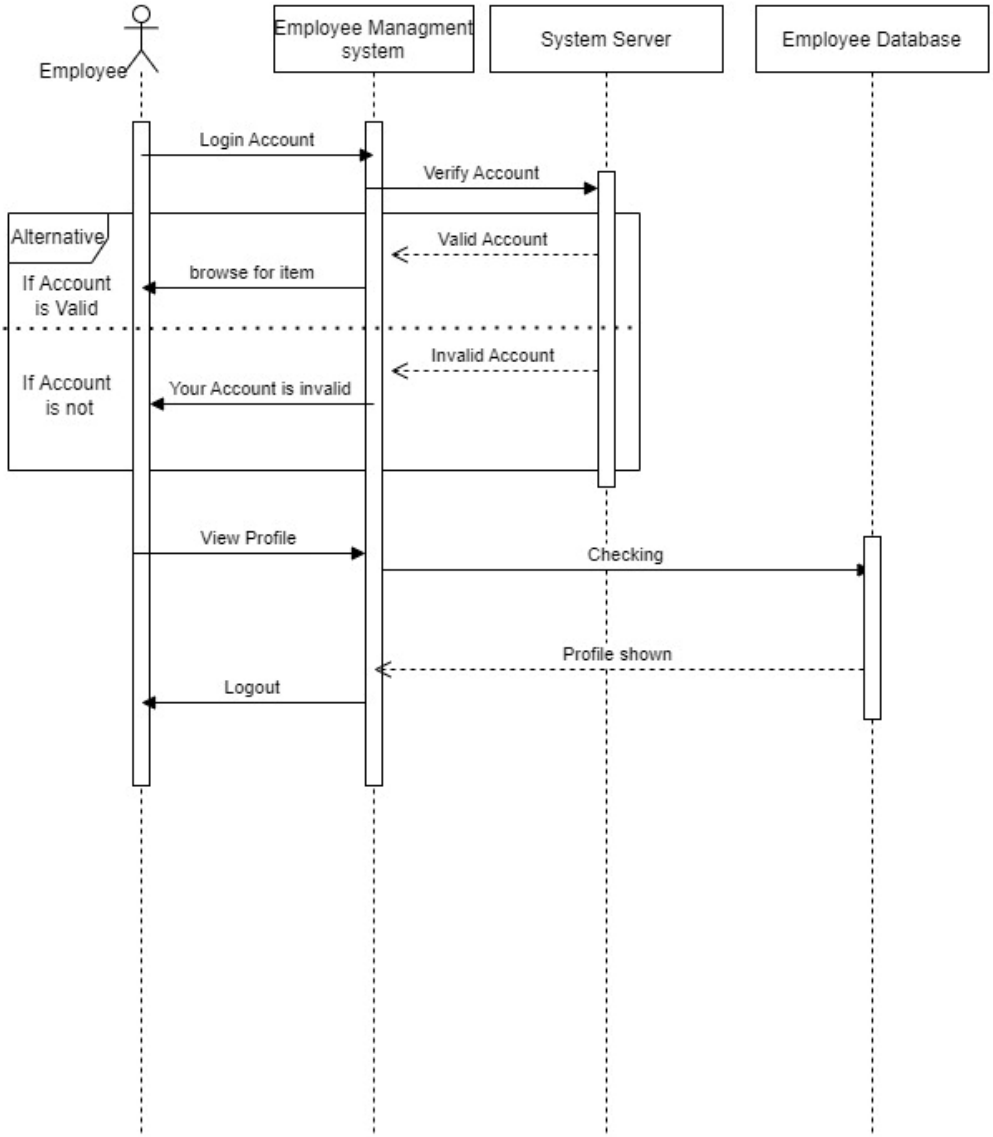


Figure 4.8 Shows Sequence Diagram for Employee View Profile Use case

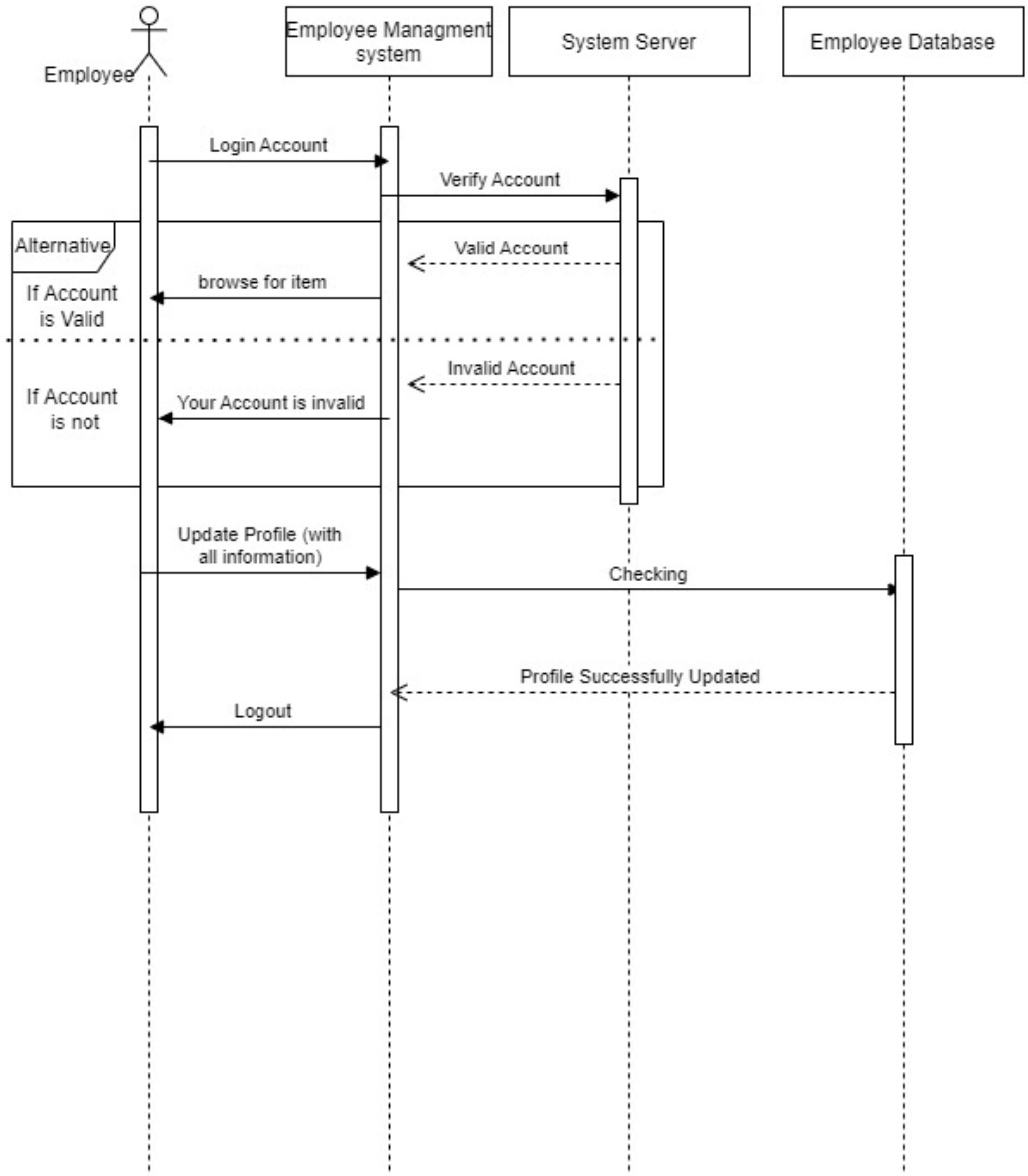


Figure 4.9 Shows Sequence Diagram for Employee Update Profile Use case

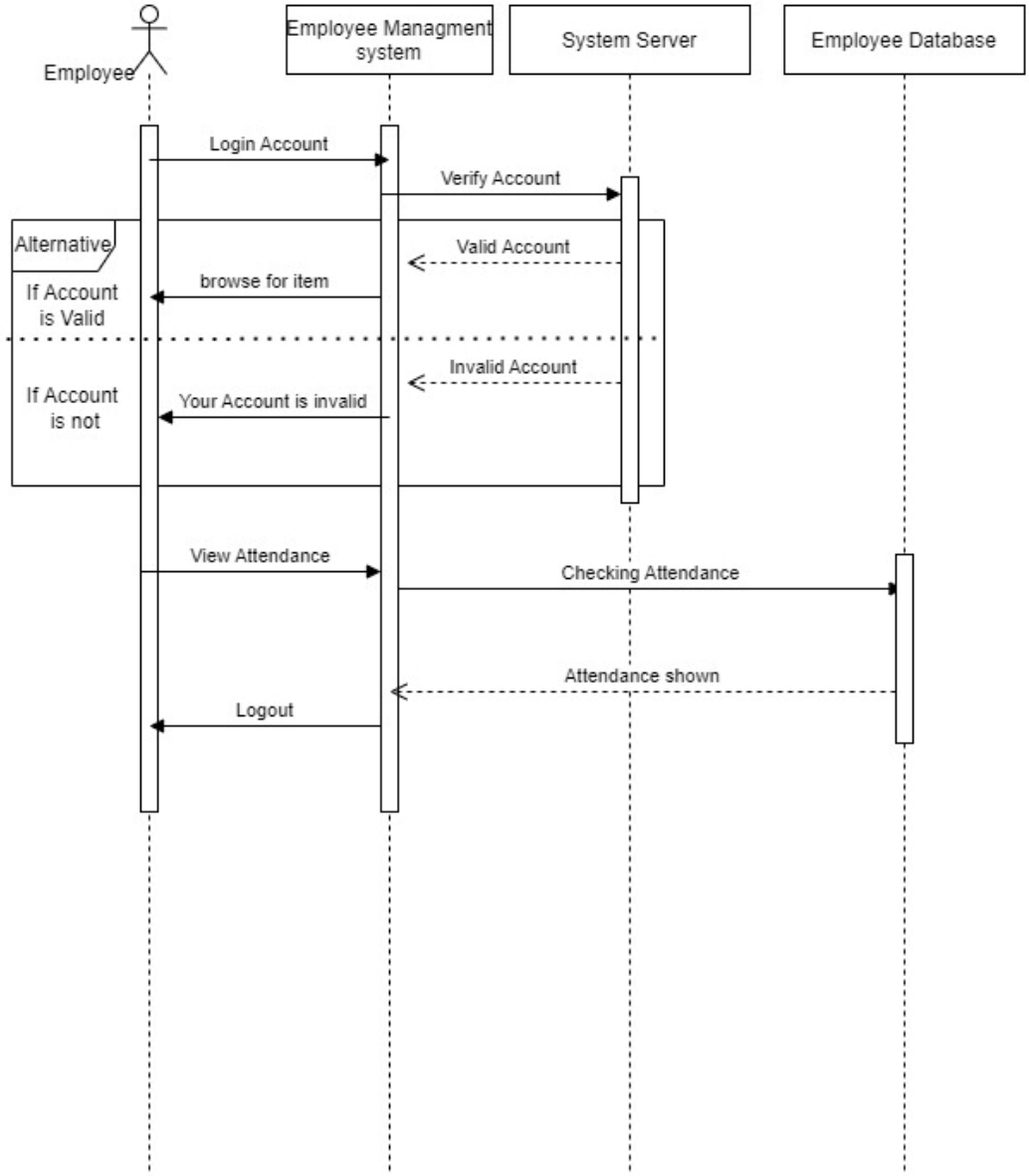


Figure 4.10 Shows Sequence Diagram for Employee View Attendance Use case

4.3 Project Design

In this section the Proposed System Design in this work are explained including System Class Diagram, and the Overall System Architecture.

The overall architecture design of the proposed system can be seen in Figure 4.5. It shows all the system components (PCs for Employee and Admin, Web and MySQL Servers, and Network devices). Also, it shows how those components are interact with each other. The Employee will access the system through the internet and then the admin can store and manage the data in the server and the database

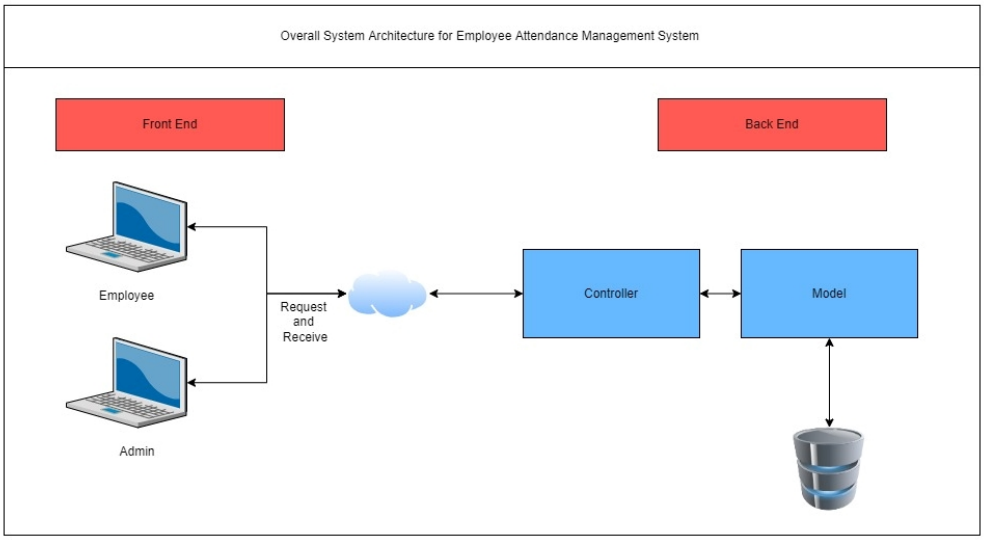


Figure 4.11 Shows the System Architectures and Design for employee attendance management system

4.3.1 Class Diagram

Figure 4.6 shows the class diagram of the proposed system which contains seven tables (Deduction, Salary, Employees, Taxes, Benefits, Absences and Job Department). All these tables with their attributes and relationships will be explained in details in the next section.

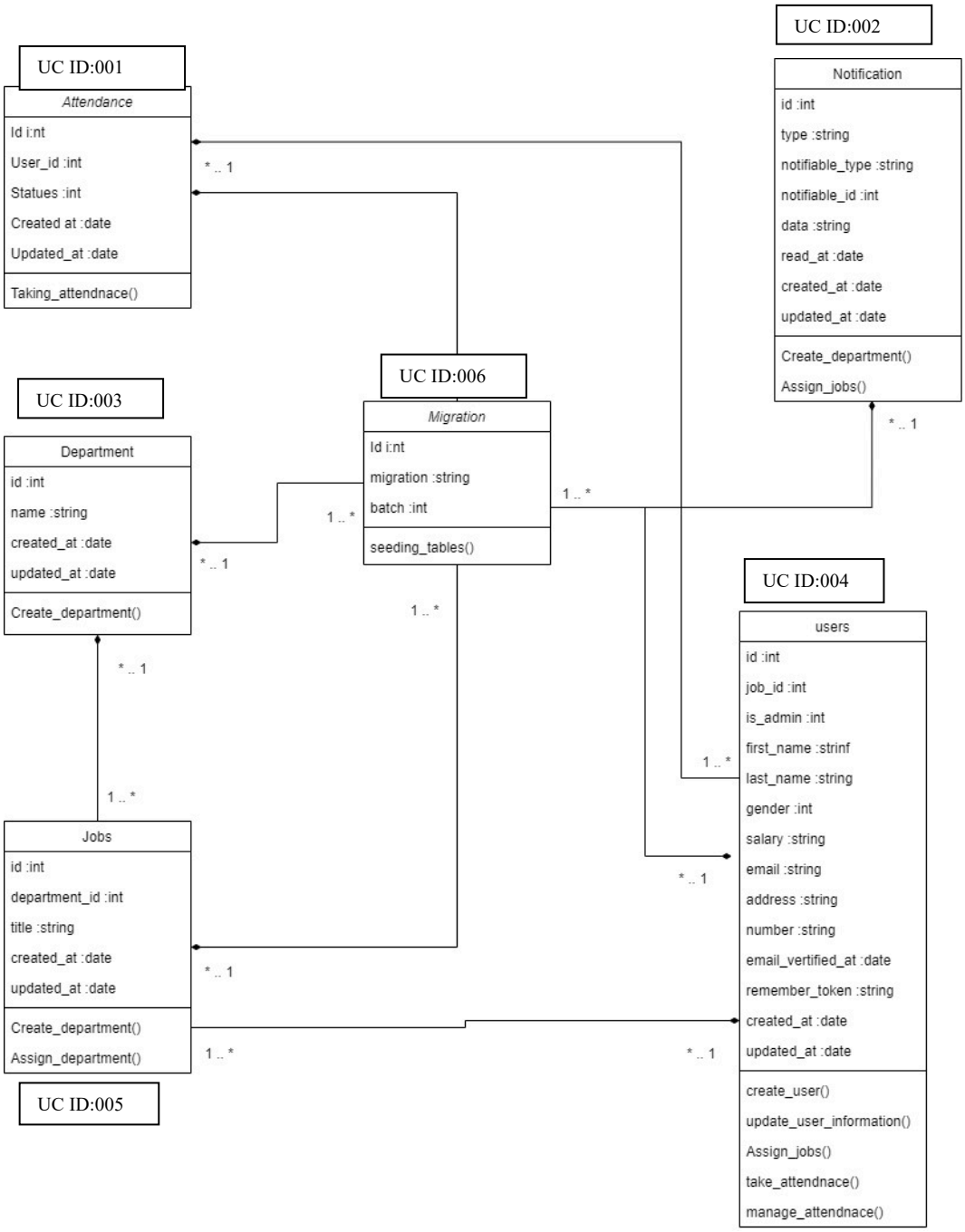


Figure 4.12 Shows Class Diagram for Employee Attendance Management System

4.4 Database Design

The structuring of data using a database model is known as database design. This section identifies the data that must be saved and the relationships between the various data items.

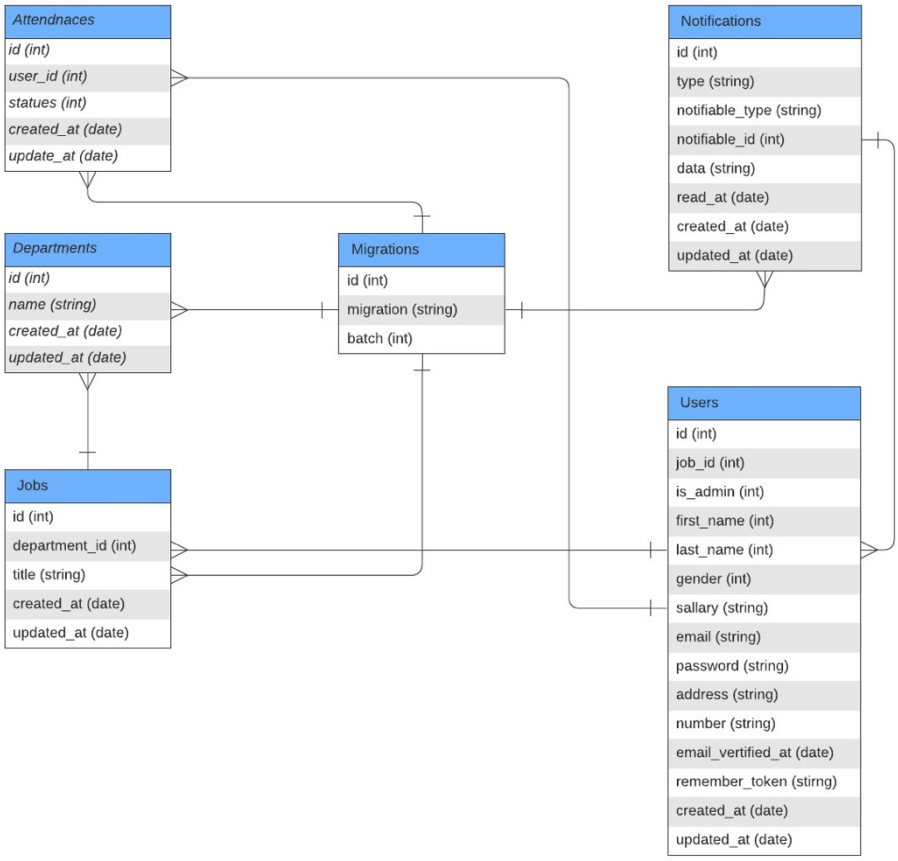


Figure 4.13 Shows the ERD for Digital Certificate Management System

4.4.1 Database Table Description

Below in the description of database in Employee Attendance Management System.

Table 4.3 Database Table: Attendance

Attribute	**Data Type**	**Description**
Id	INTEGER	Primary Key
User_id	INTEGER	Foreign Key
Statues	INTEGER	Attendance taking as absent, late or present.
Created_at	DATATIME	Data when the attendances are taken.
Updated_at	DATATIME	Data when the attendances got updated.

Table 4.4 Database Table: Department

Attribute	**Data Type**	**Description**

Id	INTEGER	Primary Key
Name	VARCHAR	The name of the department.
Created_at	DATATIME	Data when the Department is created.
Updated_at	DATATIME	Data when the department is updated

Table 4.5 Database Table: Job

Attribute	**Data Type**	**Description**
Id	INTEGER	Primary Key
Department_id	INTEGER	Foreign Key
title	VARCHAR	Name of the job as in title
Created_at	DATATIME	Data when the job is created.
Updated_at	DATATIME	Data when the job is updated

Table 4.6 Database Table: Migration

Attribute	**Data Type**	**Description**
Id	INTEGER	Primary Key
Migration	VARCHAR	Migrating the other table for filling it out.
batch	INTEGER	Represents of being done

Table 4.7 Database Table: Notification

Attribute	**Data Type**	**Description**
Id	CHAR	Primary Key
Type	VARCHAR	The route of the complaint attendance
Notifiable_type	VARCHAR	Foreign key.The route of the user
Notifiable_id	INT	Foreign key. Represent which user is complaining
data	TEXT	The message that the user sends as a complain
Read_at	DATATIME	Data when the message is read.
Created_at	DATATIME	Data when the message is created.
Updated_at	DATATIME	Data when the message is updated.

Table 4.8 Database Table: User

Attribute	**Data Type**	**Description**
Id	INTEGER	Primary Key

Job_id	INTEGER	Foreign Key.
Is_admin	INTEGER	Where the user is admin or not
First_name	VARCHAR	First name of the user
Last_name	VARCHAR	Last name of the user
gender	INTEGER	Gender of the user
sallary	VARCHAR	Salary of the user
email	VARCHAR	Email of the user
password	VARCHAR	Password of the user
address	VARCHAR	Address of the user
number	VARCHAR	Phone number of the user
Email_verified_at	DATATIME	Data when the email got vertified.
Remember_token	VARCHAR	Phrase for forgetting password
Created_at	DATATIME	Data when the user is created.
Updated_at	DATATIME	Data when the user is updated.

4.5 Interface Design

User contact with the Employee Management System is demonstrated through interface design, which is an important aspect of the development process. Furthermore, the user the visual appeal of the interface makes it easy for the user to use it without further instruction.

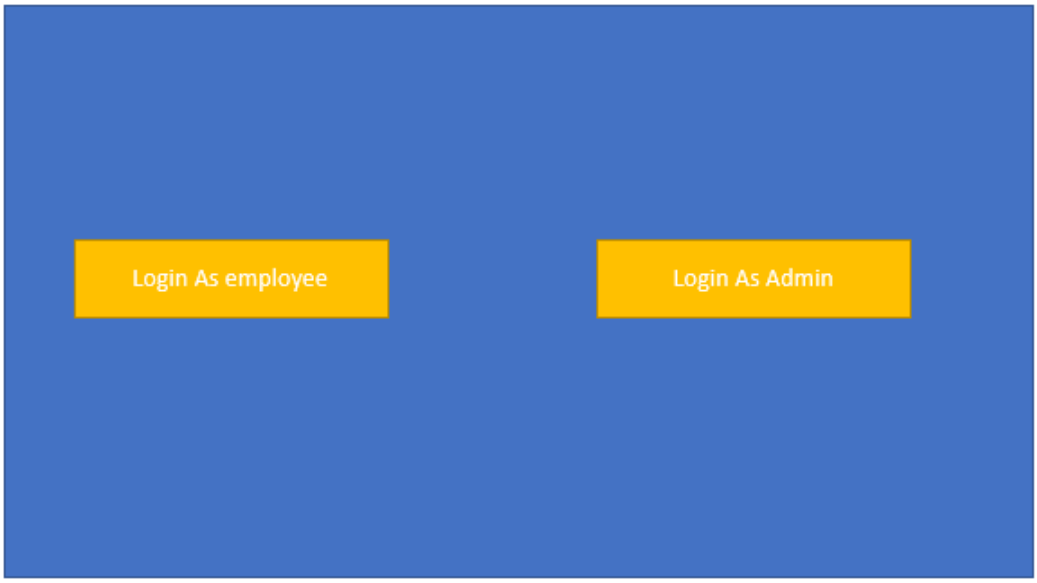


Figure 4.14 Presents the Welcome interface of Employee Attendance Management System

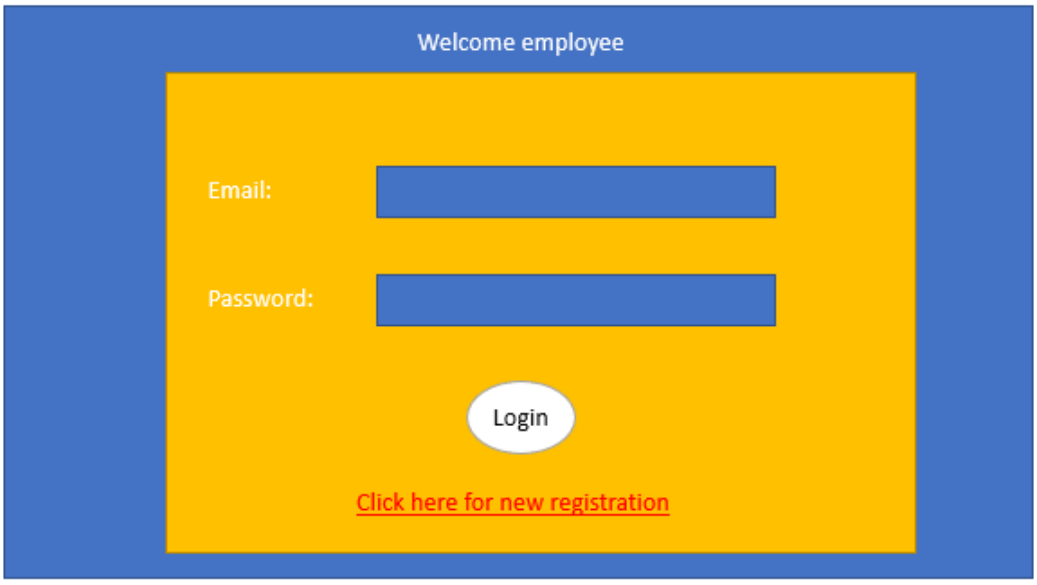


Figure 4.15 Presents the Login for employee interface of Employee Attendance Management System

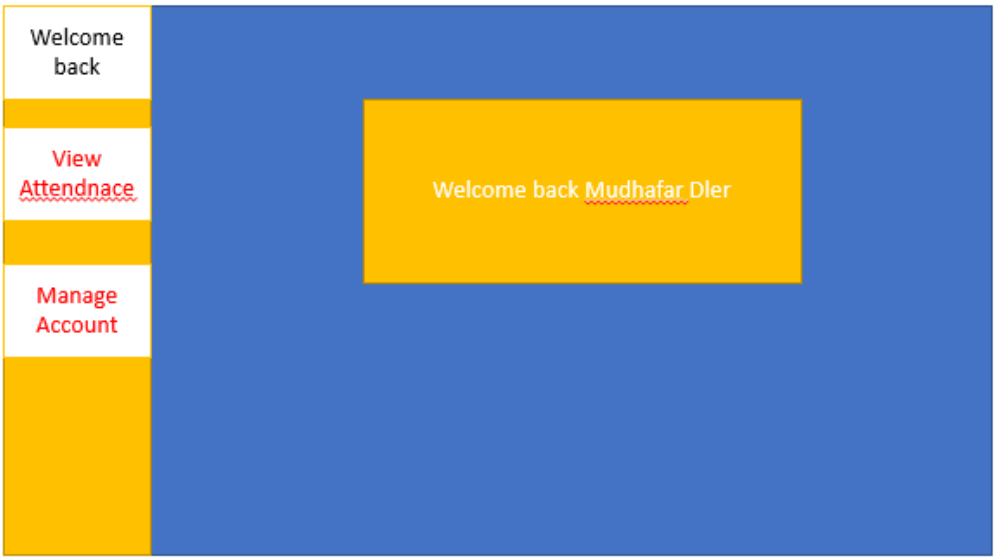


Figure 4.16 Presents the Employee Dashboard interface of Employee Attendance Management System

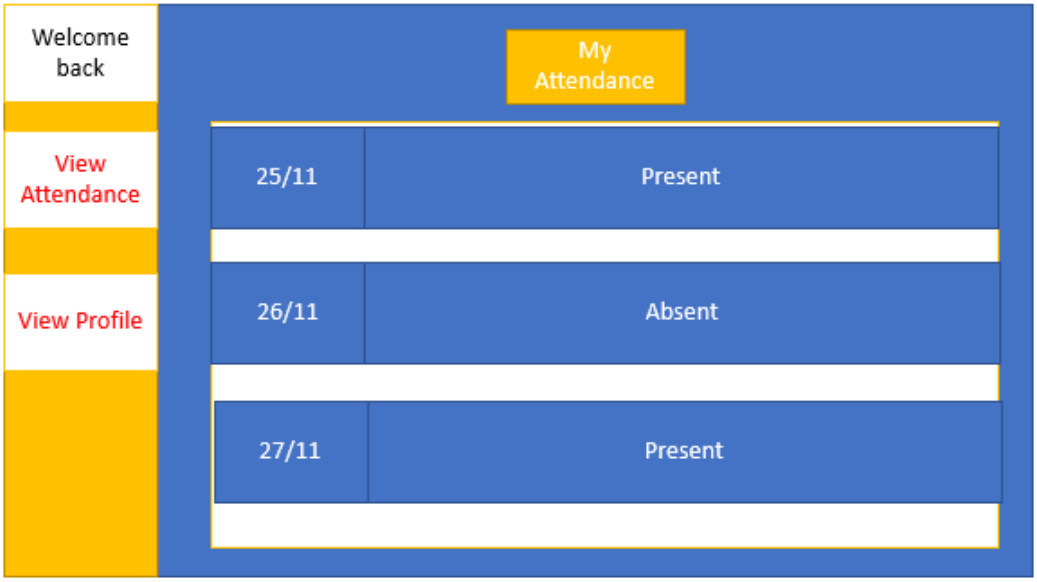


Figure 4.17 Presents the Employee my Attendance interface of Employee Attendance Management System

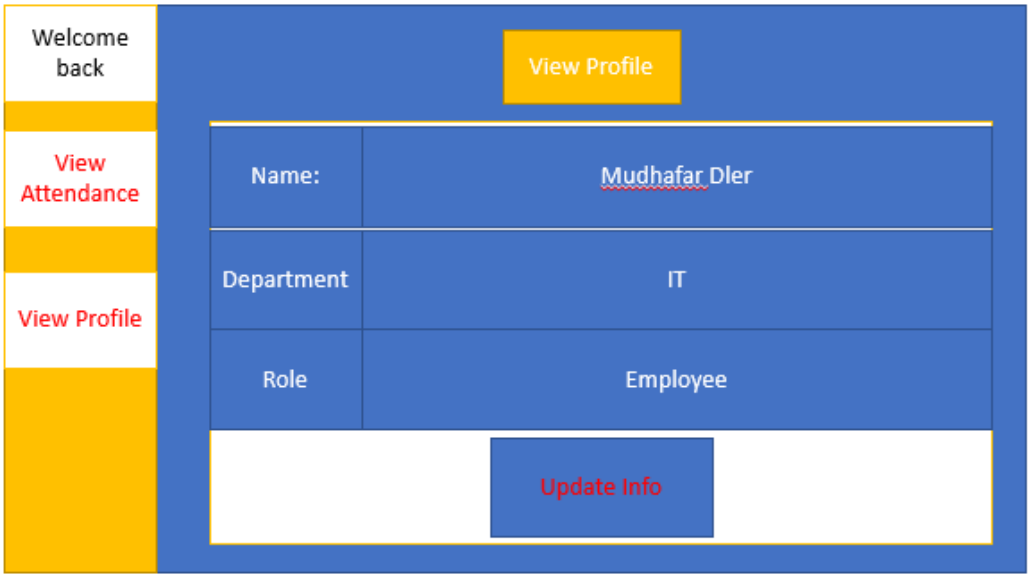


Figure 4.18 Presents the Employee View Record interface of Employee Attendance Management System

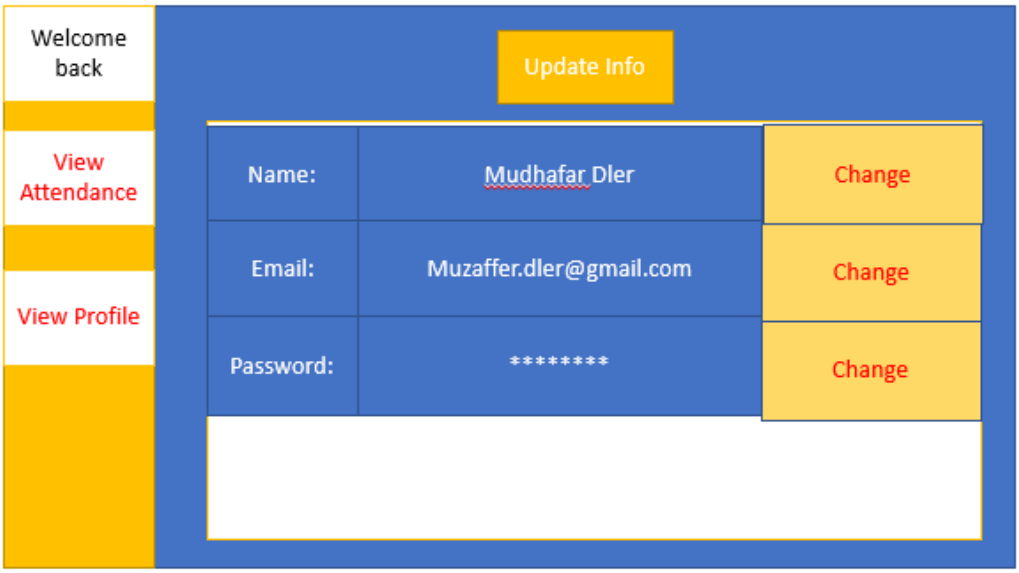


Figure 4.19 Presents the Employee Update Info interface of Employee Attendance Management System

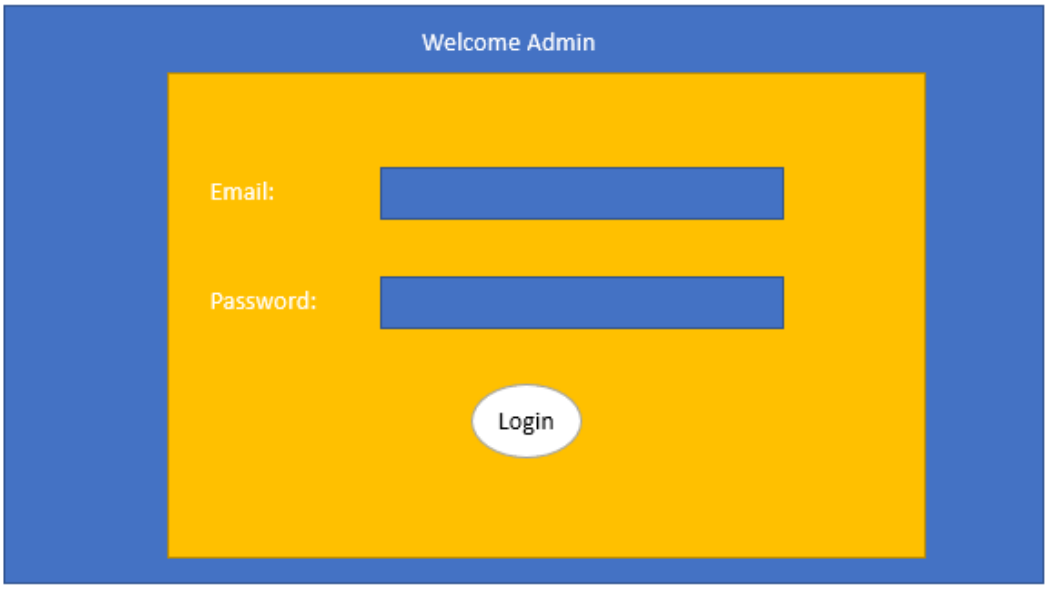


Figure 4.20 Presents the Admin Login page interface of Employee Attendance Management System

Figure 4.21 Presents the Admin Dashboard interface of Employee Attendance Management System

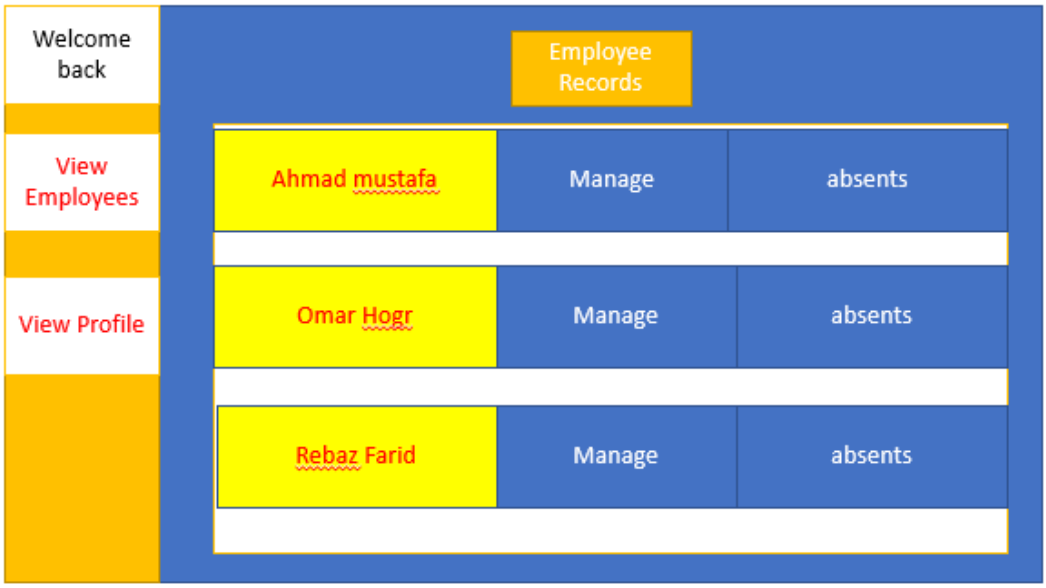


Figure 4.22 Presents the Admin Employee Record interface of Employee Attendance Management System

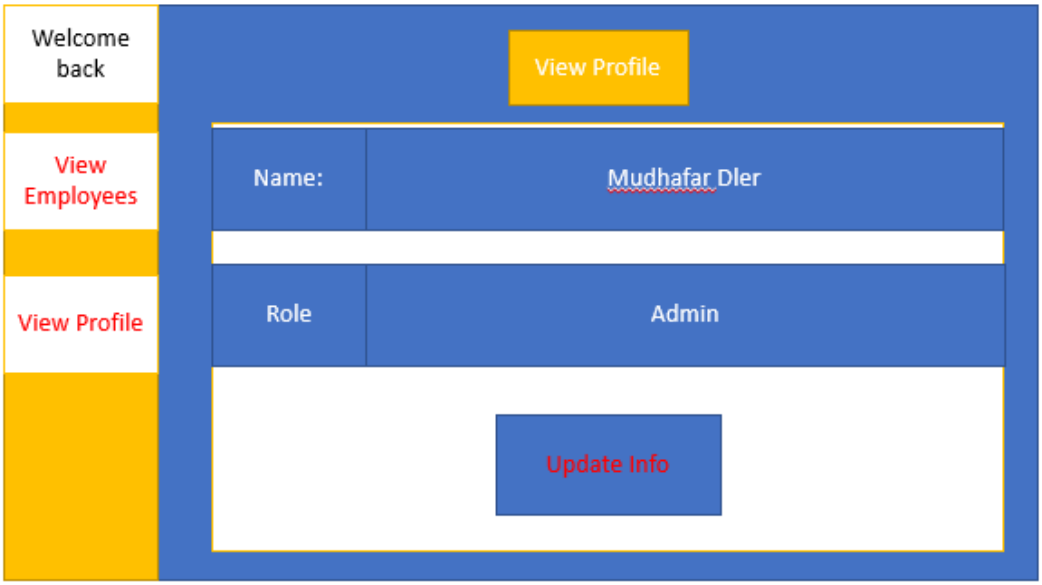


Figure 4.23 Presents the Admin View Profile interface of Employee Attendance Management System

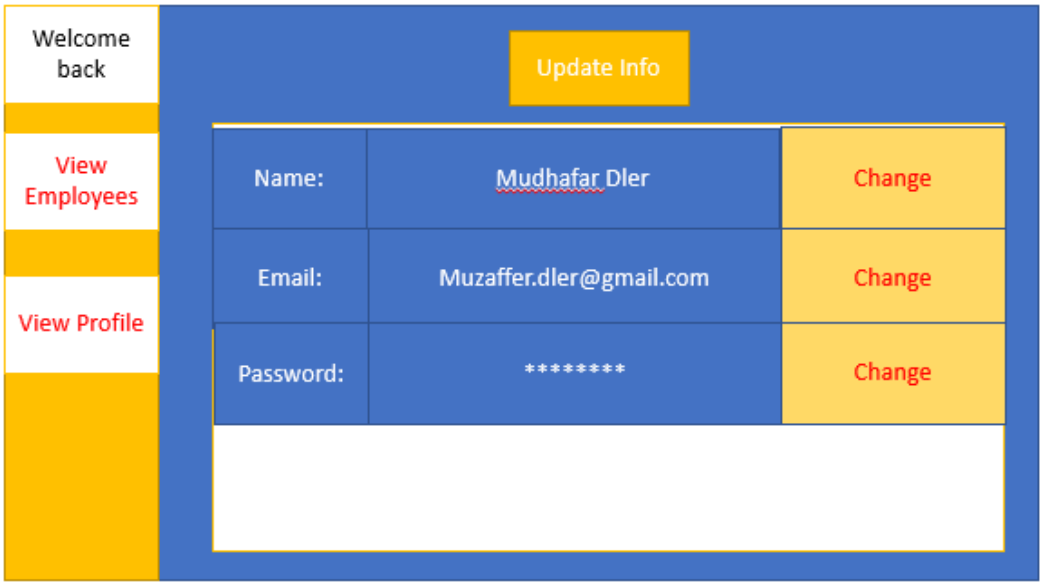


Figure 4.24 Presents the Admin Update Profile interface of Employee Attendance Management System

4.6 Chapter Summary

This chapter have discussed many things that are related to the design and requirement of the proposed system, the chapter is began with the Chapter Introduction, then the Project Requirement Analysis is explained in details by showing and talking about Use Case Diagram, Sequence Diagram, and the Activity Diagram.

After that the design of the system was introduced in two forms the Class diagram form and Overall System Architecture form. The database also was included in this chapter. Lastly the user interface was introduced which shows the prototype of the system but the interface. This interface maybe has some changed in future according to the system implementation and requirements.

CHAPTER 5

IMPLEMENTATION AND TESTING

5.1 Introduction

In Chapter 5, the development and testing process are discussed. The development processes include how the system is coded and the designation process according to selected architecture design. In addition, the testing process will be done after the development is fully completed to perform User Acceptance Testing at the end of the process. Testing is crucial because it increases the user experience and ensures whether the system meets user requirements or does not meet them. Hence, the system can be maintained for a long time.

5.2 Coding of System Main Functions

Model-View-Controller (MVC) is the system architecture for the DCMS. Model layer, View layer, and Controller layer are the three layers in this architecture. The bottom layer of the pattern is the Model, which is capable of supporting the system's data, while View is in charge of presenting all or a portion of the data to the user. Finally, the Controller layer is responsible for controlling the interactions between the Model and the View.

5.2.1 Model Layer

Model layer is concerned with the application data and business logic. It can validate data, processing it, and storing it. The information might originate from a variety of sources such as XML document, database, flat file, and other valid data

Sources. For example, section of the code attendance.php is a Model Layer is used to get the participant attendance and mark them as at work, late or absent.

app > Models > Attendance.php

```php
<?php

namespace App\Models;

use Illuminate\Database\Eloquent\Factories\HasFactory;
use Illuminate\Database\Eloquent\Model;

class Attendance extends Model
{
    use HasFactory;

    protected $guarded = [];

    public function user()
    {
        return  $this->belongsTo(User::class);
    }

    public function getStatusAttribute($value)
    {
        if ($value === 0) {
            return "At Work";
        } elseif ($value == 1) {
            return "Absent";
        } else {
            return "Late";
        }
    }
}
```

Figure 5.1 Presents the Code fragment of the Attendance.php to retrieve attendance from database

5.2.2 View Layer

In the View layer, the user can view the system's interface generated from the coding. User can insert their input data or updating the related information in the View.

For instance, Figure 5.2 shows the snippet of the code in the View folder for admins point of view when they want to take attendance of the employees.

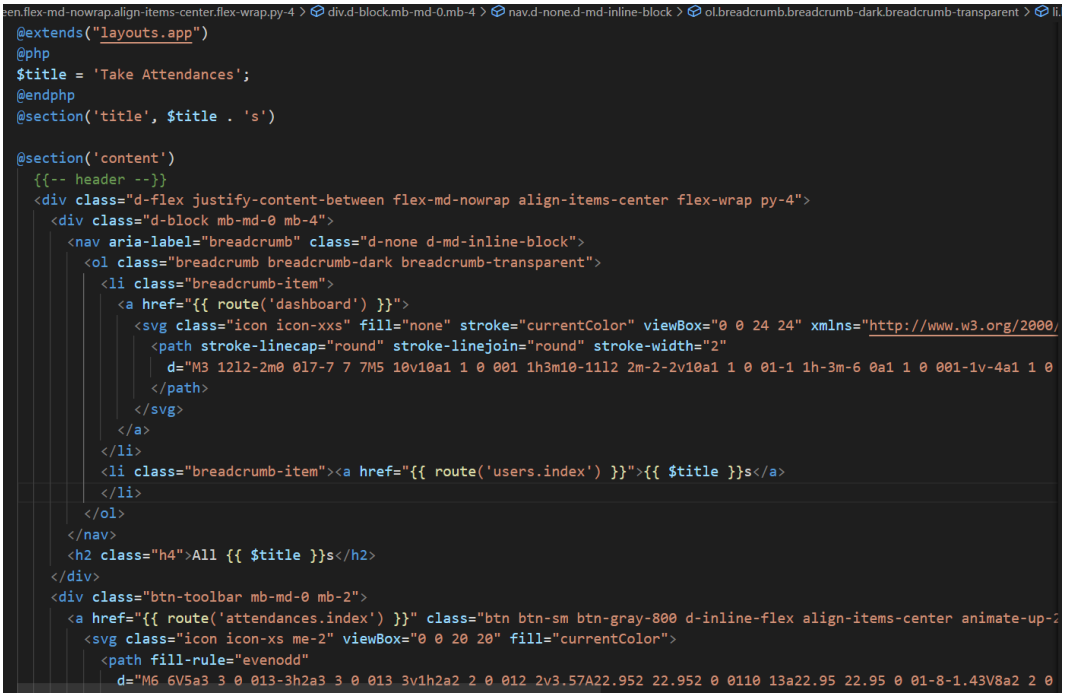


Figure 5.2 Presents the Code fragment of the take-attendance.blade.php

5.2.3 Controller Layer

Every view module in the system will have an interface that can manipulate user interaction input. As an example, when an admin clicks on buttons functions will come in play and does what every function is written, while the controller interacts with the model to retrieve the data and update the view if necessary.

Controllers > AttendanceController.php

```php
public function index()
{
    $users = User::query()->whereIsAdmin(0)->with([
        "attendance" => function ($q) {
            $q->whereDate("created_at", Carbon::today())->get();
        }
    ])->paginate(15);
    // return $users;
    return view('attendances.index', compact("users"));
}

public function takeAttendance()
{
    return view('attendances.take-attendance');
}

public function userAttendance(User $user)
{
    $statuses = ["At Work", "Absent", "Late"];
    $user = User::query()->where('id', $user->id)->with("attendances")->first();
    return view('attendances.user-attendance', compact("user", "statuses"));
}

public function attendanceComplain(Request $request, Attendance $attendance)
{

    //find all admins
    $admins = User::whereIsAdmin(1)->get();

    //send notifiaction to all admins
    Notification::send($admins, new AdminAttendanceComplainNotification($attendance, $request));
```

Figure 5.3 Presents the Code fragment of the AttendanceController.php

5.3 Interfaces of System Main Functions

Based on the code fragment in the previous section, the interface of the employee attendance is taken place and shows the interface and the functions of taking an attendance, as shows in figure 5.4. It shows a list of the employees and their state to be choose by the admin whether they are at work, late or absent.

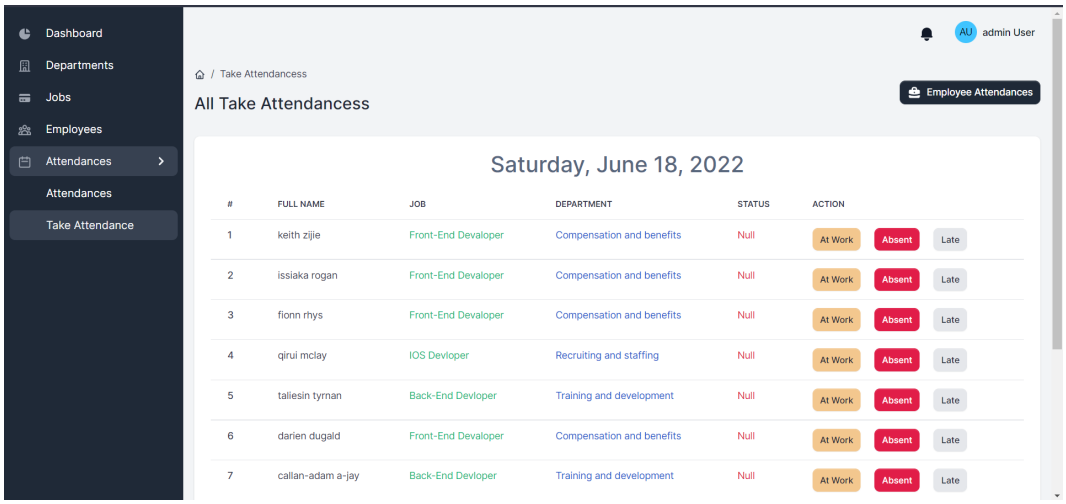


Figure 5.4 Presents the Take Attendance Interface

5.4 Testing

Software testing is the process of detecting problems in the program's requirements, design, and implementation. It is used to verify software products for correctness, completeness, security, and quality against a specification. Software testing is a method of evaluating the quality of computer software that has been built. It shows all the software's issues, errors, and weaknesses. Various methods can be selected for testing, i.e., White Box Testing, Black Box Testing, Gray Box Testing, and Agile Testing. Other than methods, there are also testing levels such as Unit Testing, System Testing, Acceptance Testing, and Integration Testing. In this chapter, the black box testing method and user acceptance testing level will be selected to test this project.

5.4.1 Black box Testing

Black box testing analyses the program as a "Black Box," with no understanding of how it works inside. It simply looks at the most essential features of the system. A tester must understand the system architecture and not access the source code when doing a black-box test. It just looks at the most basic aspects of the system and has little or no relation to the system's internal logical structure. The test cases

were created to verify the project's functioning, and the outcome was anticipated for each input before testing. And for this test please follow the appendix C.

5.4.2 User Testing

This is the stage in which the Rozza tested the Employee Attendance Management System to see if it is suitable for their purposes and meets their business requirements. Before getting their acceptance feedback, any bugs or flaws discovered during acceptance testing must be addressed. Following the testing process, remarks and enhancements are documented in the User Acceptance Testing (UAT) form. STD form must be referred to. The primary user of the Employee Attendance Management System was the Rozza Company. Hence, the manager of the company was selected as participant who responds to preform the UAT. This is because the manager knows whole process of taking attendance of their employees. Therefore, two participants who participated in the UAT are Yousif Soran Abubakr (Manager of Rozza Co.) and Osman Halil Abdullah (Employee of Rozza Co.). The testing was to conduct in person and showed them the interfaces and interactions of EAMS. After they completed the UAT, they filled the UAT for to show their satisfaction with the system.

5.5 Chapter Summary

In conclusion, this chapter shows the coding implement to build the DCMS. The system's main functions are coded to follow the MVC architecture to show how each function interacts with the other. Other than code, interfaces also being present in this chapter. Interfaces that are user-friendly, easy to understand, and navigate are being coded with the help of CSS and Bootstrap framework. After building the main functions and its design, the system is being tested. Black Box testing method is selected to perform the test where the system's internal structure is not considered during the testing. UAT also has been conducted to indicate user satisfaction when experiencing the system.

CHAPTER 6

CONCLUSION

6.1 Introduction

In this chapter will be discussing the overview of Employee Attendance Management System. The discussion includes the result and achievement of the project objectives and suggestions for future implementation. The conclusion for the whole system will briefly be explained in this chapter.

6.2 Project Development

Employee Attendance Management System is developed to improve the current employee Attendance management system where they need to take attendance of their employee with using technology in order to make the system more accurate and not miss any part of their employee's data. This system will provide information about their employees about their workspace and attendance sheet with other features such as their job title and bonuses if its available for the employee.

6.3 Achievement of Project Objectives

Video In chapter 1, the introduction, problem background, project aim, project objectives, project scopes are briefly explained how the system process and function. From the result of the study, the problem is identified, and the solution of the study are achieved. Employee Attendance Management System is developed to help employees for their daily task and take their attendance.

For chapter 2, the literature review was conducted on the existing systems that provide the functionality to the system. This is necessary in order to determine the benefits and drawbacks of the current system. The results of the existing system are examined in this chapter, which was completed prior to the development phase in order to ensure the project's success.

Chapter 3, Prototype methodology is used in developing Employee Attendance Management System. Requirement collection and analysis, fast design, build a prototype, Initial User Evaluation, Refining Prototype, and Implement Product and Maintain are the six phases of the prototype approach. All of the phases play their own roles in developing the system. Technology, software and hardware are also being explained in this chapter.

Last but not least, in chapter 4, explained how the workflow and design for the system. System architecture design is explained how the system is functioning. Database design is discussed to shows how the data is related to each other. Interface design is the design of how the system GUI looks like. The flow of the system showed using use case, activity and sequence diagram.

SRS have been conducted and is in Appendix A for Employee Attendance Management System. Where it goes in detail for User interfaces and how the users will interact with, hardware Interfaces which can support the minimum requirements for this system. The Use Case in detail including full activity diagram and sequence diagram for Employee Attendance Management System.

SDD was conducted in Appendix B for Employee Attendance Management System, where it goes in detail description of models, system architecture design and data dictionary.

STD was conducted in Appendix C for Employee Attendance Management System, where it goes in detail for the test cases for every module.

6.4 Suggestions for Future Improvement

In PSM 2, the methodology that is selected will be used, which is a Prototype methodology. The project development will be through phases by phases until the project is successfully developed. After the development phase is complete, both the white box and the black box will run on the system. The user test and the user acceptance will be the last step in PSM 2 after all the phase is completed.

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Appendix A
Software Requirements Specification

Software Requirements Specification for Employee Attendance Management System

Prepared by: Mudhafar Dler Rashad
24 Jun 2022

Table of Contents

1. Introduction

1.1 Purpose

A Software Requirement Specification (SRS) is a document that outlines the functional and non-functional requirements of a software system in a great detail. This Software Requirement Specification (SRS) is intended to outline the precise requirements of the Employee Attendance Management System. It also includes use scenarios that demonstrate how the user and the system interact. This document includes various diagrams, including a sequence diagram and a flow chart and activity diagram.

1.2 Scope

Employee Attendance Management is called EMS is a website that will be utilized by companies to let employees interact with the system and allows them to see their attendance while working in a company. The goal of this project is to design and develop a user-friendly, responsive internet system for employees.

The scopes of the system are stated as follows:

1. The system will focus the development on the companies who are willing to track their employees
2. This system is built for midsized companies.
3. The platform that supports this system is any device who have access to internet and has a browser.
4. Collaboration option with other organizers for a program is not available.
5. Customizing user profile is limited.

1.3 Definitions, Acronyms and Abbreviation

Acronym/ Abbreviation/ Term	Definition
EAMS	Employee Attendance Management System

Table 1.1 Definition, Acronyms and Abbreviation

1.4 References

System Design Architecture Lecture slides on QIU Elearning

1.5 Overview

This Software Requirement Specification (SRS) will be into three sections, the first of which will cover the introduction, which will provide you an overview of

the entire SRS. The second element is an overall description of the system, which includes a description of the requirements that will limit how the system is constructed and operated. The third section is a detailed need that goes into great detail about the system specification.

2. Overall Description

The EAMS is made up of five (5) modules which are:

1. View Profile
2. Update Profile
3. Manage Attendance
4. Update Employees Information
5. View Attendance

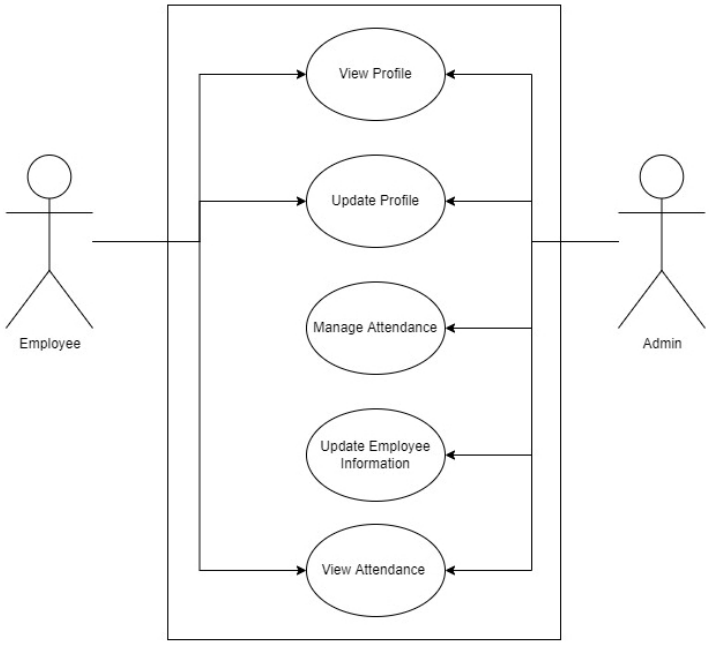

Figure 1.1 Shows Use case Diagram of Employee Attendance Management System

2.1 Product Perspective

Employee Attendance Management System is a web-based system that is build for employees and admins for getting their attendance weather they are late or absent or at work. This admin will be able to add new employees and manage their attendance, create new departments and new jobs, assign the jobs with the department, and the employees with a job. Employees are allowed to view their attendance and report if they thing there is a mistake.

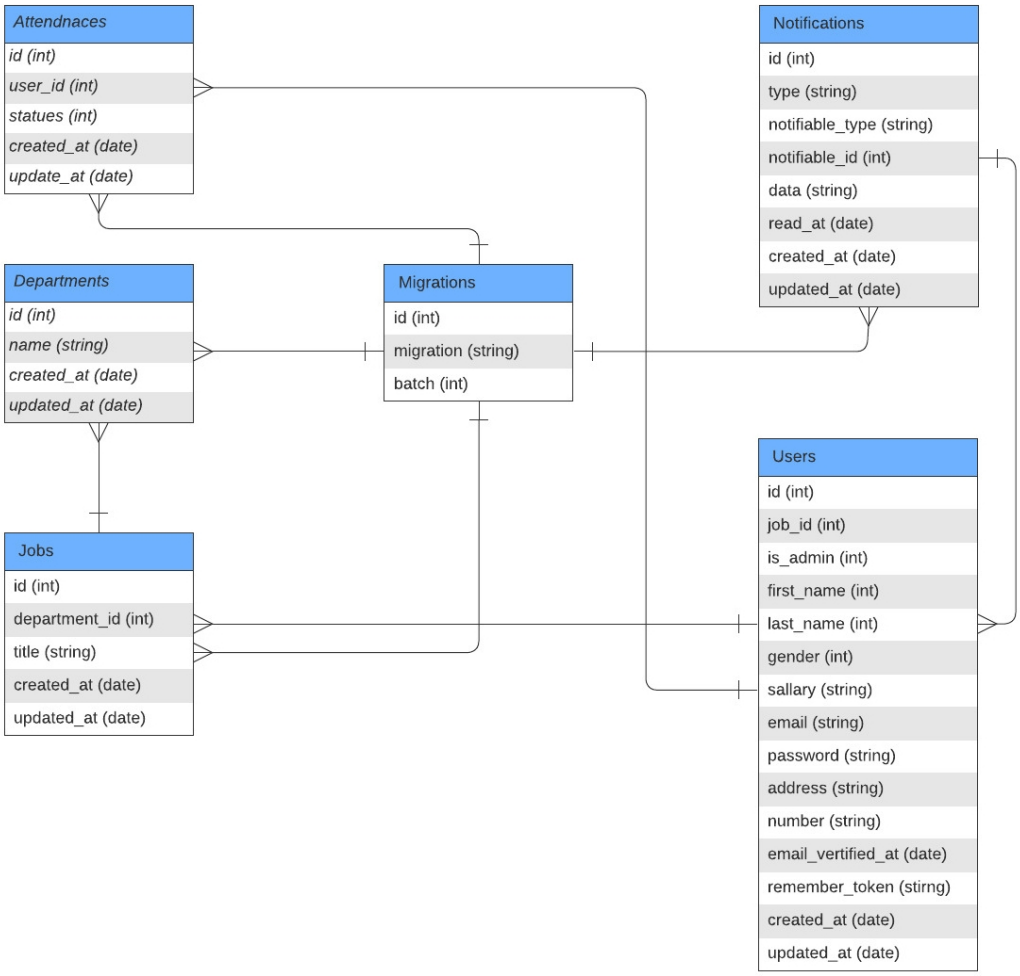

Figure 1.2 Shows Entity Relationship Diagram for Employee Management System

2.1.1 System Interfaces

To ensure that the Employee Attendance Management System functions properly. It made up of 4 (modules) and two (2) actors. According to the module, each actor has a separate task and purpose. The user interface is easy to use and appealing for the users. This is likewise made to look basic yet appealing by utilizing nice colors and icons to represent each section.

2.1.2 User Interfaces

Software: Device Specification:

1. OS Edition: Windows 11 Pro
2. Intergraded Development Environment: Visual Studio code, XAMPP
3. Database Management System: MySQL
4. Framework: PHP Laravel Framework
5. Web Browser: Brave

6. Visual Modelling & Design Tool: Draw.io, Lucid and Creately
7. High Fidelity Prototype: Figma
8. Microsoft Power Point 2018: To create presentation slide
9. Microsoft Word 2016: To document project report, SRS and SDD

2.1.3 Hardware Interfaces

Minimum Requirements:

1. Operating system: Windows 7 or later
2. Processor: Intel Pentium 4
3. Memory: 2GB minimum, 4GB recommended
4. Screen Resolution: 1280x1024 or larger
5. Application window size: 1024x680 or larger
6. Internet Connection: Required
7. Input Device: Mouse

2.2 Product Functions

There are 5 use cases that represent the main functions performed by the proposed system:

Table 2.1 Use Case Table

No	Actor	Role
6.	View Profile	Admin and Employee would be able to view their profiles.
7.	Update Profile	Admin and Employee would be able to update their profiles.
8.	Manage Attendance	Admin will be able to do the attendance and manage the employee's attendance.
9.	Update Employee Information	Admin will the ability to manage their employee's information such as job, title department and on duty time.
10.	View Attendance	Admin and Employee would be able to View the attendance record.

2.3 User Characteristics

Based on Table 2.2, there are 2 main actors in the system which are Admin and Employee. Table 2.2 provides the brief description of these actors.

Table 2.2 Actor Description Table

No	Actor	Role
3.	Admin	Admin plays a significant role in this project, they would be able to update employees' information, manage

		attendance, update profile, view profile and view attendance.
4.	Employee	Employee is responsible for update their profile, view profile and view attendance.

2.4 Constraints

Table 2.3 Software Requirements in process of developing the EAMS

Category	Software	Software Description
Operating System	Windows Operating System	Platform to run the Employee Management System.
Source-code editor	Virtual Studio Code	Use for proposed system development by writing a code that implements PHP language Laravel Framework.
Database	MySQL XAMMP	Responsible for the back-end of the system that manages and manipulates all the transaction of data into the database.

3. Specific Requirements

3.1 External Interface Requirements

3.1.1 User Interfaces

Windows 11 pro was used for developing this project, and the code was implemented on VSCODE and for the database Xammp was used. The code is PHP Laravel Framework and was run on Brave Browser.

3.1.2 Hardware Interfaces

Provide the details for Section 2.1.3.

Minimum Requirements:

1. Operating system: Windows 7 or later
2. Processor: Intel Pentium 4
3. Memory: 2GB minimum, 4GB recommended
4. Screen Resolution: 1280x1024 or larger
5. Application window size: 1024x680 or larger
6. Internet Connection: Required
7. Input Device: Mouse

3.2 System Features

3.2.1 Module <Employee Attendance Management>

State briefly the functional requirements (use cases) that are available in this module. Better to include the diagram of the specific module (or the example of Customer Support System – by subsystem, see example below) from the overall use case diagram in Figure 2.1.

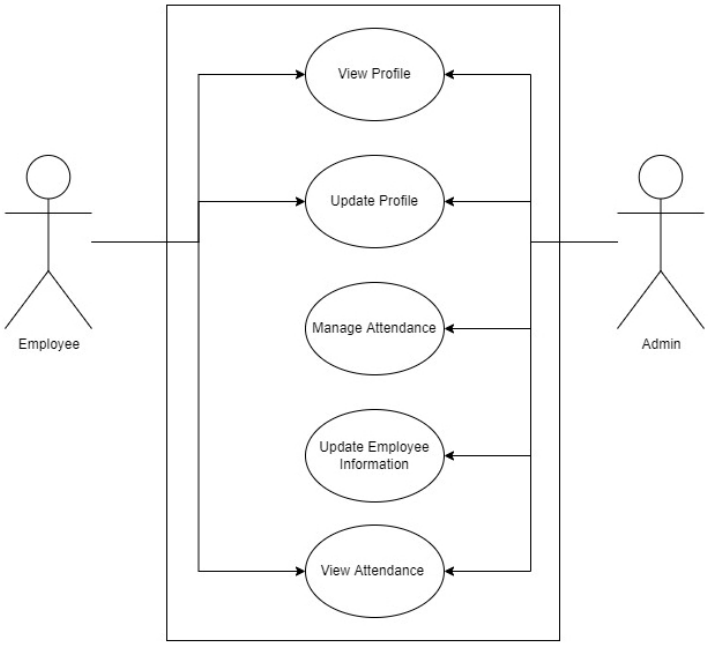

Figure 3.1 Shows Use case Diagram of Employee Attendance Management System

3.2.1 UC001: Use Case <View Profile>

Table 3.1 Use Case Description for <View Profile>

User Case	**View Profile**
ID	UC01
Actors	Employee and Admin
Description	Employee and Admin are allowed to view their profile and see all of the details and information about their profile.
Pre-Condition	Employee and Admin logged into the system and get authenticated
Normal Flow	1. The use case starts when the actor opens the system. 2. The Actor clicks the “Profile” from top menu 3. Actor will see all of the information
Alternative Flow	1. The use case starts when the actor opens the system. 2. The Actor clicks the “Profile” from the dashboard 3. Actor will see all of the information
Exception Flow	1. No internet connection 2. The Actor waits to reconnect to the system 3. The Actor follows normal flow point 2

Related Requirements	Possible Actions linked with other user case: -
Post-Condition	User successfully views their profile information

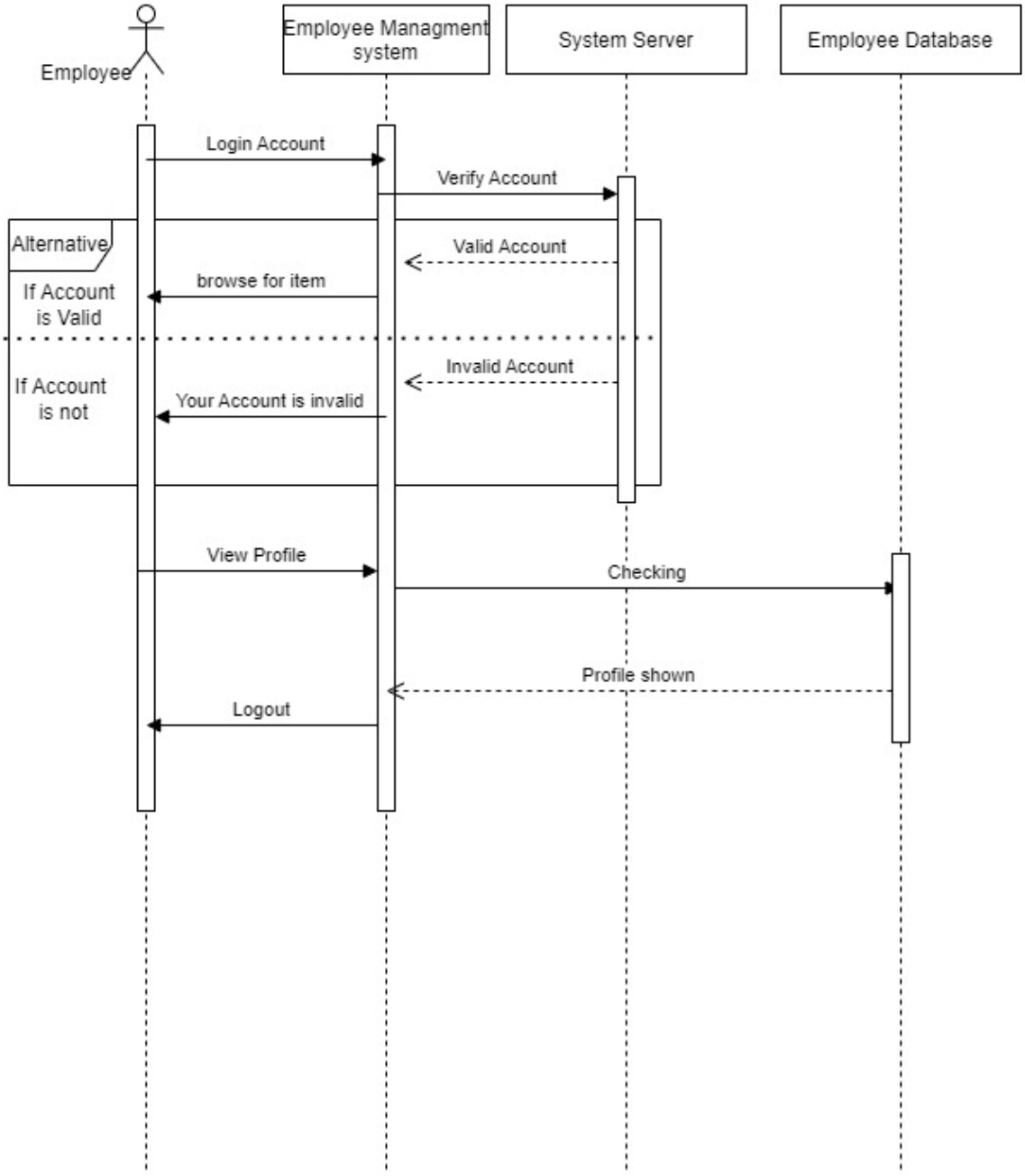

Figure 4.3 Shows Sequence Diagram View for UC01 Profile Use case

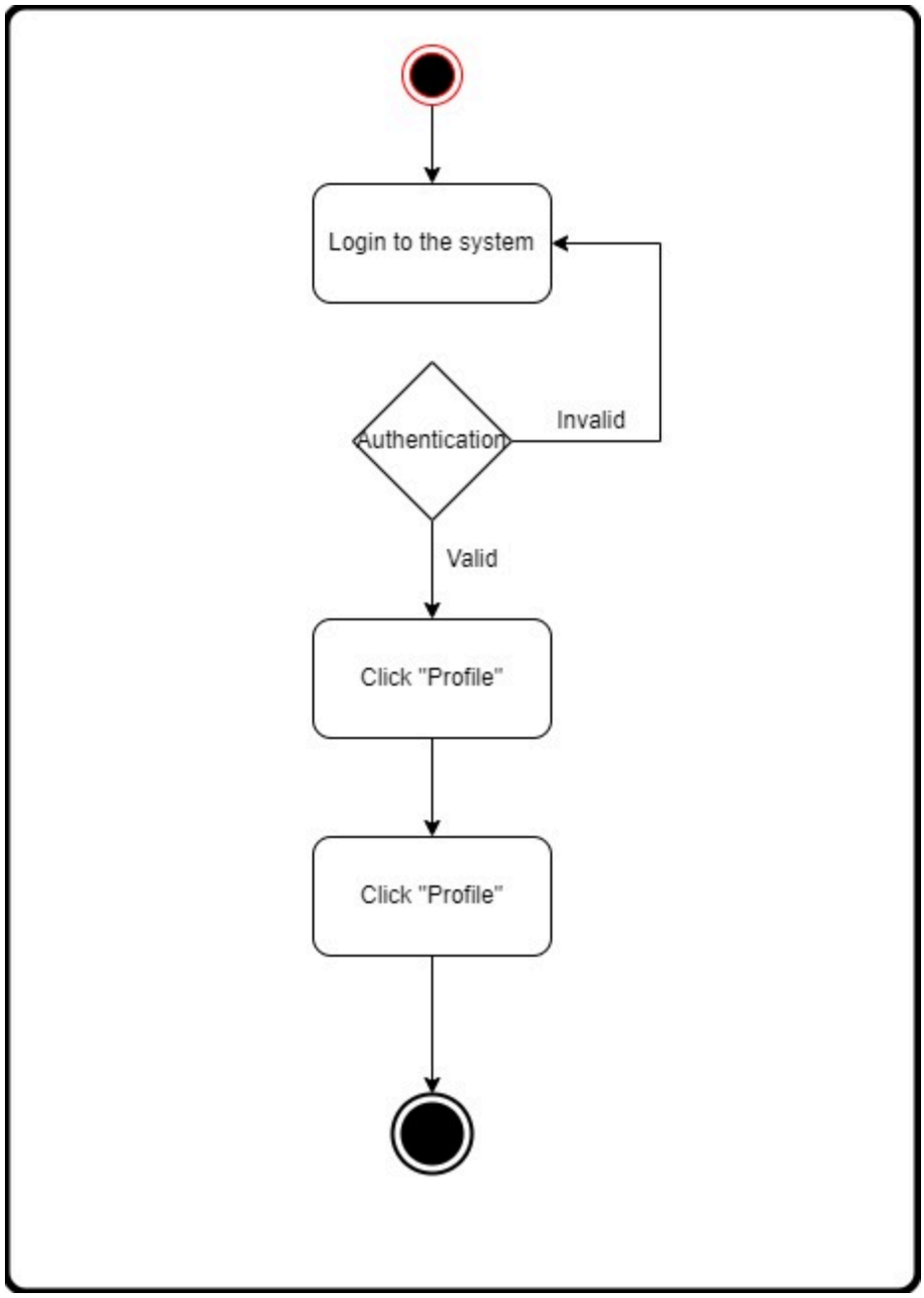

Figure 3.3 Shows Activity Diagram for UC01 View Profile

3.2.2 UC002: Use Case <Update Profile>

Table 3.2 Use Case Description for <Update Profile>

User Case	**Update Profile**
ID	UC002
Actors	Employee and Admin
Description	Employee and Admin are allowed to update their profile statues and see all of the details and information about their profile.
Pre-Condition	Employee and Admin logged into the system and get authenticated

Normal Flow	1. The use case starts when the actor opens the system. 2. The Actor clicks the “Profile” from top menu 3. The Actor clicks the “Update Profile” 4. Actor will enter all the details in the profile 5. Actor will click “Save”
Alternative Flow	1. The use case starts when the actor opens the system. 2. The Actor clicks the “Profile” from Dashboard 3. The Actor clicks the “Update Profile” 4. Actor will enter all the details in the profile Actor will click “Save”
Exception Flow	Exception 1: 1. Warning message “Please fill the form” 2. Actor fills the for not left blank 3. Continued Normal Flow 5
Related Requirements	Possible Actions linked with other user case: -
Post-Condition	User successfully Updates their profile information

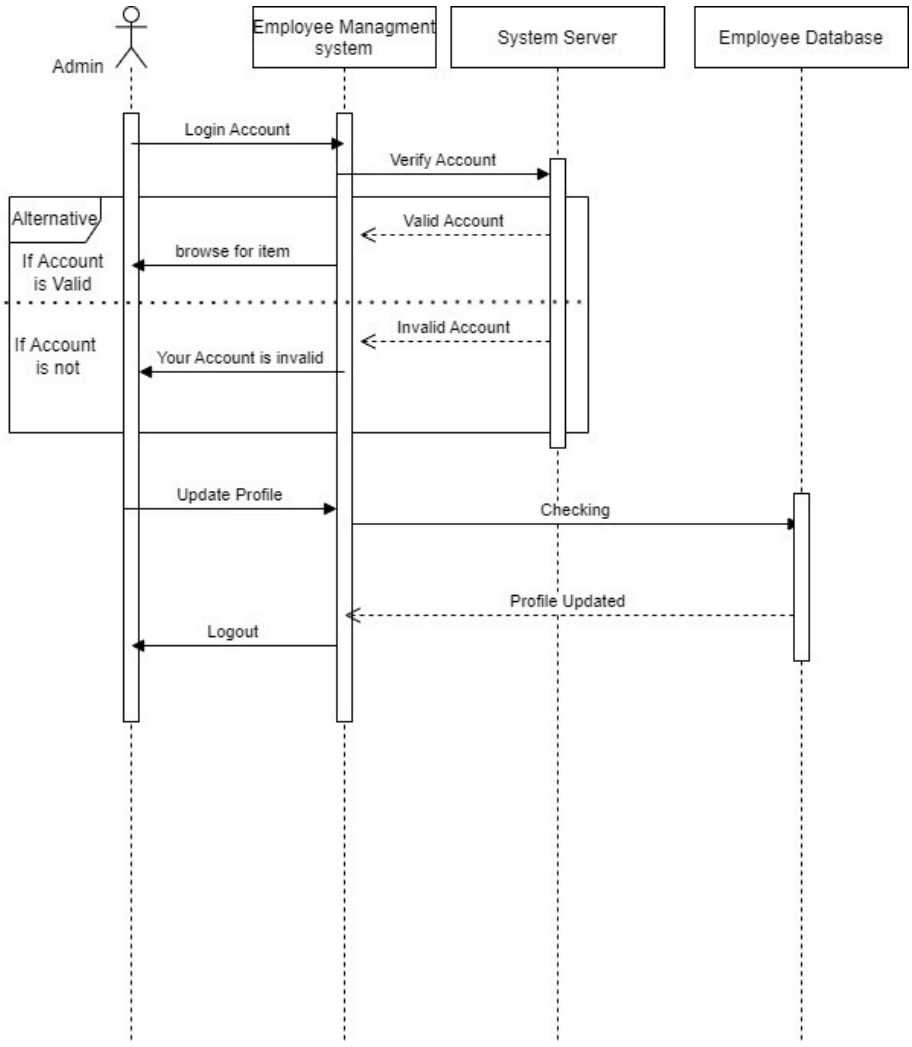

Figure 3.4 Shows Sequence Diagram for UC002 Update Profile Use case

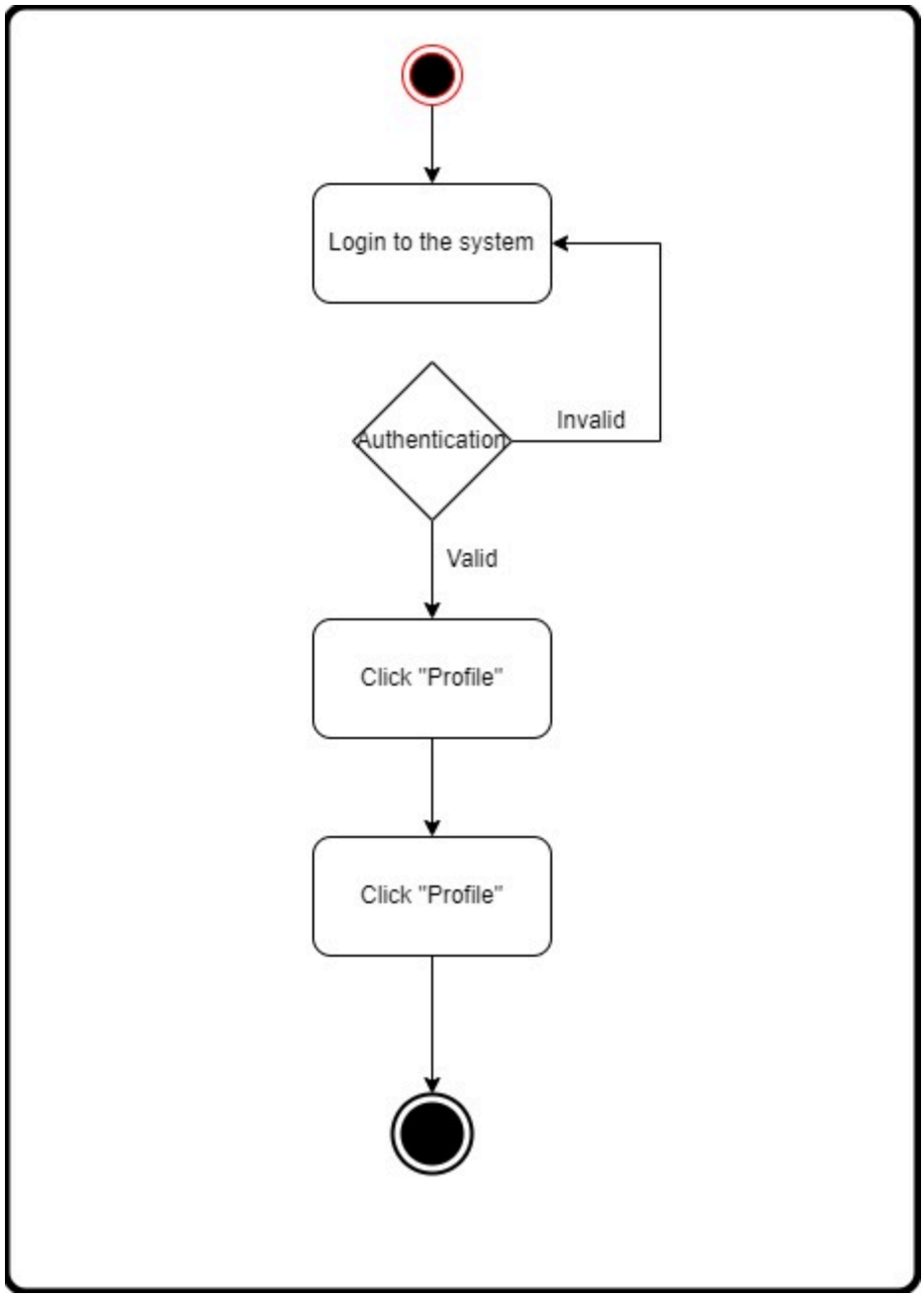

Figure 3.5 Shows Activity Diagram for UC002 Update Profile Use case

3.2.3 UC003: Use Case <Manage Attendance>

Table 3.3 Use Case Description for <Manage Attendance>

User Case	**Manage Attendance**
ID	UC003
Actors	Admin
Description	Admin is allowed to take attendance of the employee and label them as at work, late or absent
Pre-Condition	1. Admin logged into the system and get authenticated 2. Employee must be registered into the system

Normal Flow	1. The use case starts when the actor opens the system. 2. The Actor clicks the “manage attendance” from left menu 3. The Actor finds the list of employees 4. Actor will select of the employees 5. Actor will select one of the labels (at work, late and absent)
Alternative Flow	1. The use case starts when the actor opens the system. 2. The Actor clicks one the employee 3. The Actor clicks on “Manage Attendance” 4. The Actor will select one of the labels (at work, late and absent)
Exception Flow	1. No internet connection 2. The Actor waits to reconnect to the system 3. The Actor follows normal flow point 2
Related Requirements	Possible Actions linked with other user case: -
Post-Condition	User successfully take the attendance

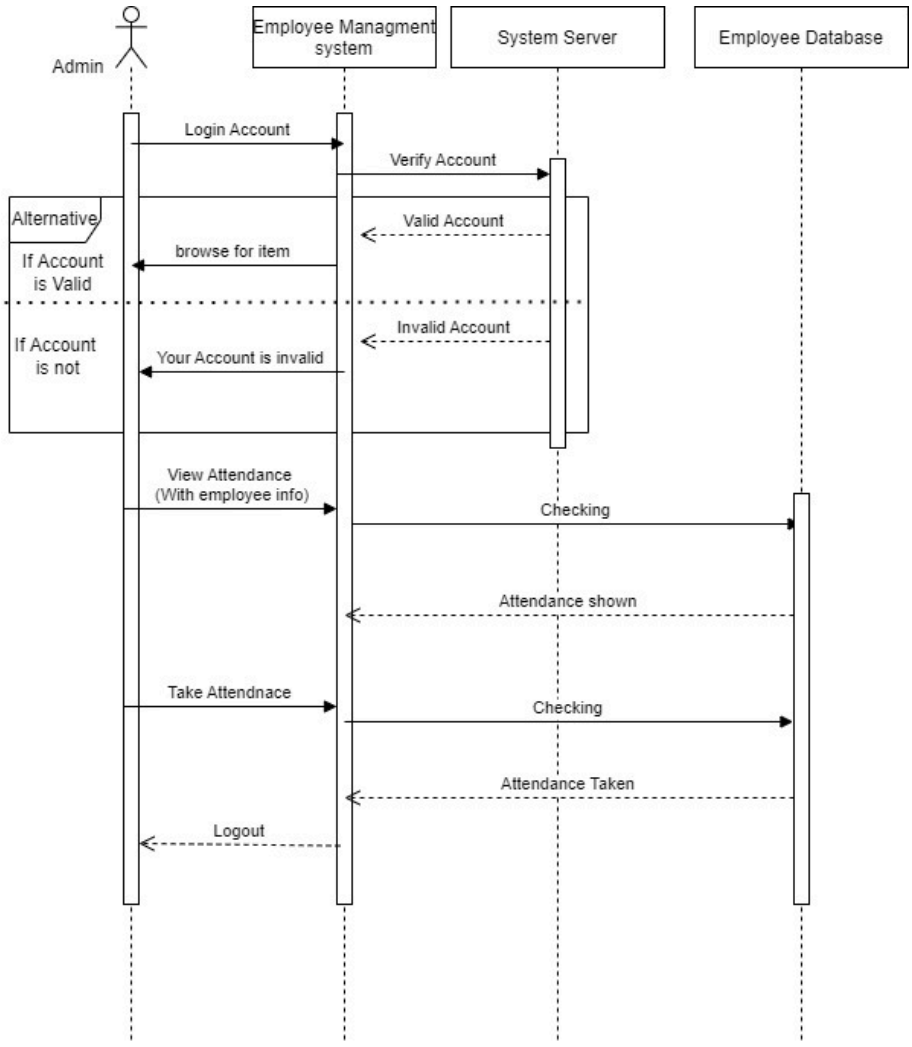

Figure 3.6 Shows Sequence Diagram for UC003 Manage Attendance Use case

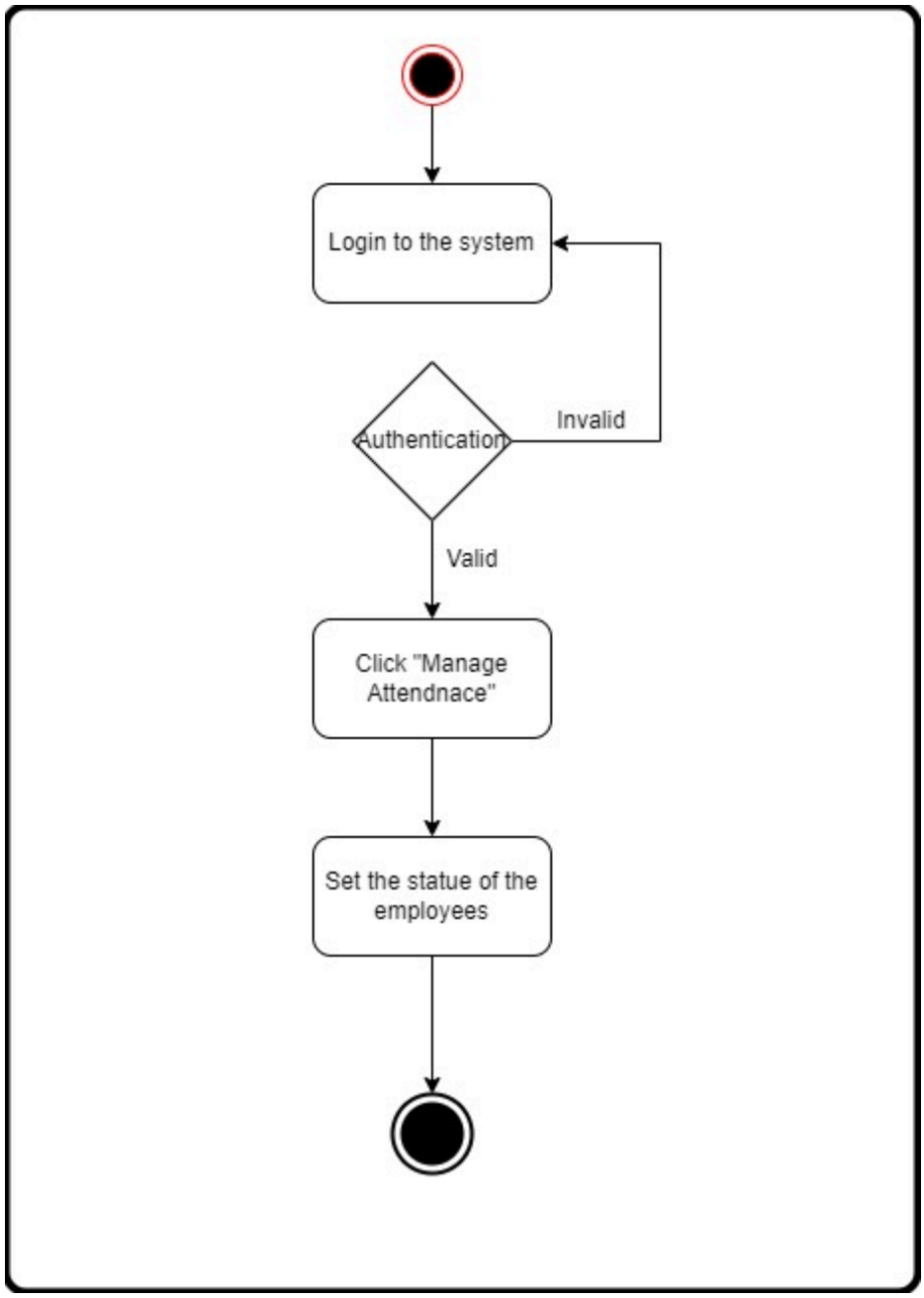

Figure 3.7 Shows Activity Diagram for UC003 Manage Attendance Use case

3.2.4 UC004: Use Case <Update Employees Information>

Table 3.4 Use Case Description for <Update Employees Information>

User Case	**Update Employees Information**
ID	UC004
Actors	Admin
Description	Admin is allowed to take update employees information that are stored in the system.
Pre-Condition	1. Admin logged into the system and get authenticated 2. Employee must be registered into the system
Normal Flow	1. The use case starts when the actor opens the system.

	2. The Actor clicks the “Employee” from left menu 3. The Actor finds the list of employees 4. Actor will select one of the employees 5. Actor will click “Update Information” 6. Actor will fill the information for the employee 7. Actor will click “Save”
Alternative Flow	1. The use case starts when the actor opens the system. 2. The Actor clicks on list of employees 3. Actor will select one of the employees 4. Actor will click “Update Information” 5. Actor will fill the information for the employee 6. Actor will click “Save”
Exception Flow	Exception 1: 1. Warning message “Please fill the form” 2. Actor fills the for not left blank 3. Continued Normal Flow 6
Related Requirements	Possible Actions linked with other user case: -
Post-Condition	User successfully update employee’s information

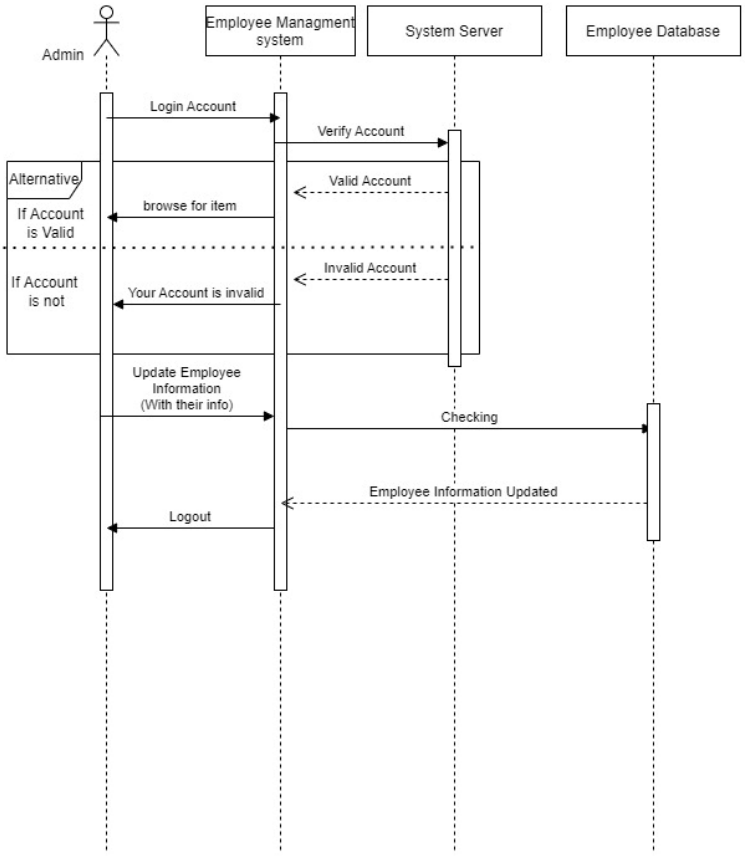

Figure 3.8 Shows Sequence Diagram Update for UC004 Employee Information Use case

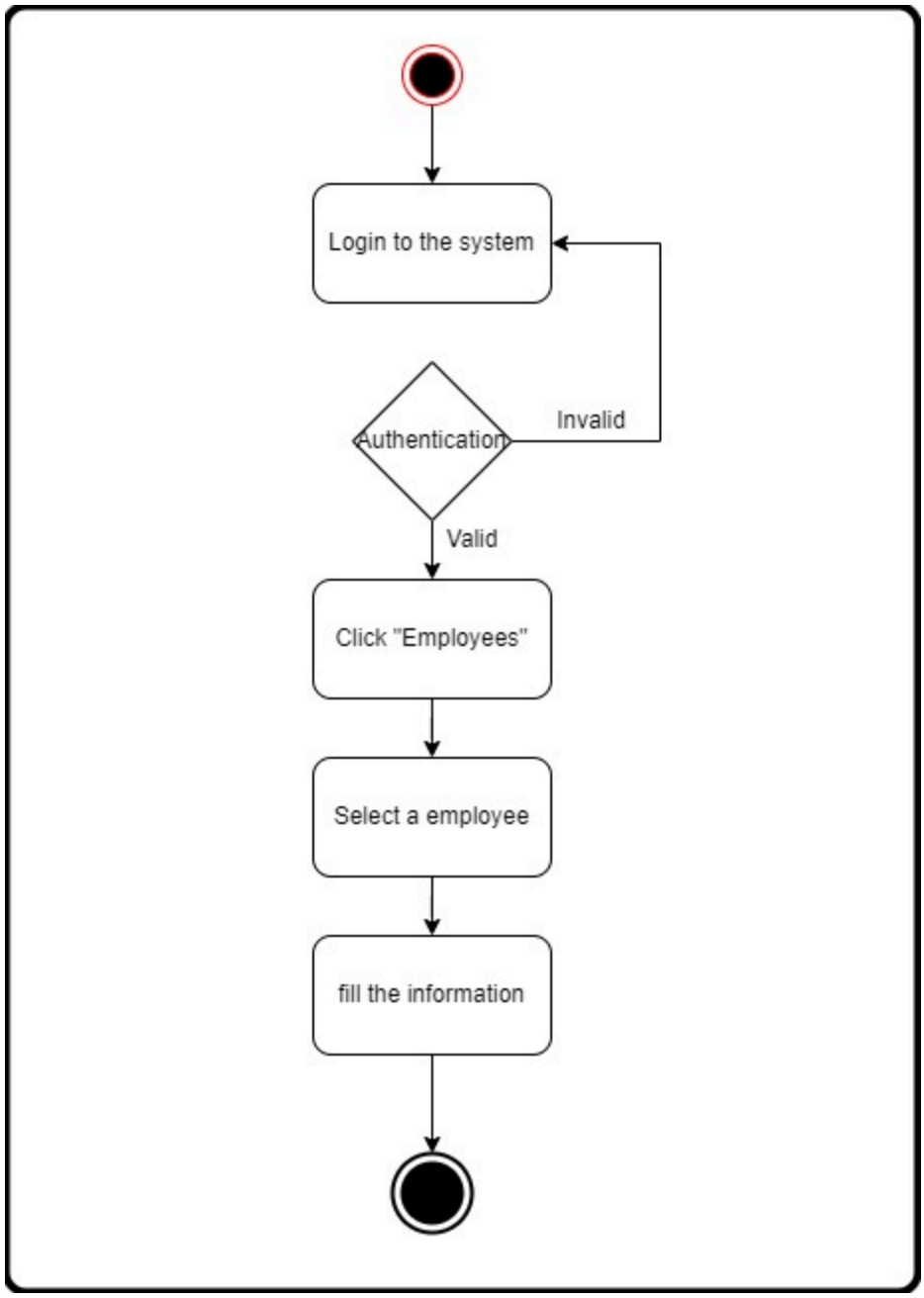

Figure 4.3 Shows Sequence Diagram View for UC004 Update Employees Information Use case

3.2.5 UC005: Use Case <View Attendance>

Table 3.5 Use Case Description for <View Attendance>

User Case	**View Attendance**
ID	UC005
Actors	Admin and Employee
Description	Admin and Employee are allowed to take update employees information that are stored in the system.

Pre-Condition	1. Admin logged into the system and get authenticated 2. Employee must be registered into the system
Normal Flow	1. The use case starts when the actor opens the system. 2. The Actor clicks the “Employee” from left menu 3. The Actor finds the list of employees 4. Actor will select one of the employees 5. Actor will click “View Attendance”
Alternative Flow	Employee click on “View Attendance”
Exception Flow	1. No internet connection 2. The Actor waits to reconnect to the system 3. The Actor follows normal flow point 2
Related Requirements	Possible Actions linked with other user case: -
Post-Condition	User successfully View Attendance

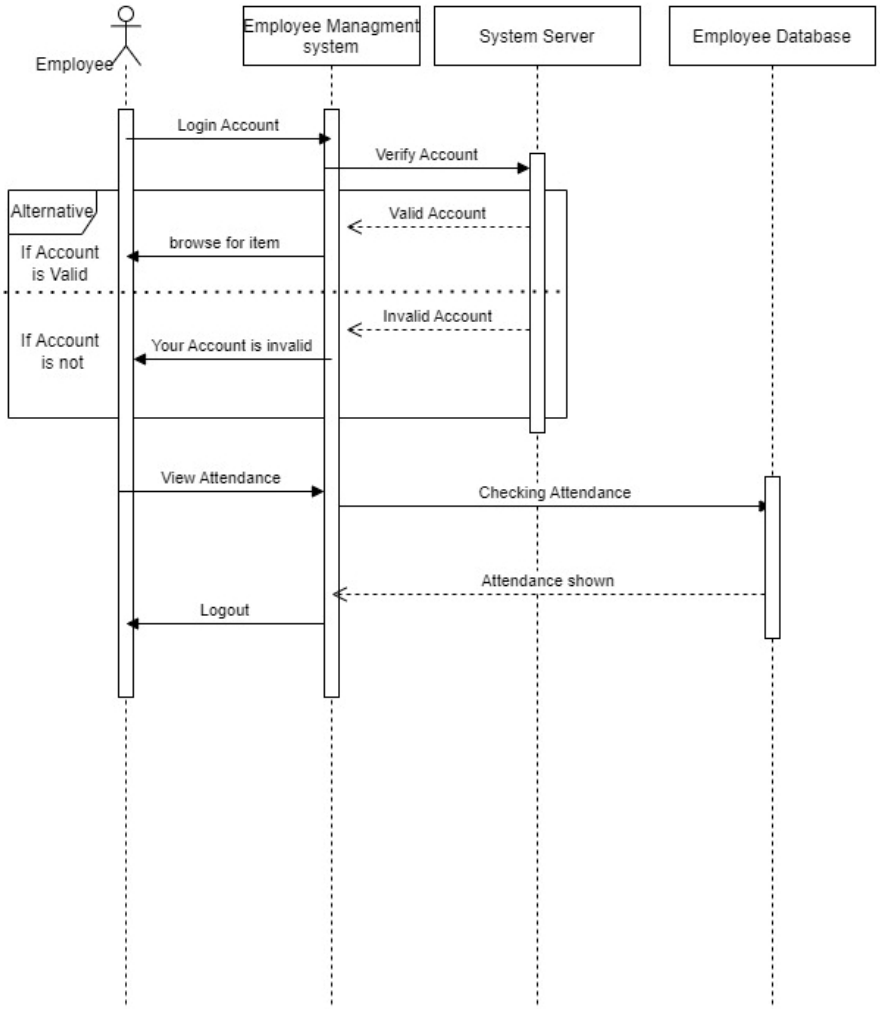

Figure 3.5 Shows Sequence Diagram for UC005 View Attendance Use case

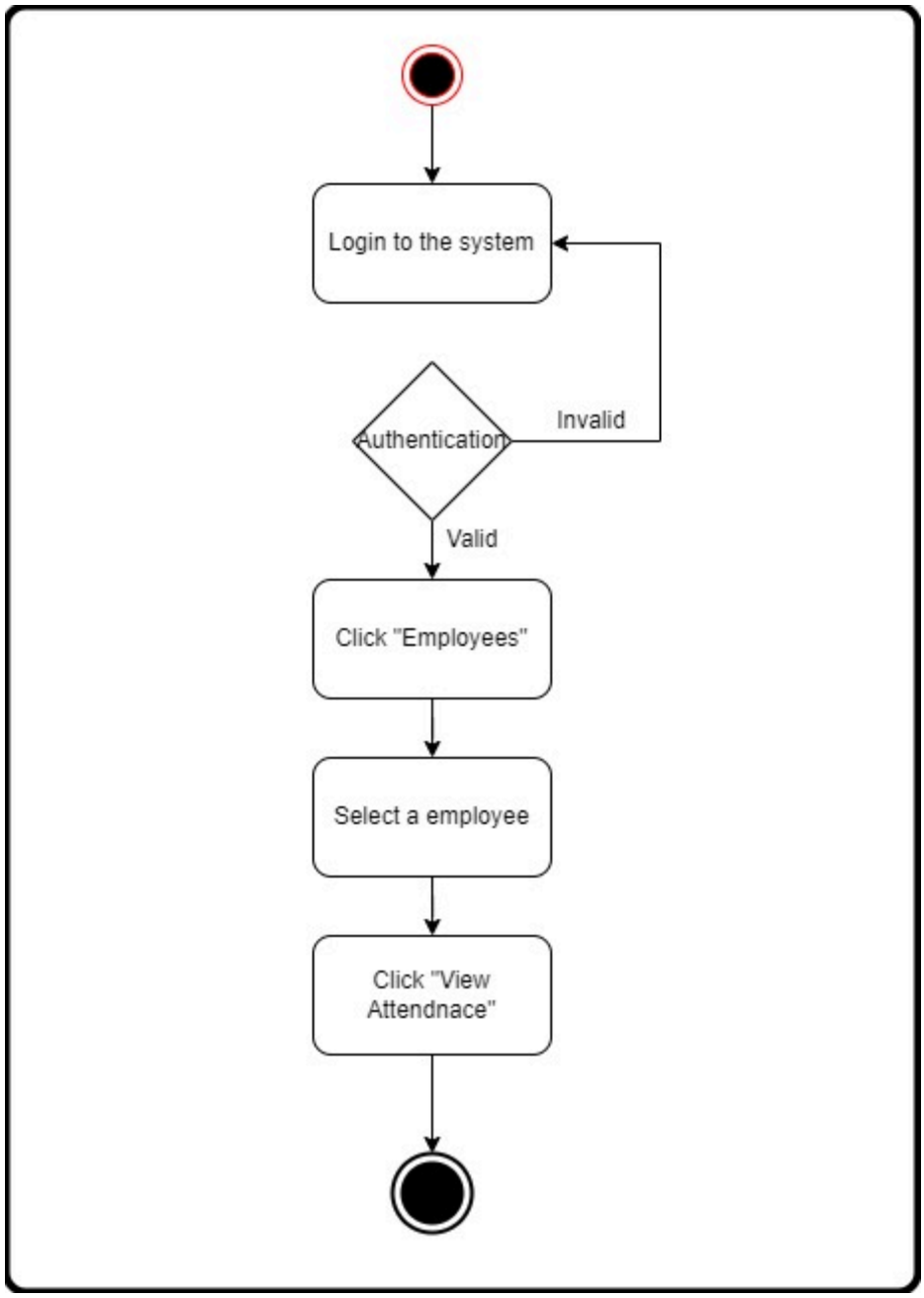

Figure 3.5 Activity Diagram for UC005 View Attendance Use case

3.3 Performance Requirements

Non-Functional Requirements	Description
Usability	The user interface should be suitable for a system with no additional training or support for the target user to understand.
Availability	The proposed system shall be able to access anywhere as the internet and personal computer is available.
Performance	All the attendance shall be able to send to participants in a short time regardless of the amount of attendance to be send.

Appendix B

Software Design Documentation

Software Design

Documentation for

Employee Attendance Management System

Prepared by: Mudhafar Dler Rashad

24 June 2022

Table of Contents

1. Introduction

1.1 Purpose

The purpose of Software Design Documentation (SDD) is to provide a clear view on how the DCMS is going to build and brief description of the system's flow. Software design description including architecture style, database description and interface design also being explained in this document.

1.2 Scope

The scopes of the system are stated as follows:

1. The system will focus the development on the companies who are willing to track their employees.
2. This system is built for midsized companies.
3. The platform that supports this system is any device who have access to internet and has a browser.
4. Collaboration option with other organizers for a program is not available.
5. Customizing user profile is limited.

1.3 Definitions, Acronyms and Abbreviation

Acronym/ Abbreviation/ Term	Definition
EAMS	Employee Attendance Management System
MVC	Model View Controller
ERD	Entity Relationship Diagram

Table 1.1 Definition, Acronyms and Abbreviation

1.4 References

Christensson, P. (2018, March 7). MVC Definition. Retrieved 2020, Jul 25, from https://techterms.com

1.5 Overview

This document describes the overview of the system into various sections. The section of this document as sated as below:

1. Introduction
2. System Overview
3. System Architecture
4. Database Design
5. Interface Design

2. System Overview.

Employee Attendance Management System (EAMS) is a web-based system that aim to generate take employee's attendance using technology to reduce the time-cost. By this means, this proposed system allows the target user which is an admin a company's manager to take attendance of their employees in a short time.

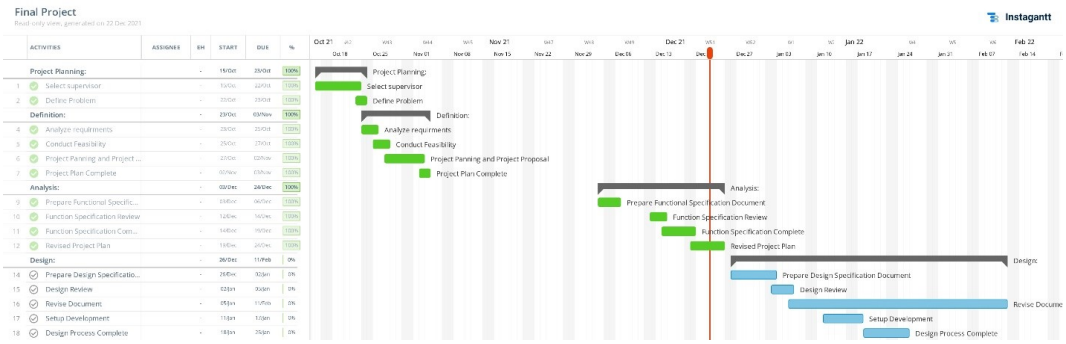

Figure Gant Chart

3. System Architecture Design

3.1 MVS Architecture

MVC stands for "Model-View Controller". MVC is an architectural pattern that separates an application into three interconnected parts. This includes Model, View and Controller. MVC architecture is commonly used for designing web applications as well as mobile applications. This architectural pattern works well with object-oriented programming due to distinct models, views and controllers can be treated as objects and reused within applications.

There are three components in MVC. First is the Model component. Model components responsible to store data and its related logic. This component represents data that is being transferred between controller components. It responds to the request from the controllers.

Second component is the View component. View represents the data presentation by means of displaying objects within the system.

Last component is Controller. Controller components act as an intermediary for View and Model. This component will manipulate data by receiving the user input and performing the corresponding update. Figure 3.1 shows the diagram that briefly explains the concept of MVC. Figure 3.2 is how the MVC applies to the Employee Attendance Management System.

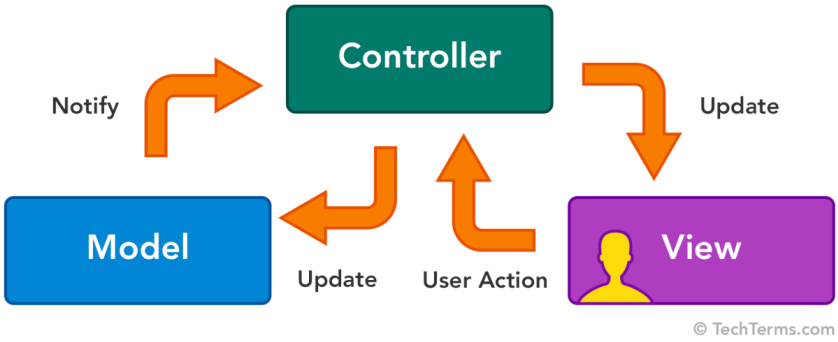

Figure 3.1 Presents the MVC Architecture

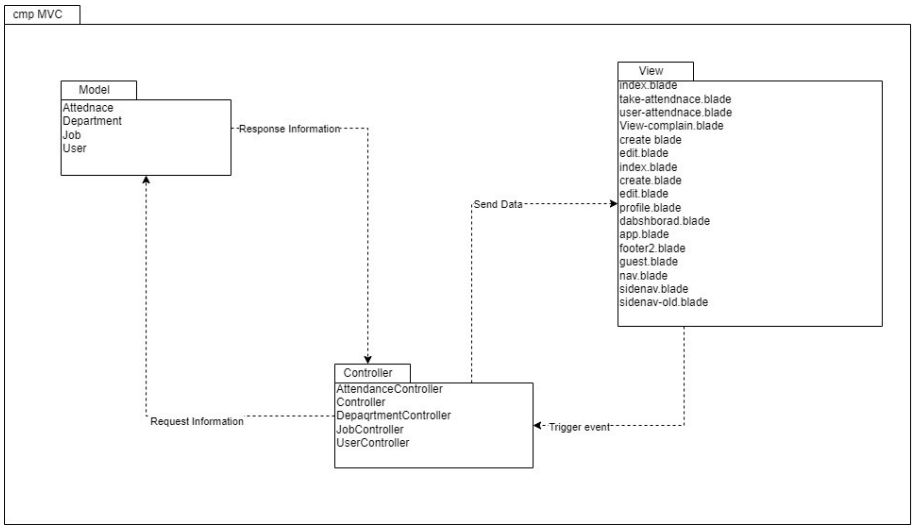

Figure 3.2 Presents the MVC Architecture of Employee Attendance Management System

4. Data Design

4.1 Entity Relationship Diagram

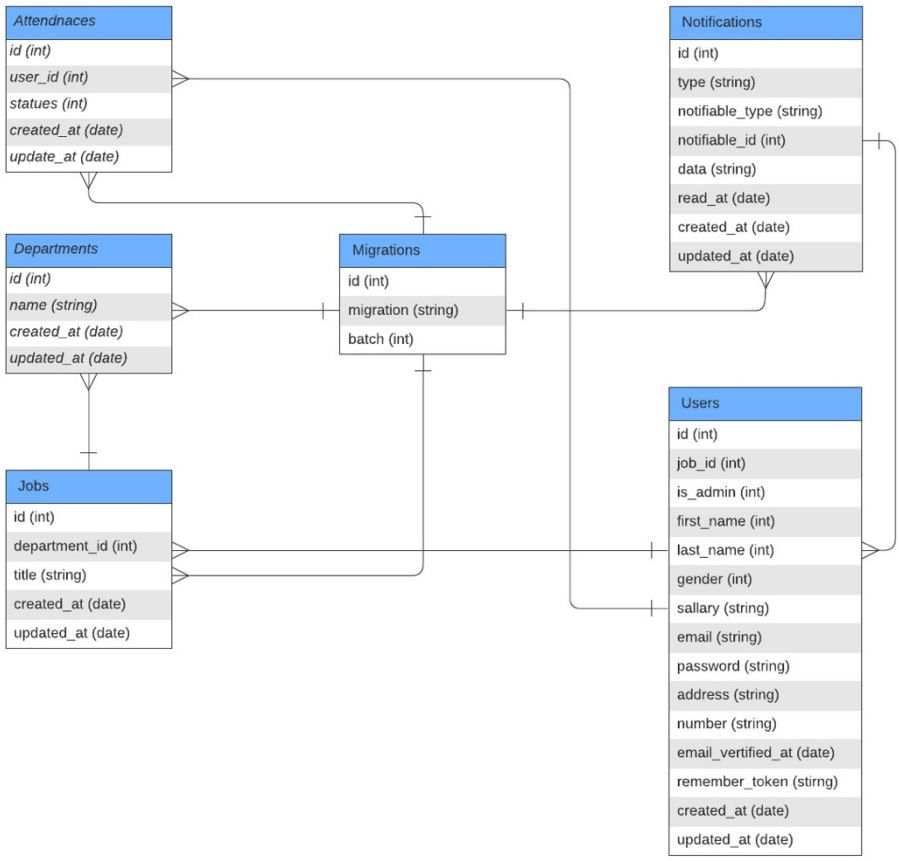

Figure 4.1 Shows the ERD for Employee Attendance Management System

4.2 Data Dictionary

Below is the description of the data dictionary in the EAMS database system.

Table 4.1 Database Table: Attendance

Attribute	Data Type	Description
Id	INTEGER	Primary Key
User_id	INTEGER	Foreign Key
Statues	INTEGER	Attendance taking as absent, late or present.
Created_at	DATATIME	Data when the attendances are taken.
Updated_at	DATATIME	Data when the attendances got updated.

Table 4.2 Database Table: Department

Attribute	Data Type	Description
Id	INTEGER	Primary Key
Name	VARCHAR	The name of the department.
Created_at	DATATIME	Data when the Department is created.
Updated_at	DATATIME	Data when the department is updated

Table 4.3 Database Table: Job

Attribute	Data Type	Description
Id	INTEGER	Primary Key

Department_id	INTEGER	Foreign Key
title	VARCHAR	Name of the job as in title
Created_at	DATATIME	Data when the job is created.
Updated_at	DATATIME	Data when the job is updated

Table 4.4 Database Table: Migration

Attribute	**Data Type**	**Description**
Id	INTEGER	Primary Key
Migration	VARCHAR	Migrating the other table for filling it out.
batch	INTEGER	Represents of being done

Table 4.5 Database Table: Notification

Attribute	**Data Type**	**Description**
Id	CHAR	Primary Key
Type	VARCHAR	The route of the complaint attendance
Notifiable_type	VARCHAR	Foreign key.The route of the user
Notifiable_id	INT	Foreign key. Represent which user is complaining
data	TEXT	The message that the user sends as a complain
Read_at	DATATIME	Data when the message is read.
Created_at	DATATIME	Data when the message is created.
Updated_at	DATATIME	Data when the message is updated.

Table 4.6 Database Table: user

Attribute	**Data Type**	**Description**
Id	INTEGER	Primary Key
Job_id	INTEGER	Foreign Key.
Is_admin	INTEGER	Where the user is admin or not
First_name	VARCHAR	First name of the user
Last_name	VARCHAR	Last name of the user
gender	INTEGER	Gender of the user
sallary	VARCHAR	Salary of the user
email	VARCHAR	Email of the user
password	VARCHAR	Password of the user
address	VARCHAR	Address of the user
number	VARCHAR	Phone number of the user
Email_verified_at	DATATIME	Data when the email got vertified.
Remember_token	VARCHAR	Phrase for forgetting password
Created_at	DATATIME	Data when the user is created.
Updated_at	DATATIME	Data when the user is updated.

5. User Interface Design

5.1 Overview of User Interface

This system is focused on the system which works on desktop. A friendly user interface has been developed for the target to use without additional training.

5.2 Screen Images

5.2.1 Login Page

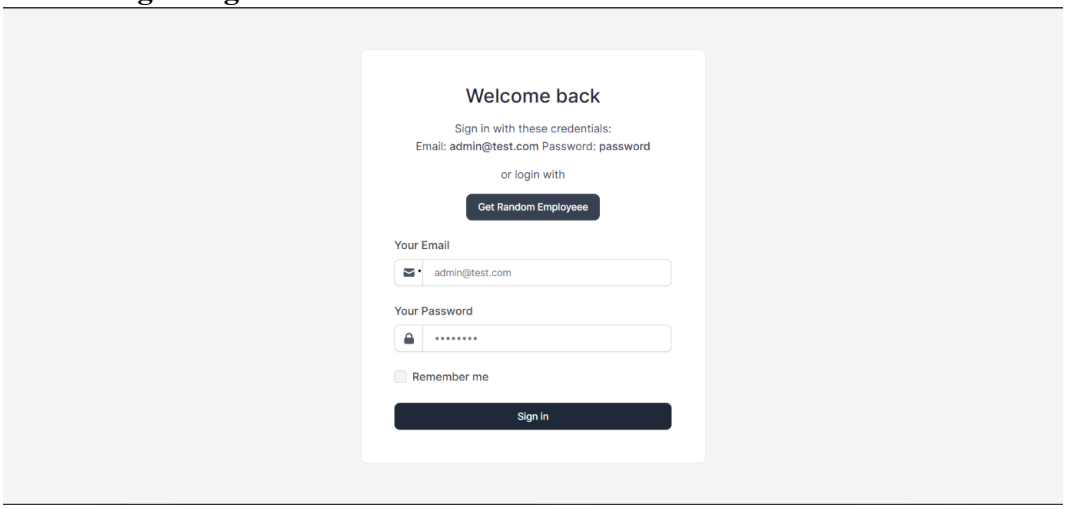

Figure 5.1 Presents the Home Page Interface

5.2.2 Admin Dashboard

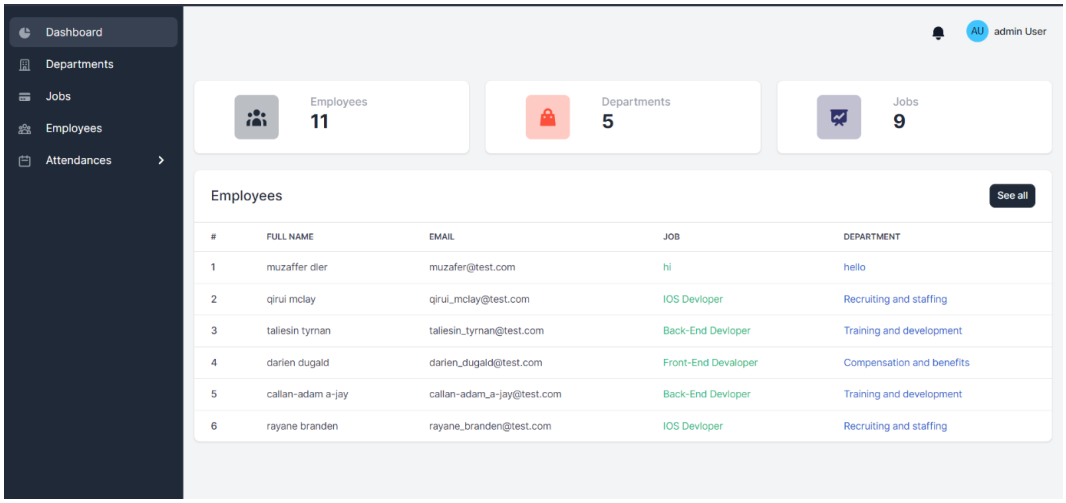

Figure 5.2 Presents the Admin Dashboard

5.2.3 Admin Department

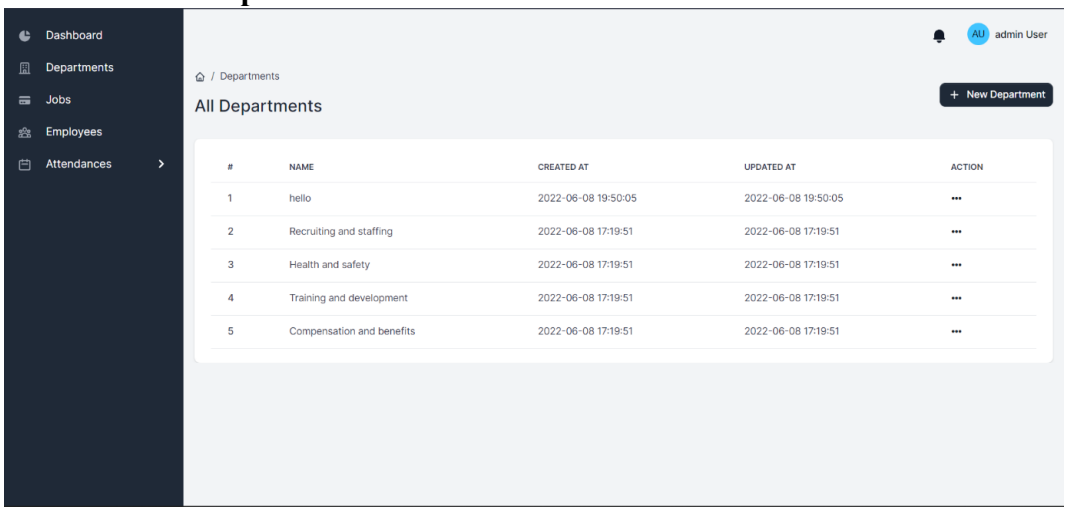

Figure 5.3 Presents the Admin Department

5.2.4 Admin Add Department

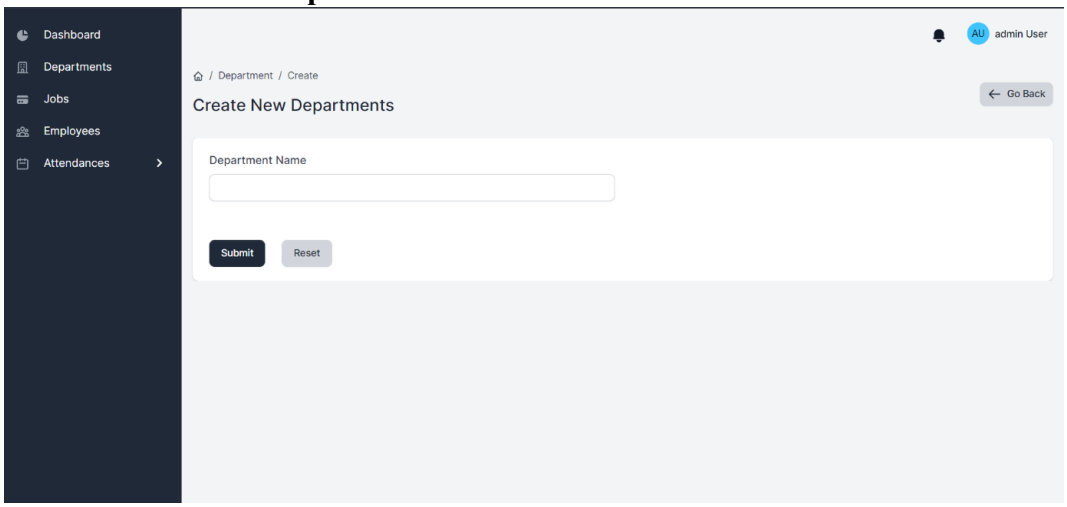

Figure 5.4 Presents the Admin Add Department

5.2.5 Admin Job

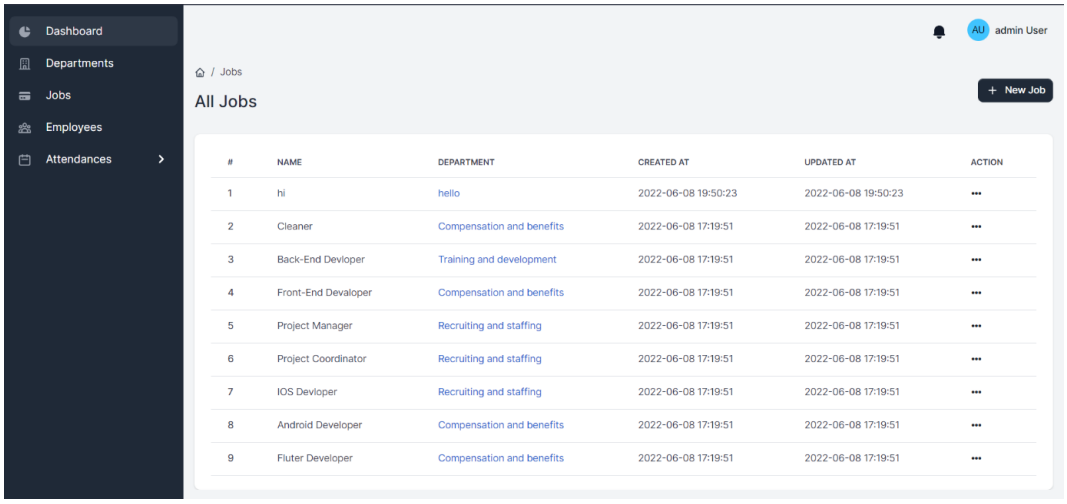

Figure 5.5 Presents the Admin Job

5.2.6 Admin Add Job

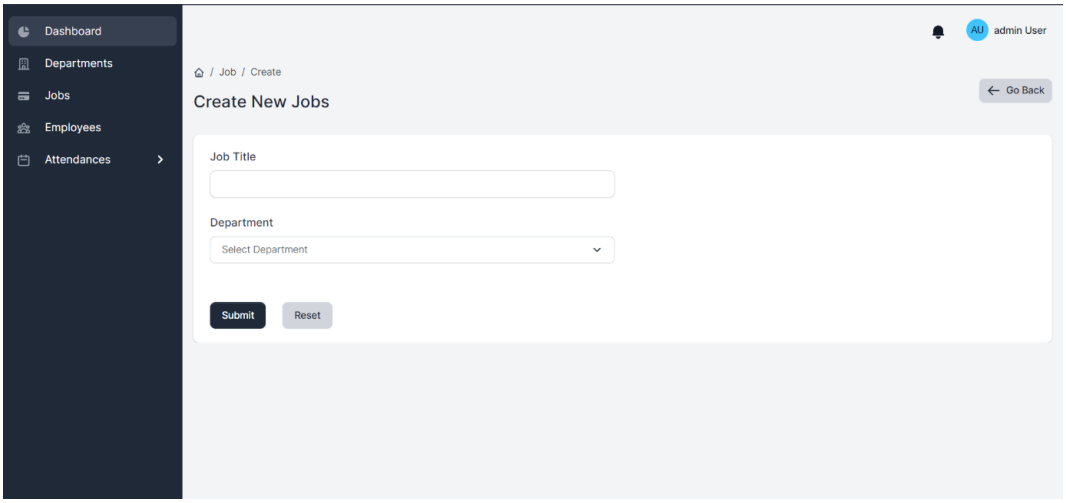

Figure 5.6 Presents the Admin Add Job

5.2.7 Admin Employees

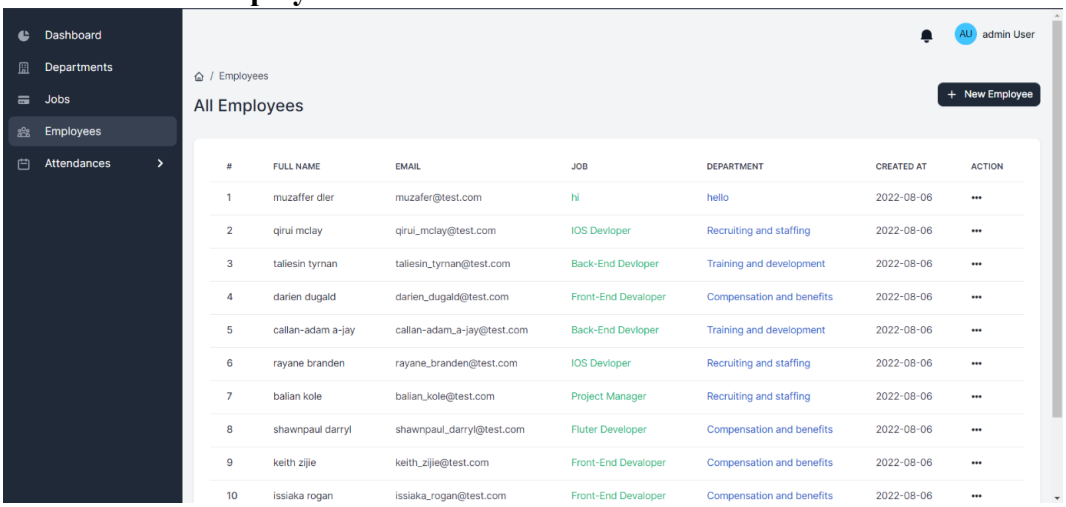

Figure 5.7 Presents the Admin Employees

5.2.8 Admin Add Employees

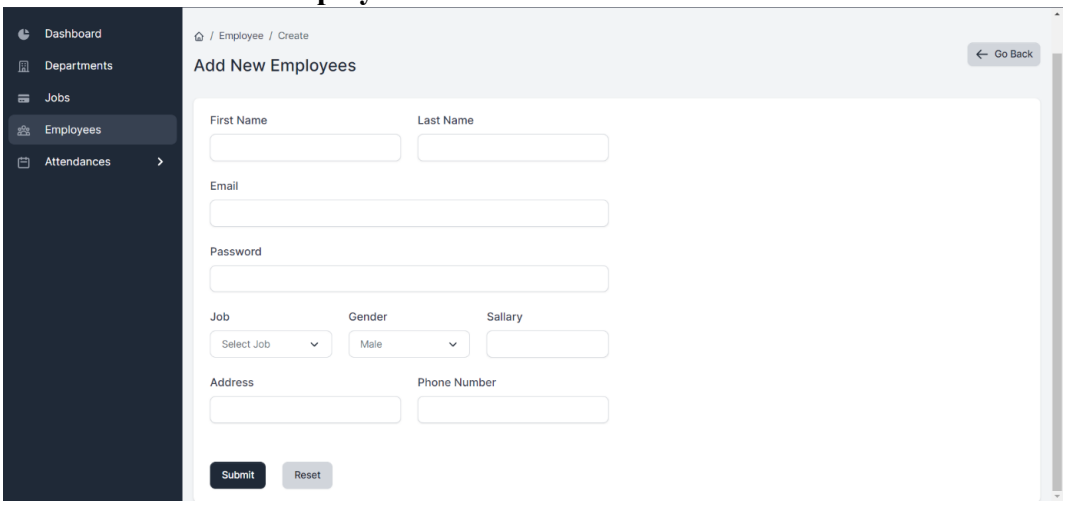

Figure 5.8 Presents the Admin Add Employees

5.2.9 Admin Attendance

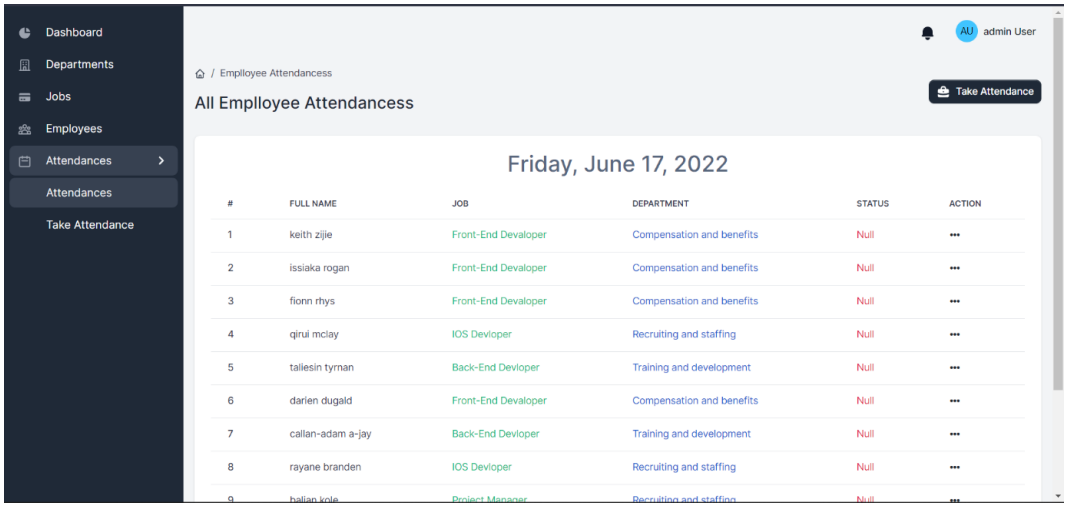

Figure 5.9 Presents the Admin Attendance

5.2.10 Admin Take Attendance

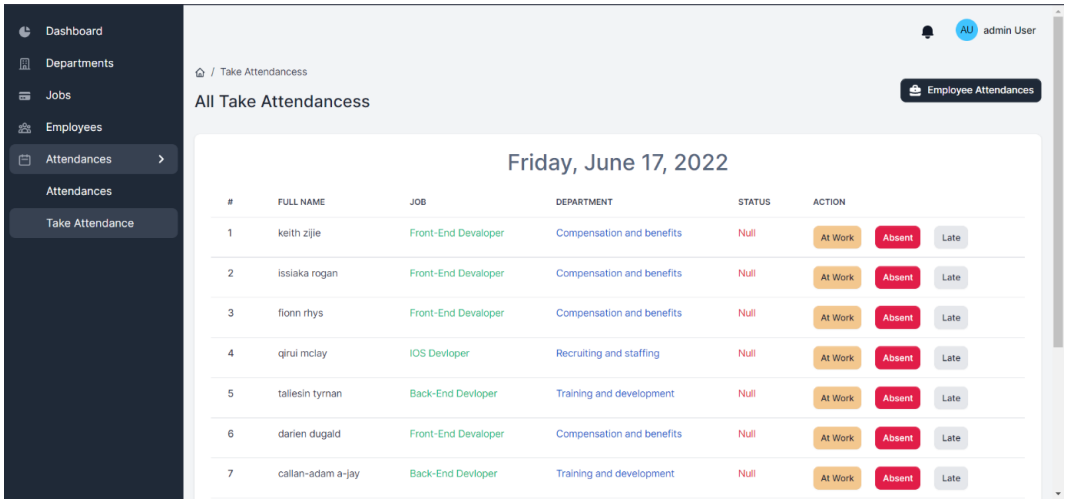

Figure 5.10 Presents the Admin Take Attendance

5.2.11 Admin Full Employees Attendance

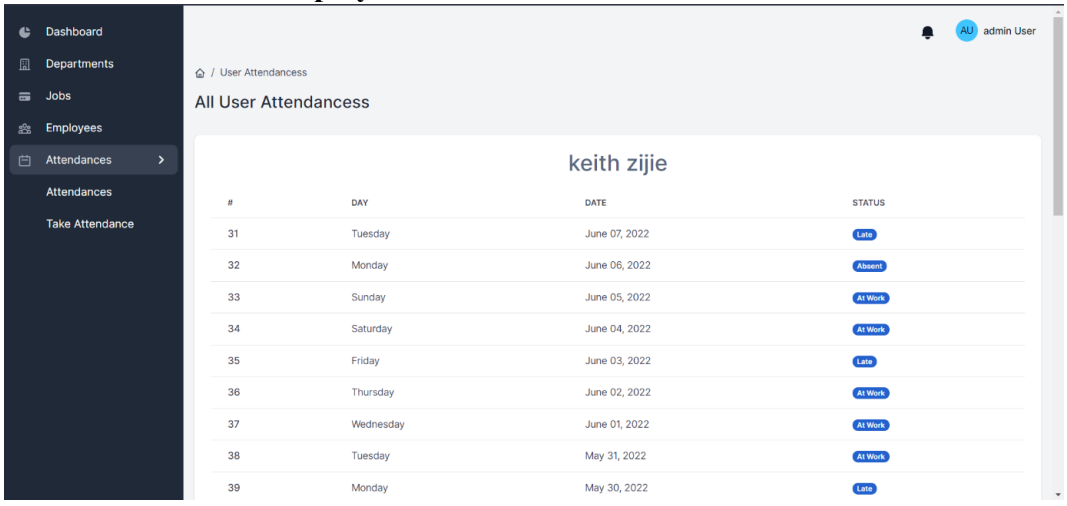

Figure 5.11 Presents the Admin Full Employees Attendance

5.2.12 Admin Update Employees Profile

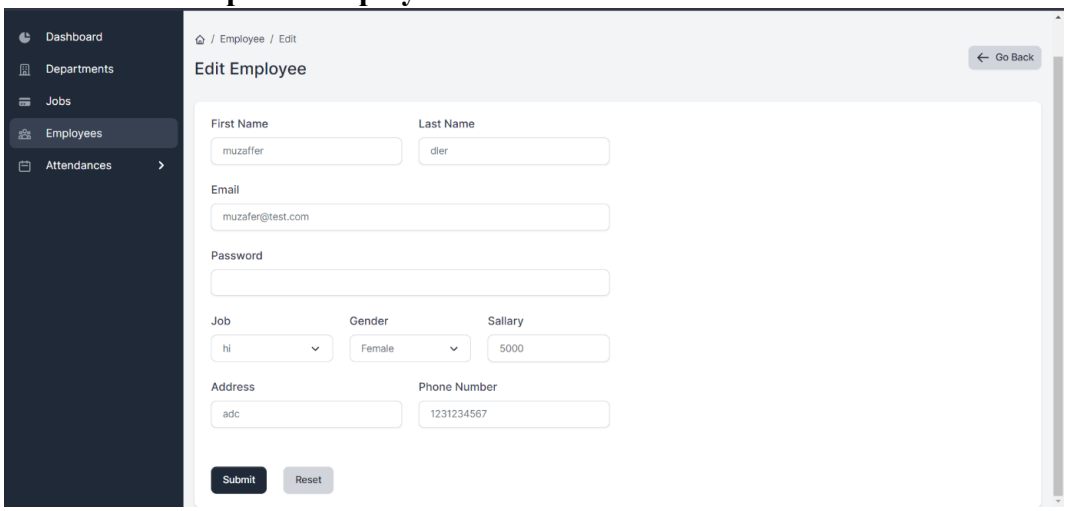

Figure 5.12 Presents the Admin Update Employees Profile

5.2.13 Admin View and Update Profile

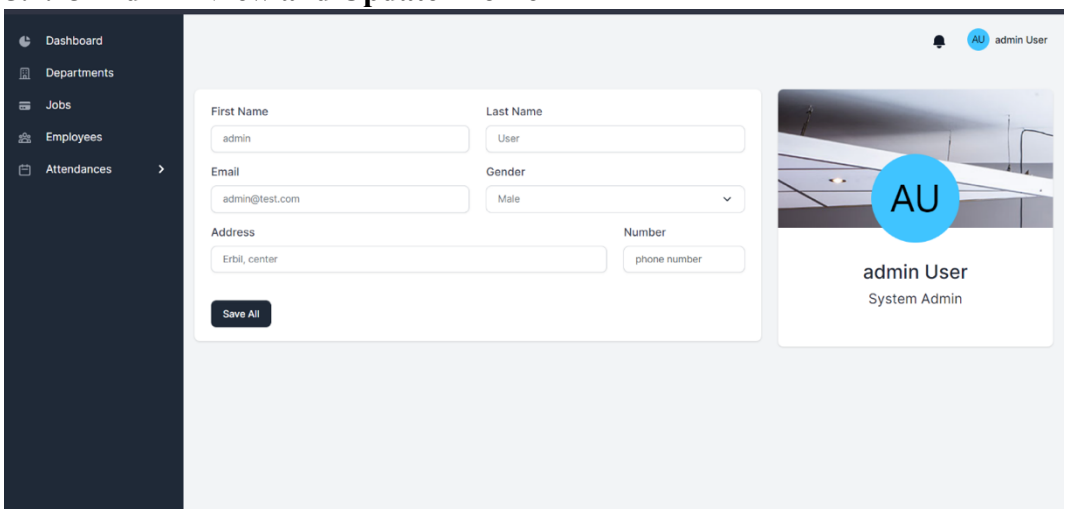

Figure 5.13 Presents the Admin View and Update Profile

5.2.14 Employee View and Update Profile

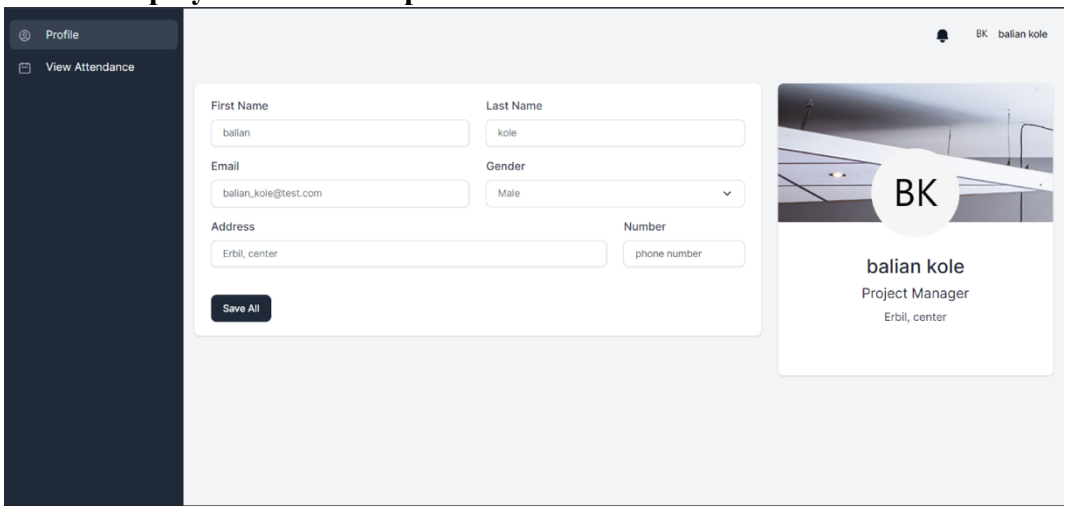

Figure 5.14 Presents the Employee View and Update Profile

5.2.15 Employee View Attendance

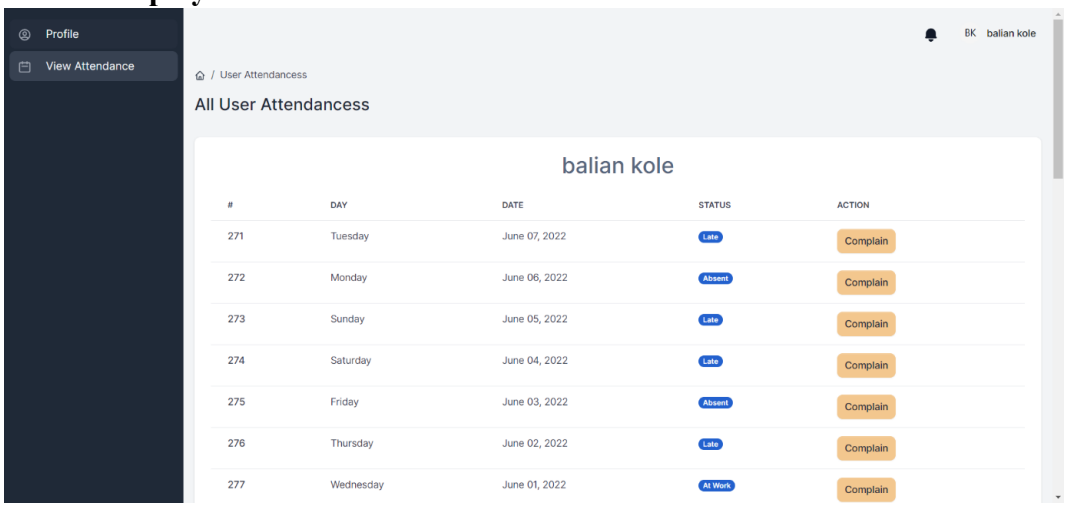

Figure 5.15 Presents the Employee View Attendance

Appendix C
Software Testing Documentation

Software Testing Documentation

Employee Attendance Management

Version 1.0

24 Jun 2022

Department Software Engineering School of Computing Faculty of Engineering

REVISION PAGE

a. Overview

This version consists of the final version of testing activities with the result of testing for each test cases.

b. Target Audience

The target audience to perform the testing are Rossa Manager 2022 and a Rossa employee.

c. Version Control History

Version	Primary Author(s)	Description of Version	Date Completed
1.0	Mudhafar Dler Rashad	Early version	17 Jun 2022

Table of Contents

1. Introduction

Software testing is the process of detecting problems in the product's requirements, design, and implementation. It is used to verify software products for correctness, completeness, security, and quality against a specification. Software testing is a method of evaluating the quality of computer software that has been built. It shows all the software's issues, errors, and weakness. There are various methods that can be selected to adopt for testing, i.e., White Box Testing, Black Box Testing, Gray Box Testing, and Agile Testing. Other than methods, there are also testing levels such as Unit Testing, System Testing, Acceptance Testing, and Integration Testing. For DCMS project, Black Box Testing method and User Acceptance Testing level will be selected to perform the testing for this project.

1.1 Purpose

This STD provides the necessary information regarding the testing activities that include test description and test results when testing the DCMS. This STD also record the UAT performed by user.

1.2 Scope

The scopes of the software product are stated as below:

1. The system will focus the development on the companies who are willing to track their employees.
2. This system is built for midsized companies.
3. The platform that supports this system is any device who have access to internet and has a browser.
4. Collaboration option with other organizers for a program is not available.
5. Customizing user profile is limited.

1.3 Definitions, Acronyms and Abbreviation

Acronym/ Abbreviation/ Term	Definition
EAMS	Employee Attendance Management System
STD	Software Testing Documentation
TC	Test Case
UAT	User Acceptance Testing
SC	School of Computing

Table 1.1 Definition, Acronyms and Abbreviation

1.4 References

Ehmer, M., & Khan, F. (2012). A Comparative Study of White Box, Black Box and Grey Box Testing Techniques. International Journal of Advanced Computer Science and Applications, 3(6), 1–2. https://doi.org/10.14569/ijacsa.2012.030603

IEEE. IEEE Std 829-1998 IEEE Standard for Software Test Documentation, IEEE Computer Society, 1998.

1.5 System Overview

STD for Employee Attendance Management System contains test data provided by the developer, the test cases for each use cases and its description also the UAT comments and results from the testing. The STD is started with the description of the testing for each use cases. Proceed with the action or input data entered by the developer, the expected result from the actions and testing result either the test is pass or fail. This STD end with the UAT results.

2. Test Cases, Data and Expected Results

2.1 Test TC001 for Module View Profile: <View Profile (UC001)>

This test contains the following test cases:

Admin or employees need to login to the system to be allowed to view their profile in the system.

UC001_01: e.g. View Profile Employee

Test Case ID	Input data	Expected result	Actual result	Pass / Fail
TC001_01_01	Logged in as muzaffer dler	System shows the profile of the user.	System successfully showed users profile	Pass
TC001_01_02	Logged in as qirui mclay	System shows the profile of the user.	System successfully showed users profile	Pass
TC001_01_03	Logged in as taliesin tyrnan	System shows the profile of the user.	System successfully showed users profile	Pass
TC001_01_04	Logged in as Omar Hogr	System shows the profile of the user.	System failed to show the users profile due to no being into the system	Fail

UC001_02:. View Profile Admin

Test Case ID	Input data	Expected result	Actual result	Pass / Fail
TC001_02_01	Logged in as admin	System shows the profile of the user.	System successfully showed users profile	Pass
TC001_02_02	Logged in as Mustafa	System shows the profile of the user.	System failed to show the users profile due to no being into the system	Fail
TC001_02_03	Logged in as Mustafa	System doesn't shows the profile of the user.	System failed to show the users profile due to no being into the system	Fail

2.2 Test TC002 for Module Update Profile: <Update Profile (UC002)>

UC002_01: Update Profile Employee

Test Case ID	Input data	Expected result	Actual result	Pass / Fail
TC002_01_01	FName: Ahmad Lname:Mustafa Email:ahska@gmail.com Gendar:Male Address Erbil, Center	System Updates the profile	System successfully Updated users profile	Pass
TC002_01_02	FName: Lname:Mustafa Email:ahska@gmail.com Gendar:Male Address Erbil, Center	Fname is blank	System unsuccessfully Updated users profile	Fail
TC002_01_03	FName: Ahmad Lname: Email:ahska@gmail.com Gendar:Male Address Erbil, Center	Lname is blank	System unsuccessfully Updated users profile	Fail
TC002_01_04	FName: Ahmad Lname: Omar Email:	Email is blank	System unsuccessfully	Fail

	Gendar:Male Address Erbil, Center		Updated users profile	

UC002_02:. Update Profile Admin

Test Case ID	Input data	Expected result	Actual result	Pass / Fail
TC001_02_01	FName: Admin Lname:User Email:admin@test.com Gendar:Male Address Erbil, Center	System Updates the profile	System successfully Updated users profile	Pass
TC001_02_02	FName: Lname:User Email:admin@test.com Gendar:Male Address Erbil, Center	Fname is blank	System unsuccessfully Updated users profile	Fail
TC001_02_03	FName: Admin Lname:User Email:admin@test.com Gendar: Address Erbil, Center	Gender is blank	System unsuccessfully Updated users profile	Fail

2.3 Test TC003 for Module Manage Attendance: <Manage Attendance (UC003)>

UC003_01: Manage Attendance

Test Case ID	Input data	Expected result	Actual result	Pass / Fail
TC003_01_01	Atwork	System takes attendnace	System successfully takes attendnace	Pass
TC003_01_02	late	System takes attendnace	System successfully takes attendnace	Pass
TC003_01_03	Present	System takes attendnace	System successfully takes attendnace	Pass
TC003_01_04	none	System doesn't takes attendnace	System un successfully takes attendnace	Fail

2.4 Test TC004 for Module Update Employees Information: < Update Employees Information (UC004)>

UC004_01: Update employees Information

Test Case ID	Input data	Expected result	Actual result	Pass / Fail
TC004_01_01	FName: Muzaffer Lname:Dler Email:admin@test.com Job:Flutter developer Gendar:Male Salary: 5000 Address Erbil, Center PhoneNumber:1234567	System Updates the profile	System successfully Updated users profile	Pass
TC004_01_02	FName: Lname:Dler Email:admin@test.com Job:Flutter developer Gendar:Male Salary: 5000 Address Erbil, Center PhoneNumber:1234567	System doesn't Updates the profile	System un successfully Updated users profile	Fail

TC004_01_03	FName: Muzaffer Lname: Email:admin@test.com Job:Flutter developer Gendar:Male Salary: 5000 Address Erbil, Center PhoneNumber:1234567	System doesn't Updates the profile	System unsuccessfully Updated users profile	Fail
TC004_01_04	FName: Muzaffer Lname:Dler Email: Job:Flutter developer Gendar:Male Salary: 5000 Address Erbil, Center	System doesn't Updates the profile	System un successfully Updated users profile	Fail

2.5 Test TC005 for Module View Attendance: < View Attendance (UC005)>

UC005_01: View Attendance

Test Case ID	Input data	Expected result	Actual result	Pass / Fail
TC005_01_01	Logged in as Muzaffer	System shows the profile of the user.	System successfully showed the attendance of the user	Pass
TC005_01_02	Logged in as qirui mclay	System shows the attendance of the user.	System successfully showed the attendance of the user	Pass
TC005_01_03	Logged in as Mustafa	System doesn't shows the attendance of the user.	System failed to show the attendance of users due to no being into the system	Fail
TC005_01_04	Logged in as Ahmad	System doesn't shows the attendance of the user.	System failed to show the attendance of users due to no being into the system	Fail

Appendix D

User Acceptance Testing

User Acceptance Testing for Rozza Make up company

Purpose : To test user acceptance of Employee Attendance Management System (EAMS) meets user needs and expectations.

Testing Date : 17/06/2022

Role:	✓	Admin (section 1 & 2)	**Name: Yousif Soran Abubakr**
		Employee (section 3)	**Name: Osman Halil Abdullah**

Scale of experience:

1: Very bad 2: Bad 3: Neutral 4: Good 5: Very good

Section 1	System design test					
Purpose	To test the system design if it meets the requirement					
No	**Aspect**	**Score**				
		1	**2**	**3**	**4**	**5**
1.	Link and navigation				✓	
2.	Menu arrangement					✓
3.	Text colour					✓
4.	System background colour				✓	
5.	Whole system design					✓
6.	User-friendly level of the system					✓
7.	System content information					✓
Comment and Suggestion	-					

Section 2	System testing (Admin)					
Purpose	To test the system's functionality for EMAS (Admin)					
No	**Aspect**	**Score**				
	(Functionality)	**1**	**2**	**3**	**4**	**5**
1.	Login and logout to the system					✓
2.	View the Dashboard page				✓	
3.	View Employees list					✓
4.	Add employees					✓
5.	View Jobs					✓
6.	Add new Jobs					✓
7.	View Departments					✓
8.	Add new Departments				✓	
9.	Update Employees					✓
10.	Take Attendance					✓
11.	Manage Attendance					✓
12.	View Full Attendance of Employee				✓	
13.	Receiving Notification					✓
14	View Profile					✓
15	Update Profile					✓
Comment and Suggestion	-					

Section 3	System testing (Employee)					
Purpose	To test the system's functionality for Employee (Employee)					
No	**Aspect**	**Score**				
	(Functionality)	**1**	**2**	**3**	**4**	**5**
1.	Log in and out of the system					✓
2.	View the dashboard page				✓	
3.	View Profile					✓
4.	Update Profile					✓
5.	View Notification					✓
6.	Send Message for Complain					✓
7.	View Full Report of Attendance					✓
Comment and Suggestion	-					