

Employee Management System

Diploma in Software Engineering

Final Project Documentation

2021.1F

CODSE211F022

P.P.D. Anuruddha

CODSE211F026

M.W.T. Mithmal

CODSE211F027

K.Sanuga Lakdinu Kuruppu

CODSE211F028

Manula Rathnayake



School of Computing and Engineering

National Institute of Business Management

Colombo-7

Project Title	Employee Management System for Certis Lanka Group of Companies
Student Index Name	CODSE211F-022 (P.P.D. Anuruddha)
	CODSE211F-026 (M.W.T. Mithmal)
	CODSE211F-027 (K.S.L. Kuruppu)
	CODSE211F-028 (Manula Rathnayake)
Name of the Program	Diploma in Software Engineering
Supervisor	Ms. Chandula Rajapaksha
Institution	School of Computing and Engineering
	National Institute of Business Management
Date	14-12-2022

This project is submitted in partial fulfillment of the requirements of the diploma in Computing and Engineering of National Institute of Business Management

Table of Contents

Declaration	5
Abstract.....	6
List of Figures.....	7
List of Tables	9
List of acronyms and abbreviations	10
Chapter 1 – Introduction.....	11
 1.1 Introduction of the Organization.....	11
 1.1.1 Vision:.....	11
 1.1.2 Mission:.....	11
 1.1.3 Certis Lanka Security Solutions (Pvt) Ltd.....	12
 1.1.4 Certis Lanka Secure Logistics (Pvt) Ltd.....	12
 1.1.5 Certis Lanka Technology & Consultancy (Pvt) Ltd.....	12
 1.1.6 Certis Lanka Courier Services (Pvt) Ltd.....	12
 1.1.7 Certis Lanka Home Nursing & Swift care (Pvt) Ltd.....	12
 1.2 Organization Structure	13
 1.3 Current Operations in Organization.....	14
 1.4 Users and Responsibilities of Organization	15
 1.5 Problem Definition.....	16
 1.6 Project Objectives	17
 1.7 Proposed Solution	18
 1. Functional Requirements:.....	19
 2. Nonfunctional Requirements:.....	21
 1.8 Summary.....	21
Chapter 2 – Methodology	22
 2.1 Introduction.....	22
 2.2 Data Collection Methods	22
 2.3 Software Process Model	23
 2.4 Software Development Tools.....	25

2.5	Testing Strategies	26
2.6	Implementation Plan	27
2.7	Summary.....	28
Chapter 3 – Analysis.....		29
3.1	Introduction.....	29
3.2	UML Diagram	30
3.3	ER Diagram of the Proposed System	54
3.4	Summary.....	55
Chapter 4 – Solution Design.....		56
4.1	Introduction.....	56
4.2	Interface Design	56
4.3	Database Design	83
4.4	Report Layout Design.....	97
Chapter 5 – Conclusion		109

Declaration

I certify that this project does not incorporate without acknowledgement, any material previously submitted for a Diploma in any institution and to the best of my knowledge and belief, it does not contain any material previously published or written by another person or myself except where due reference is made in the text. I also hereby give consent for my project report, if accepted, to be made available for photocopying and for interlibrary loans, and for the title and summary to be made available to outside organizations

P.P.D. Anuruddha

M.W.T. Mithmal

K. Sanuga Lakdinu Kuruppu

Manula Rathnayake

Abstract

Certis Lanka Group is one of the major security solution providers in Sri Lanka who is covering all the areas of integrated security, secure logistics, home nursing and courier services. As a group of companies, they are capable of providing services around the country. Certis Lanka Group is maintaining number of branches around the country having more than 6000 employees.

Currently, company is experiencing problems when it comes to managing all the data related to employees, welfare management and salary management. They are having manual system to manage these data while facing problems such as data loss, not making business decisions, not having centralized database.

As a software solution, the main purpose of this employee management system is to bring all the manual data related business functions into a complete computerized system in order to avoid those business problems.

This employee management system is capable of covering all the business needs such as recruitment process of employees, Dependents of employees, attendance, leaves, trainings, promotions, demotions, resignations, salary management, loan management, loan recovery process and also welfare managements. Automation of above processes will be a huge transition to the staff performances and also the best solution using different technologies and methodologies for the previous mentioned issues.

List of Figures

Figure 1	13
Figure 2	18
Figure 3 Iterative Incremental Process Model	23
Figure 4	24
Figure 5 Welcome Screen.....	56
Figure 6 Login Form.....	57
Figure 7 Employee System User Main Dashboard Form.....	57
Figure 8 View Employee Form	58
Figure 9 Add New Employee Form	58
Figure 10 Update Employee Details Form.....	59
Figure 11 Remove Employee Form	59
Figure 12 Add Dependents Form	60
Figure 13 Update Dependents Form	60
Figure 14 View Dependents Form	61
Figure 15 Remove Dependent Form.....	61
Figure 16 Add Promotions Form.....	62
Figure 17 Update Promotion Form	62
Figure 18 View Promotion Form.....	63
Figure 19 Remove Promotion Form.....	63
Figure 20 Add Demotion Form.....	64
Figure 21 Update Demotion Form.....	64
Figure 22 View Demotion Form	65
Figure 23 Remove Demotion Form	65
Figure 24 Add Resignations Form.....	66
Figure 25 View Resignations Form	66
Figure 26 Add Training Form	67
Figure 27 Update Training Form	67
Figure 28 Remove Training Form.....	68
Figure 29 Add Leaves Form.....	68
Figure 30 Update Leaves Form	69
Figure 31 View Leaves Form	69
Figure 32 Remove Leave Form.....	70
Figure 33 View Employee Designations Form	70
Figure 34 Update Employee Designations Form.....	71
Figure 35 View Salary Form	72
Figure 36 Update Salary Form	72
Figure 37 Remove Salary Form.....	73
Figure 38 Welfare User Main Dashboard Form	73
Figure 39 Add New Loan Form.....	74
Figure 40 Update Loan Form	74
Figure 41 View Loan Form	75

Figure 42 Remove Loan Form	75
Figure 43 Add New Welfare Allowance Form	76
Figure 44 Update Welfare Allowance Form.....	76
Figure 45 Remove Welfare Allowance Form	77
Figure 46 CFO User Main Dashboard Form	77
Figure 47 CFO User Add Welfare Category Form	78
Figure 48 CFO User View Welfare Category Form	78
Figure 49 CFO User Update Welfare Category Form	79
Figure 50 CFO User Remove Welfare Category Form	79
Figure 51 CFO User Add Loan Category Form	80
Figure 52 CFO User View Loan Category Form.....	80
Figure 53CFO User Update Loan Category Form	81
Figure 54 CFO User Remove Loan Category Form	81

List of Tables

Table 1 Branch Table	83
Table 2 Role Table	83
Table 3 Designation Type Table	84
Table 4 Welfare Fund Table	84
Table 5 Welfare Allowance Table	85
Table 6 Salary Allowance Type Table	85
Table 7 Salary Deduction Type Table.....	85
Table 8 Employee Table	86
Table 9 User Table	86
Table 10 Attendance Table	87
Table 11 Leave Table.....	87
Table 12 Dependent Table.....	88
Table 13 Promotion Table.....	88
Table 14 Demotion Table	89
Table 15 Training Table.....	89
Table 16 Welfare Allowance Table.....	90
Table 17 Salary Table.....	90
Table 18 Salary Allowance Table	91
Table 19 Salary Deduction Table	91
Table 20 Loan Table	92
Table 21 Approved Loan Table	92
Table 22 Rejected Loan Table	93
Table 23 Monthly Welfare Table.....	93
Table 24 Resignation Table.....	94
Table 25 Loan Recovery Table	94
Table 26 Guarantor Table.....	95
Table 27 Loan Guarantor Table.....	95
Table 28 Branch Mobile Table	95
Table 29 Branch Land Table	96
Table 30 Employee Address Table	96
Table 31 Training Location Table	96

List of acronyms and abbreviations

UML	- Unified Modeling Language
ER	- Entity Relationship
UI	- User Interface
HR	- Human Resource
EPF	- Employees' Provident Fund
ETF	- Employees' Trust Fund
CFO	- Chief Financial Officer

Chapter 1 – Introduction

1.1 Introduction of the Organization

Certis Lanka is the pioneering security solution provider in Sri Lanka. One of the best security solutions providers in Sri Lanka. This group specializes in integrated security, technology and consultancy, secure logistics, home nursing and courier services.

Certis Lanka is a joint venture with Certis International (Pte) Ltd, Singapore, a fully owned subsidiary of Temasek Holdings (a private investment arm of the Singapore government). It has been functioning over 40 years having established in 1977 as a Colombo based private company. Currently, Certis Lanka group consists of over 9000 employees, 15 branches and 5 companies.

1.1.1 Vision:

- To be the premier service provider in loss prevention, secure Logistics and caring services in Sri Lanka.

1.1.2 Mission:

- To provide our customers peace of mind, by setting the highest professional standards in providing solutions in loss prevention, secure logistics and caring services in Sri Lanka whilst giving our employees a challenging, rewarding and fulfilling career.

1.1.3 Certis Lanka Security Solutions (Pvt) Ltd.

Providing integrated security solutions tailored to the specific needs of organizations. They are the security partner of choice for major financial institutions, shopping malls, international hotel chains, diplomatic mission and many more.

1.1.4 Certis Lanka Secure Logistics (Pvt) Ltd.

Providing experienced personnel and fleet of teller made vehicles equipped with GPS tracking, monitoring systems provide the assurance of cash & valuables.

1.1.5 Certis Lanka Technology & Consultancy (Pvt) Ltd.

Providing comprehensive protection that combines intelligence, innovation and performance. They provide security automation solutions for residential and commercial applications.

1.1.6 Certis Lanka Courier Services (Pvt) Ltd.

Providing efficient courier services to both individuals and corporates in door- to-door delivery with online tracking. Their team of skilled and experienced professionals stationed island-wide are connected to their main operations center 24 hours a day to extend an impeccable customer service.

1.1.7 Certis Lanka Home Nursing & Swift care (Pvt) Ltd.

Providing a wide range of services which meet various demands of the global trends in the health care sector and aims to be the productive contributor towards uplifting the healthcare sector of the country.

1.2 Organization Structure

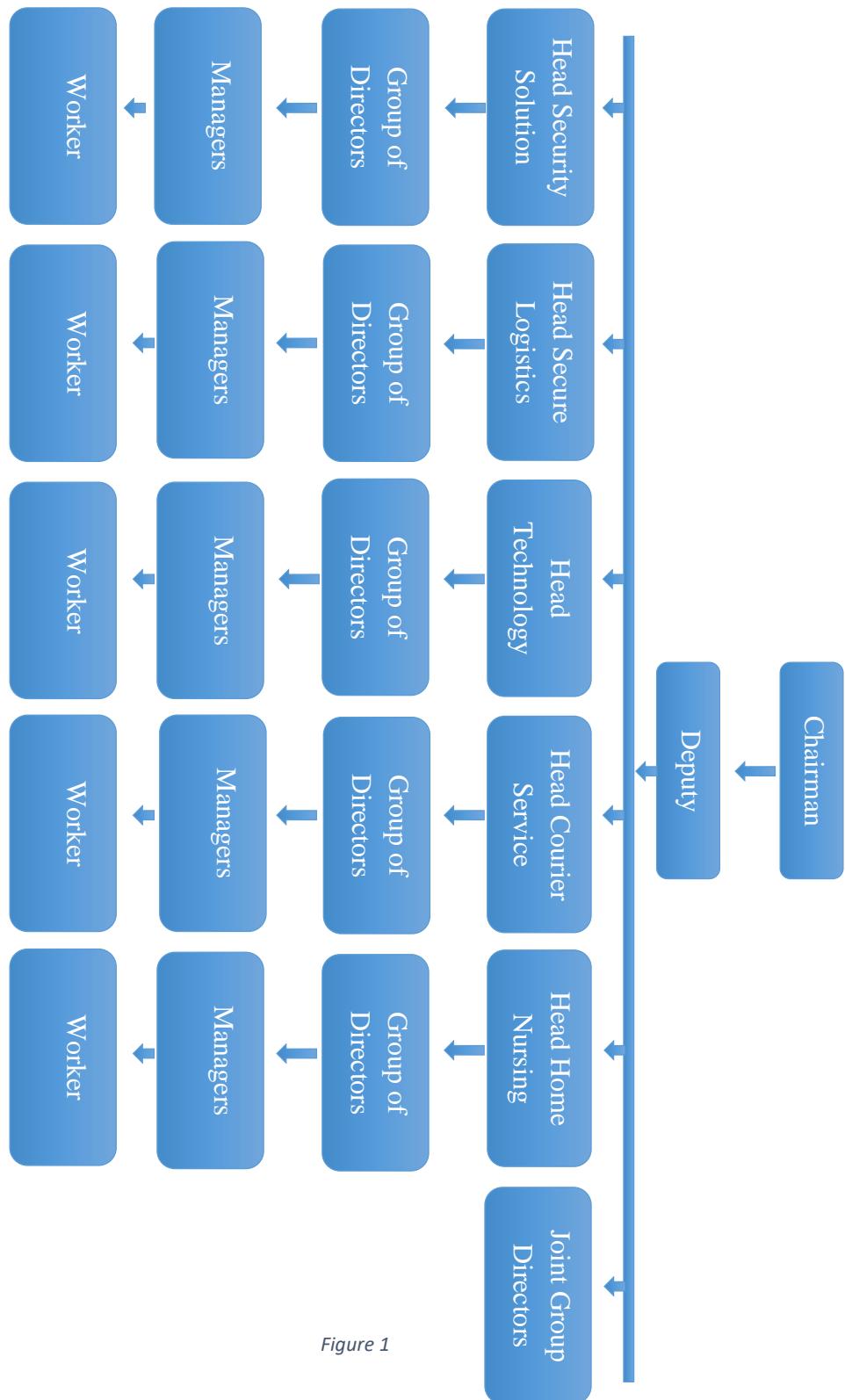


Figure 1

1.3 Current Operations in Organization

- Operations of the company can be divided mainly into five parts.
 1. Security Solutions
 - Providing experienced security partners for major financial institutions, shopping malls, hotel chains.
 2. Secure Logistics
 - Cash and valuable transport
 - ATM replenishments
 - Cash management and processing
 - Cash sorting
 - Armed guard services
 3. Technology & Consultancy
 - CCTV solution
 - Intrusion detection and alarm systems
 - Fire detection and protection systems
 - Metal and explosive detection
 - Home automation systems
 4. Courier Services
 - Door-to-door delivery services
 5. Home Nursing & Swift care
 - Home nursing services
 - Industrial nursing services
 - Ambulance services
 - Doctor on call 24x7

1.4 Users and Responsibilities of Organization

Current HR System and the manual system have two types of users. According to the business, they are responsible for different types of use cases and operations.

1. HR System user

HR user is responsible for managing all the operations related to the employees.

Company wants to manage all the details related to the employees and, responsible for managing all the salary related operations.

- Register all the recruitments.
- Update their details.
- Delete employees from the main system.
- Manage employee trainings.
- Manage employee Leaves
- Manage employee attendance
- Manage payrolls
- Manage employee welfare accounts

2. Welfare system manager

- Check whether an employee can receive a loan.
- Check whether an employee can guarantee for another employee.
- Register all the approved loans.
- Manage all recovery process of loans.

1.5 Problem Definition

As a group of 5 companies, Certis Lanka Group is experiencing some problems with managing over 9000 employees effectively. Currently, Company has a HR System without having a Welfare Management Facility and Loan Management Facility. So that, lots of problems are raised.

- Not having a centralized data collection for all centers.

HR System details are stored in one database, but it is inside a one branch. Also, the person who manage all the welfare details is inside another branch. There is not having a centralized database presently, they use a shared spreadsheets in order to share details.

- Problems with using spreadsheet system.

The amount of time spent comparing versions, entering data, re-entering data mean that any single spreadsheet is now ripe for errors and teams are subject to unnecessary peaks in activity to support the close workload.

- No backups for welfare details.

Since there is not a computerized system for welfare management or having a HR system without a welfare management system, Data are stored only inside a shared spreadsheet. It is more dangerous than having a system even without a backup. Data is the most important asset for business. Studies show that 60% business can't survive even 6 months after data loss (Rikhi 2021).

- Data missing with loan management and recovery process.

Since there is not a centralized database, some data is not updated on the same time. Therefore, some loan recovery details could be missed in the recovery process of loans because there is no connection in between HR system and the Welfare manual System.

- Cannot take business decisions about welfare accounts.

The manual system currently using inside the company for welfare purposes is not able to generate reports and cannot understand future trends with employee's loan requests.

1.6 Project Objectives

- Implement an Employee Management System in order to fulfil all the task related to personal tracking, Payroll, and Welfare Management.
- Creating a complete centralized database for all the Employee Management Operations.
- Implement a suitable data backup process for company employee data.
- Convert the current shared spreadsheet system into a complete computerized system.
- Implement a system to take quick business decisions based on past data.
- Reduce data losses and miss interpretations.

1.7 Proposed Solution

The best software solution for this problem is implementing an Employee Management System including welfare management system. As a solution, we have decided to implement desktop application. Basically, this software consists of three main components.

1. Personal Tracking

This is for tracking all the employees' details and related details. (Dependents, Attendance, Leaving, Training)

2. Payroll Management

This component is for processing all the salary related functions inside the company. (No pay, EPF, ETF)

3. Welfare Management

This is for managing all the welfare accounts related to all employees and managing all loan details and recovery details.

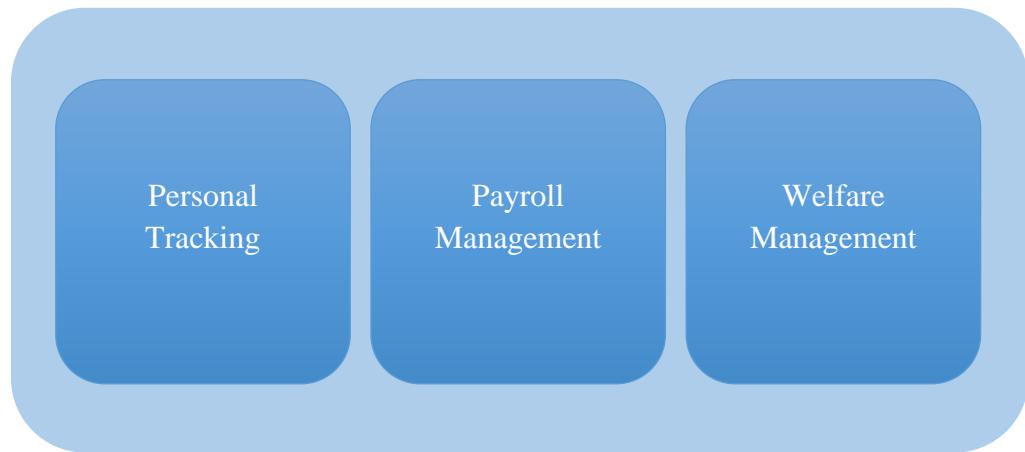


Figure 2

In our proposed solution, there three types of users.

- Admin user
- Employee system manager [Personal Tracking, Payroll Management]
- Welfare system manager [Welfare Management]

According to the above user types, this system has various types of features and operations.

1. Functional Requirements:

1. Employee System User

- User can add new employees to the system based on their company.
- Can update their details if some changes have been made.
- Can delete those employees if an employee is no longer for the company.
- User can view all the employees according to his requirements.
- Can track their dependents details.
- Can track attendance details of employees.
- Can track leavings of all employees.
- Can manage all trainings related to employees.
- User can create new payroll accounts for new employees.
- User can create new Welfare accounts for new employees.
- Can Update their payroll details and view their details.
- Can add allowance to their salaries and can deduct welfare amounts and other required deductions.

- Employee User can generate following types of reports.
 - Monthly recruitments Reports.
 - Monthly Leaving Reports.
 - Monthly & Daily attendance Report.
 - Monthly Salary Report.

2. Welfare System User

- User can check whether an employee can receive a loan payment.
- Can view each employee profile and all details.
- Can view all guarantors' profiles and details.
- Can check whether an employee can guarantee for another employee.
- Can Calculate all values related to the loan process.
- Can add new loan after approval process.
- Can track all loan recovery details from payroll component.
- User can generate following types of reports.
 - Monthly approved loan report.
 - Monthly loan recovery report.
 - Monthly not recovered loan report.
 - Monthly finished loan report.
 - Individual loan report.

3. Admin User

- Can manage all the Employee System Users and Welfare Users.
- User can generate following types of reports.
 - Monthly Loan report.
 - Monthly recruitments reports.
 - Monthly Salary report.

2. Nonfunctional Requirements:

1. Higher Security

- Three types of users must be able to recover their password.
- User must change their password after first login.
- One user type cannot access another type of user activities.

2. Usability

- Users of this system are businesspeople not the people with IT knowledge. So newly developed system must be able to easily understand.

3. Performance

4. Scalability

- This organization currently operates more than 9000 employees parallelly. But in the future, system should be able to handle more employees than now. Therefore, newly developed system must be able to easily scalable.

1.8 Summary

Certis Lanka is a Group of companies which provides collection of security solutions to their customer. As a group, they want to manage their employees effectively. But the company is facing many types of problems with their current system, and with their loan management. Even though company is leading type of company, they used to proceed with manual system for loan management. Therefore, as the best software solution, in this chapter, we have discussed about what are the main occurring problems with current system and what is our solution.

Chapter 2 – Methodology

2.1 Introduction

Software development methodology is a process or series of processes used in software development. Again, quite broad but that it is things like a design phase, a development phase. So, in this chapter, we will discuss about how we can collect data from different methods, what we can use as software process model, what are the software development tools we will plan to use, testing strategies etc.

2.2 Data Collection Methods

Requirement gathering is a process of generating a list of requirements to define what a project is about and its goal. Understanding the requirements is the one of most difficult tasks faced by software engineers (Business Analysis). So, these are the techniques that we can use to successfully gather requirements.

1. Interviews

Interviews are the most common way of gathering requirements from the users and the stakeholders. It is very important creating a great software solution. Since this system is used by a smaller number of users. For this project, we can use two types of interviews.

- One on one interviews.
- Group interviews.

2. Observations

By observing users, we can identify a process flow, steps, pain points and opportunities for improvement. These observations can be passive and active. For this project, we can use these two types of observations techniques.

- Active

This is more effective at getting an understanding of the existing business process.

- Passive

This is better for getting feedback on a prototype when we want to refine requirements.

3. Brainstorming

This is a common technique used early in a project. With this, we can gather as many ideas as possible from the users to identify, categorize and opportunities quickly.

2.3 Software Process Model

Software Processes is a coherent set of activities for specifying, designing, implementing, and testing software system. Software Process Model is an abstract representation of the software development cycle that presents a description of a process from some perspective.

For this software solution, we have decided to build this system according to the Iterative Incremental Process Model. In the Iterative Incremental model, process starts with a simple implementation of a small set of the software requirements and iteratively enhances the evolving versions until the complete system is implemented and ready to be deployed.

This model does not attempt to start with a full specification of requirements. Instead, Development begins by specifying and implementing just part of the software, which is then reviewed to identify further requirements. This process is then repeated, producing a new version of the software at the end of each iteration of the model.

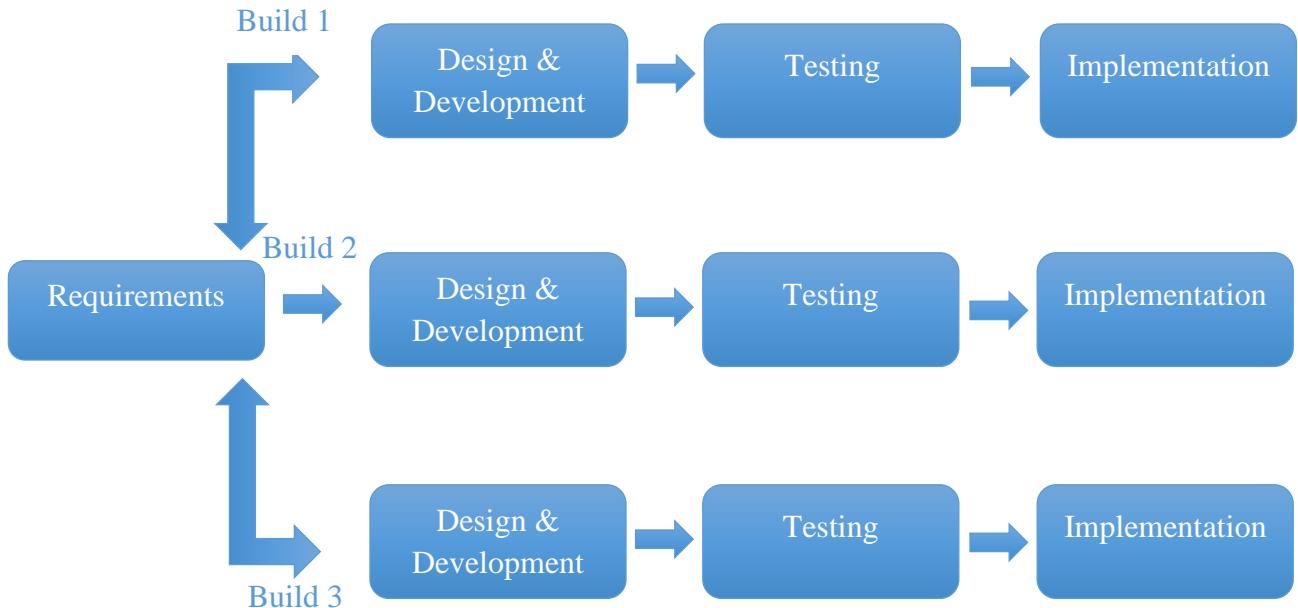


Figure 4

Following are some advantages of using Iterative Incremental Software Process Model.

- Risk can be identified and resolved during each and every iteration.
- Testing and debugging during smaller iteration are easy.
- Parallel development can be planned, and progress can be measured.
- Some working functionalities can be developed early.
- For every increment, operational product is delivered.

2.4 Software Development Tools

A software development tool is a computer program utilized by software developers to create, maintain, edit, support, and debug other programs, frameworks, or applications. For this software solutions, we have decided to use Java Programming language and following types of development tools.

- **Asana:**

Can be used to management project tasks and teammates. Asana is a software platform designed to improve team collaboration and work management. It can be used to manage projects and tasks in one tool. Teams can create projects, assign tasks to teammates, specify deadlines, and communicate about tasks directly in Asana platform.

- **Figma:**

Can be used to design the interfaces of the application. Figma is a collaborative web application for interface design, with additional offline features enabled by desktop applications.

- **GitHub:**

Can be used to control the versions of the application while working as a team. GitHub is an internet hosting service for software developments and version control using git.

- **NetBeans:**

Can be used to develop main application using java programming language. It is an open-source integrated development environment supports of all java application types (SE, ME, EE). This allows applications to be developed from a set of modular software components.

- **MySQL:**

Can be used to create and maintain the database. MySQL is an open-source relational database management system which is based on SQL (Structured Query Language).

2.5 Testing Strategies

Software testing is a process of checking whether the actual software product matches expected requirements and to ensure that software solution is error free. For this software solution, we have decided to use several types of testing strategies in order to make the system error free.

1. Black Box Testing.

This testing strategy is used to find bugs and errors without knowing the internal structure of the code and backbone. So that, we can use following types of black box testing types.

- Interface testing - In order to find errors with interfaces and inputs.
- System testing – In order to check entire system at once.
- Acceptance testing (Alpha & Beta) - Since this software is for business world, as developers, we ensure that system is bug free. Alpha testing can be done by our team and Beta testing can be done by our users.

2. White Box Testing.

This strategy is used for finding errors with internal structure. So that, Knowledge of coding is required for this type of testing. Using white box testing, we can find internal security holes, errors with loops etc.

3. Nonfunctional Testing.

- Security Testing
- Recovery Testing

2.6 Implementation Plan

Implementation is the process of integrating software into company workflow. When developing a software solution for business world, there is a huge risk to migrate from one system to another system. Sometimes, it will affect financially. And it involves ensuring that the software is used effectively and efficiently. Out of many types of implementation methods, we have decided to use parallel run method.

The parallel method of implementation involves operating both systems together for a period. This allows any major problems with the new system to be encountered without the loss of data. Parallel conversion also means that users have time to familiarize themselves with the new system. And, if errors are found, user can refer to the old system to resolve the problem and make modifications to the new system thus operation can continue under the old system while the problems are sorted out. This also allows training of staff and help them to gain confidence in the new system. Therefore, Parallel Run is the best implementation plan for this software solution.

2.7 Summary

When developing a software solution, methodology performs a huge role within the developing process. Even though having better software coders, new systems cannot be implemented without having a good methodology. Therefore, in this chapter, we have discussed about things related to methodology.

As a software process model, we have decided to proceed with Iterative and Incremental approach because of the requirements. When gathering requirements, we can use different data collection methods such as interviews, observations, and brainstorming. Inside the development phase, we can use different technologies and tools to fulfil the proposal. Based on java programming language, we use different technologies and tools such as NetBeans, MySQL.

After developing the software, we must make sure that software is bug free. Therefore, we have decided to proceed with few types of testing strategies. Both black box and white box testing methods can be used to check whether our software is ready to deploy.

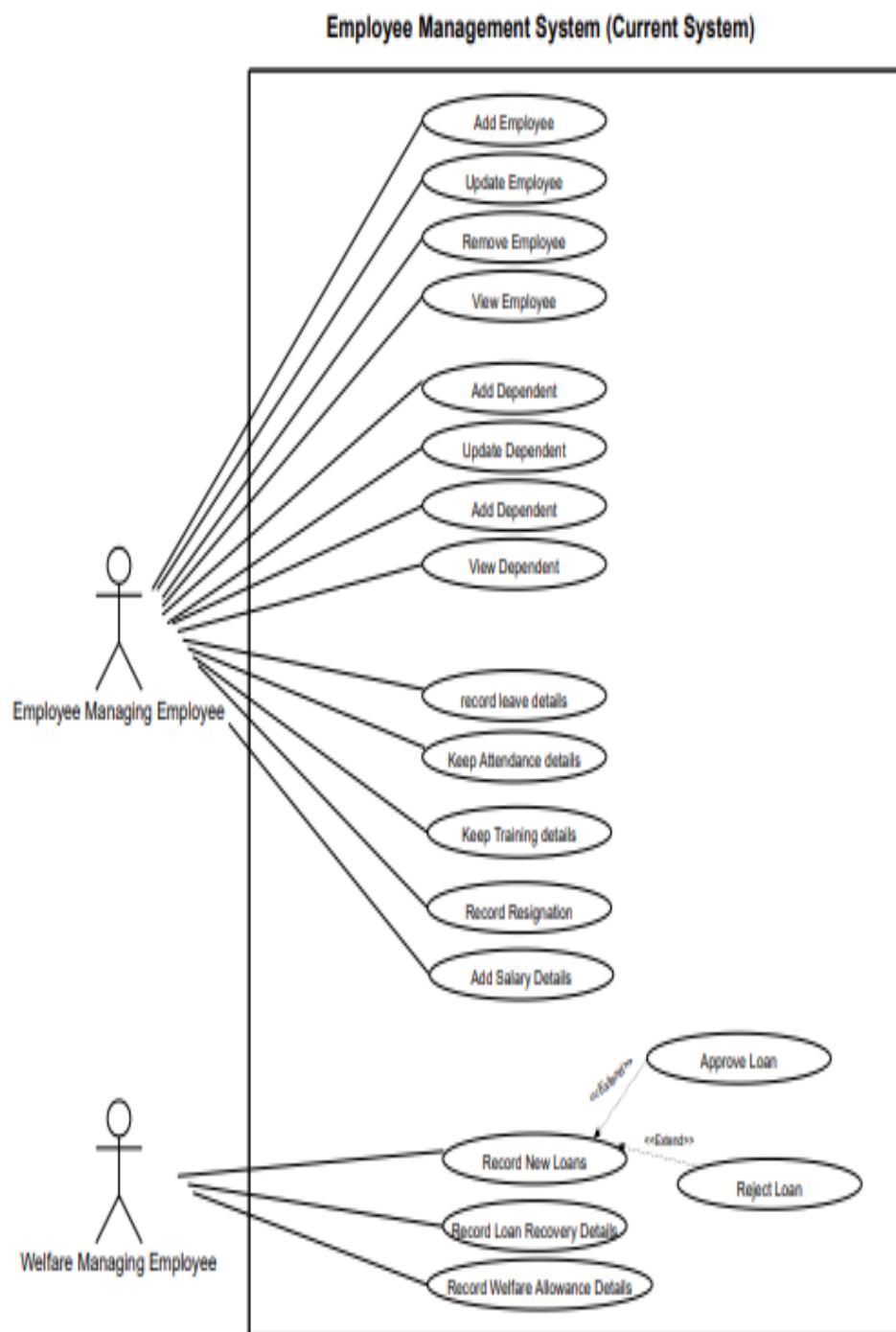
Chapter 3 – Analysis

3.1 Introduction

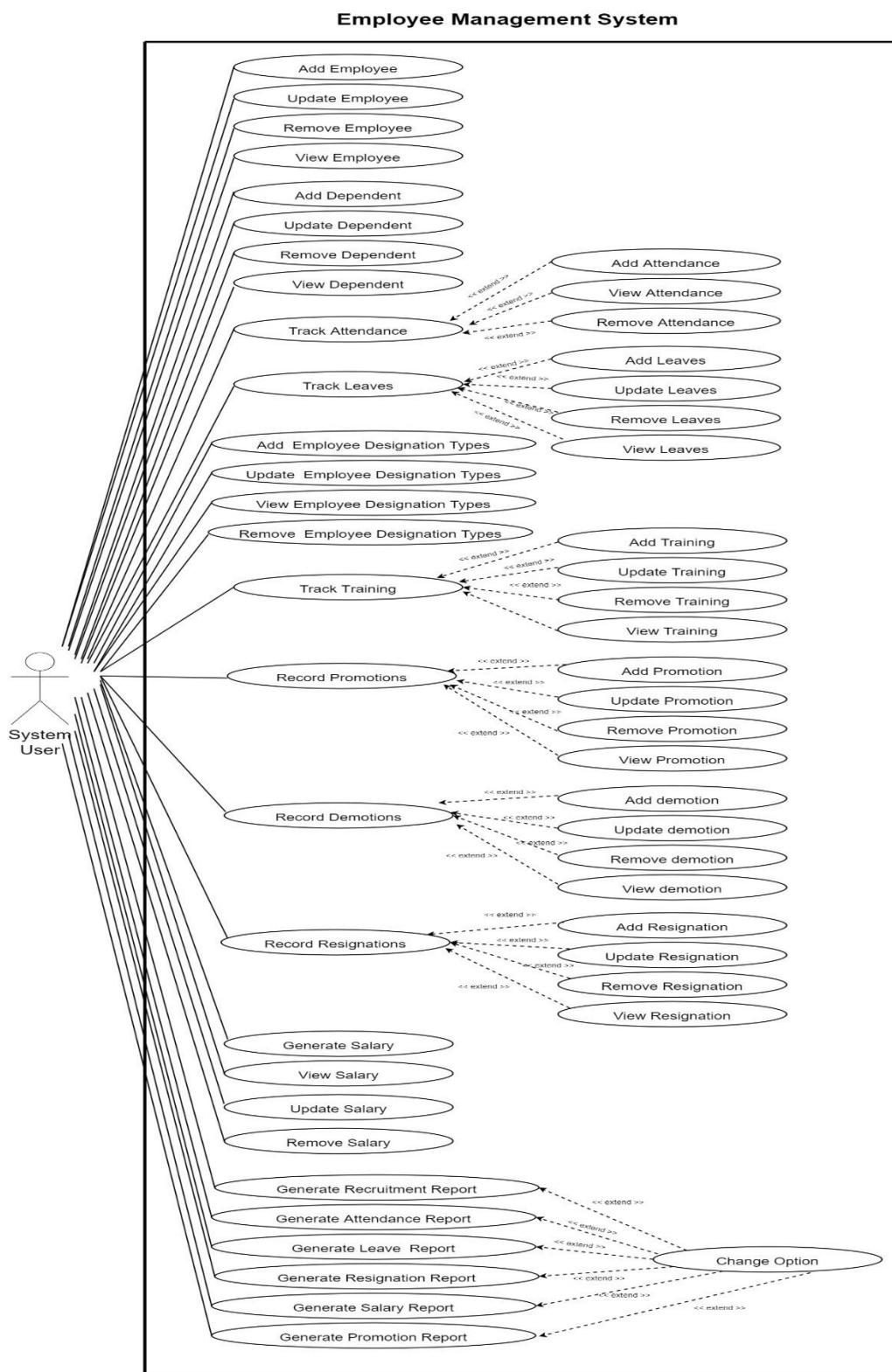
During entire software development life cycle, Again, one of the most important and crucial phases is software analysis. It is the main connection between business requirements and the software developer's perspective. The term 'Software analysis' refers to any process of translating business requirements into meaningful engineering representation that can be implemented. During the requirements gathering phase, business analysts gather all the business expectations from the software and during the designing and analyzing process, designers want to translate those business requirements into human readable representation. That is the main foundation for software developers to build a successful software solution. In this chapter, we are going to focus on designing necessary diagrams to understand the entire system and how we can represent that information that can be used by software developers.

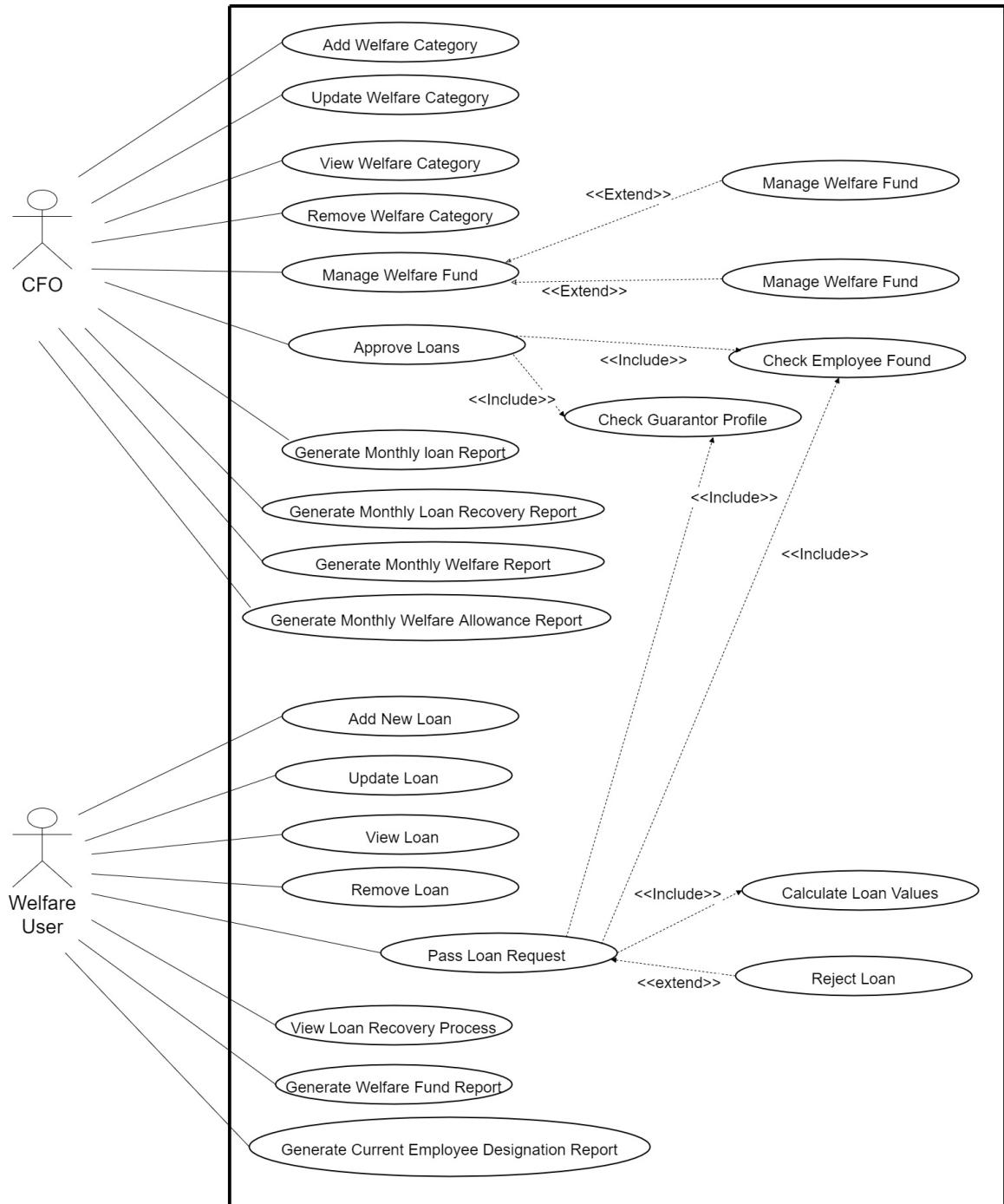
3.2 UML Diagram

3.2.1 Use Case Diagram of Existing System

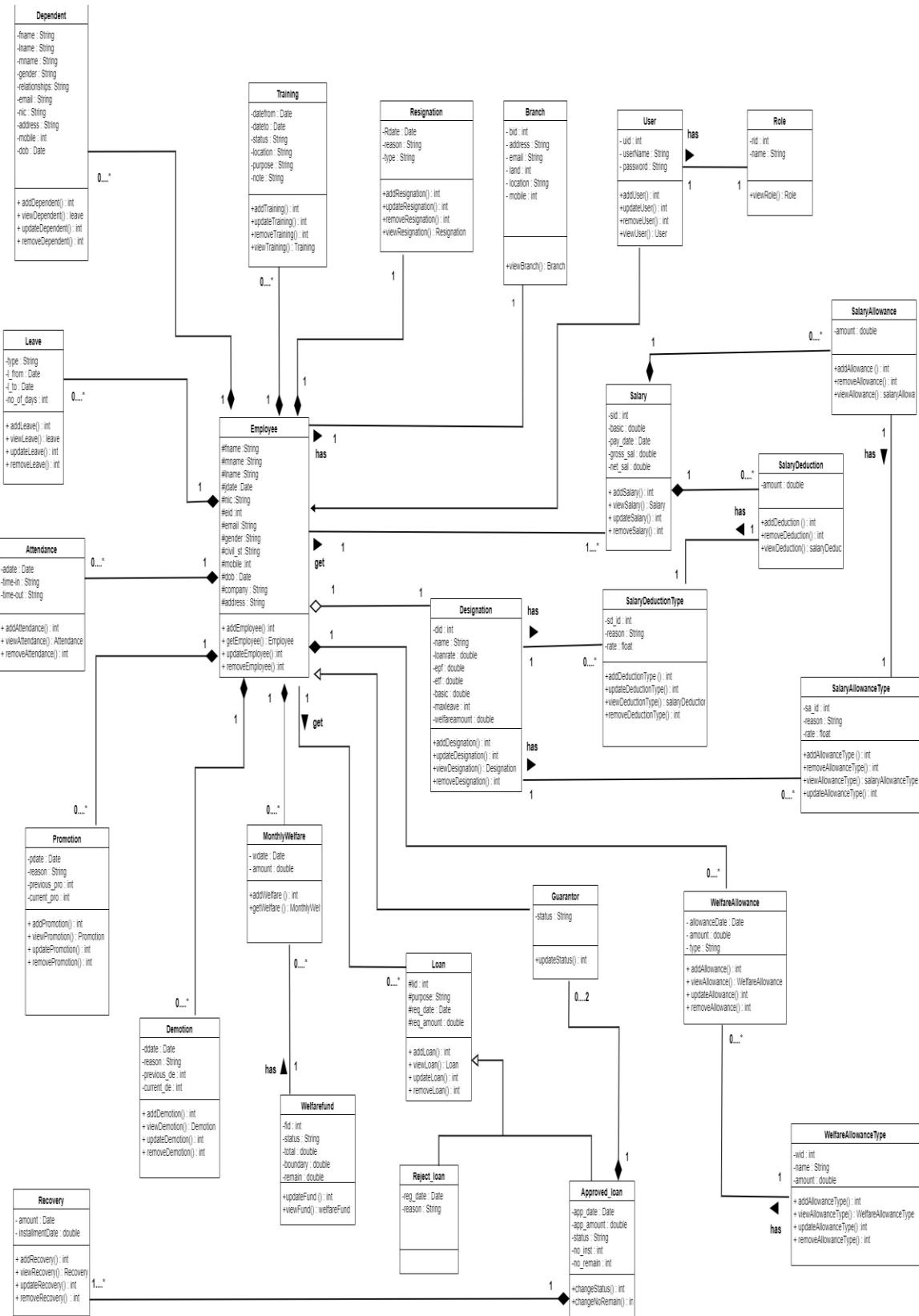


3.2.1 Use Case Diagram of Proposed System



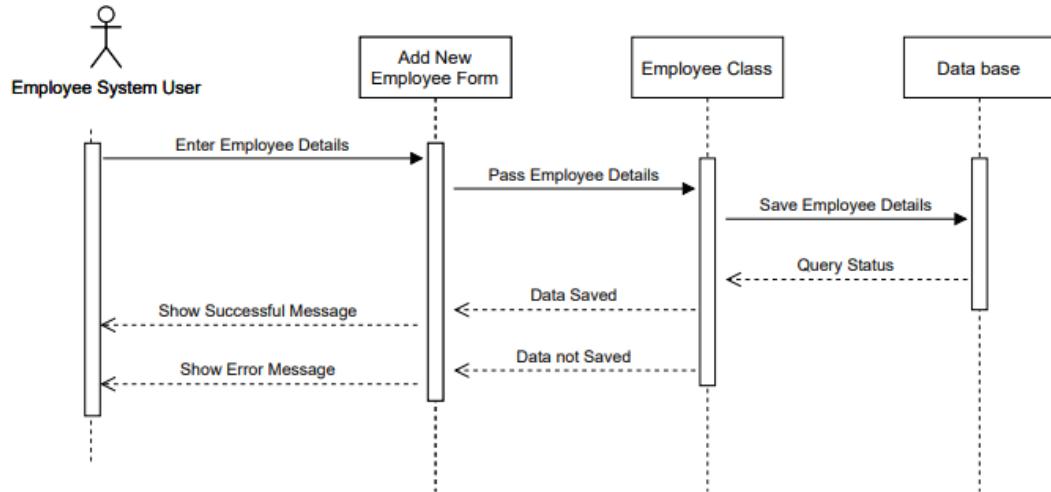


3.2.2 Class Diagram of Proposed System

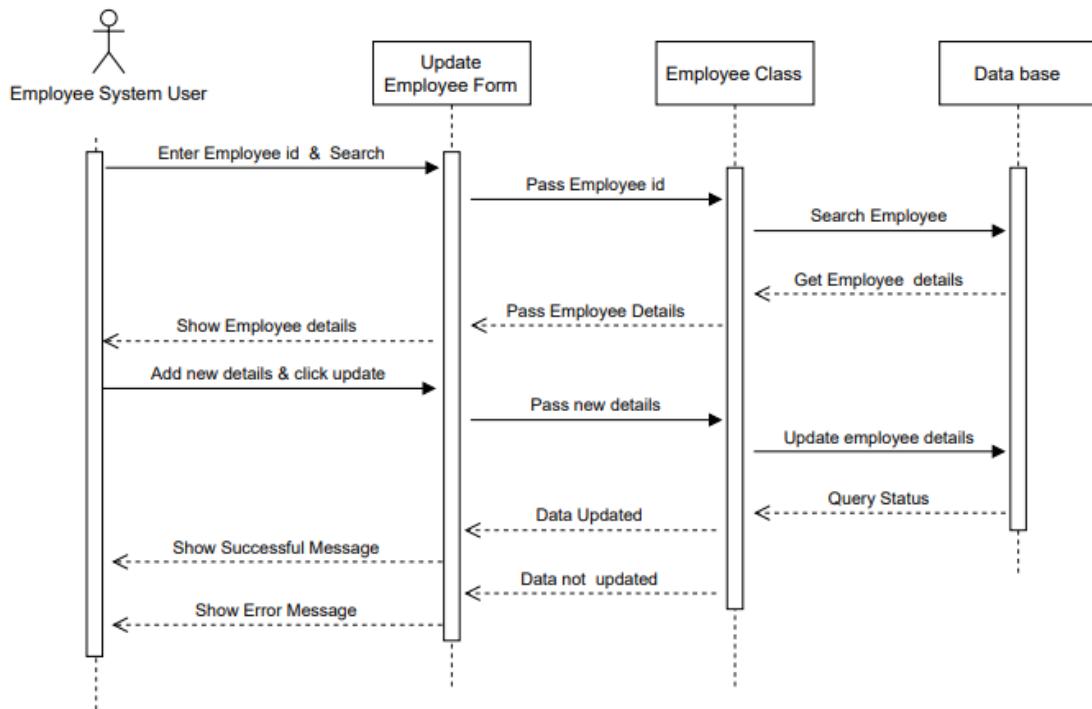


3.2.3 Sequence Diagrams of Proposed System

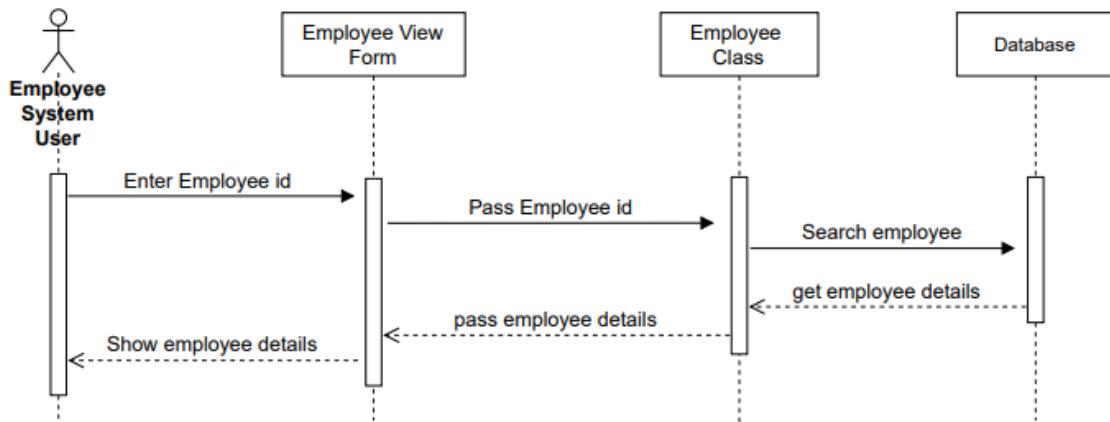
Sequence Diagrams for Add New Employee



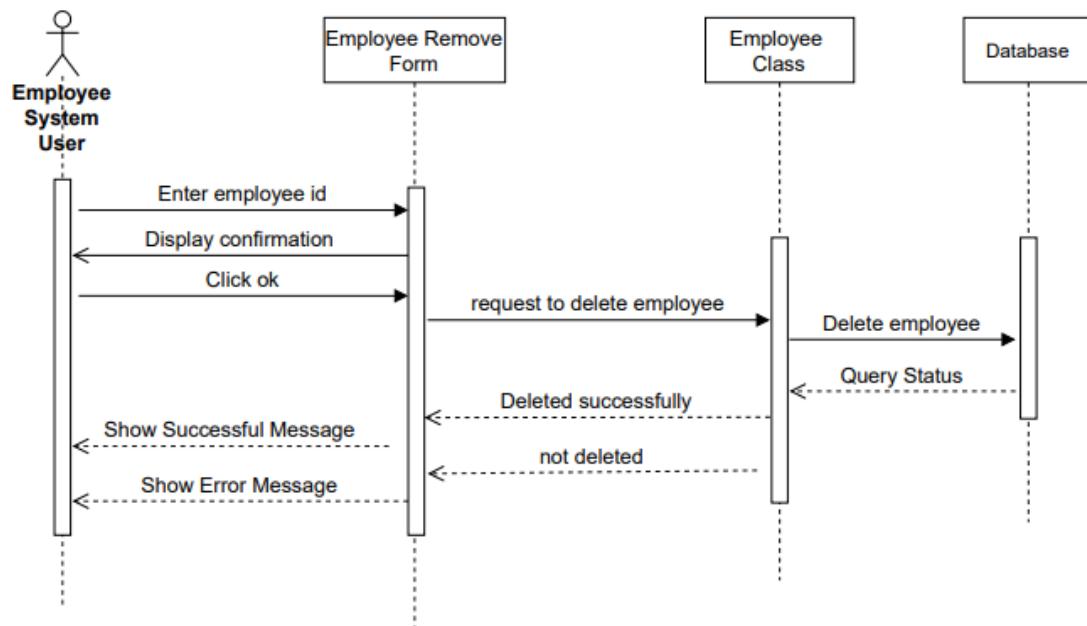
Sequence Diagrams for Update Employee



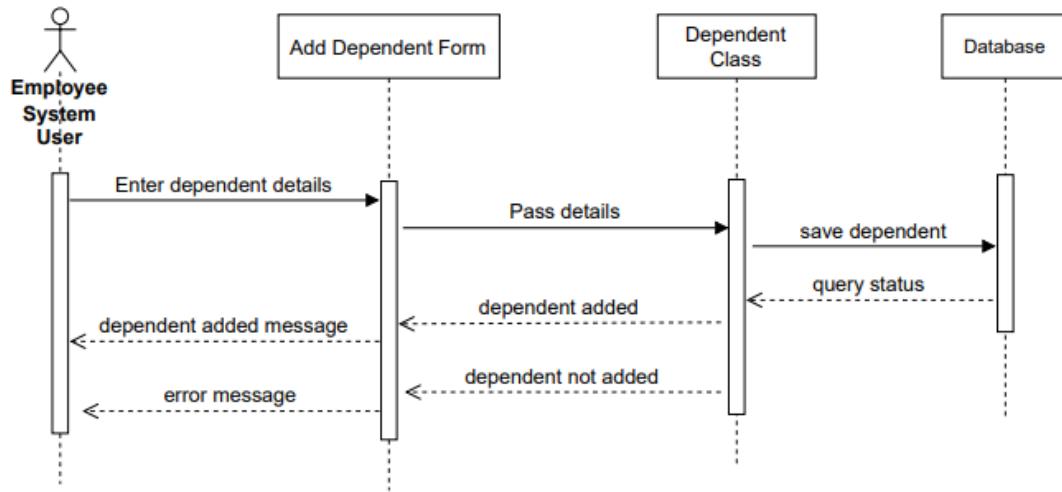
Sequence Diagrams for View Employee



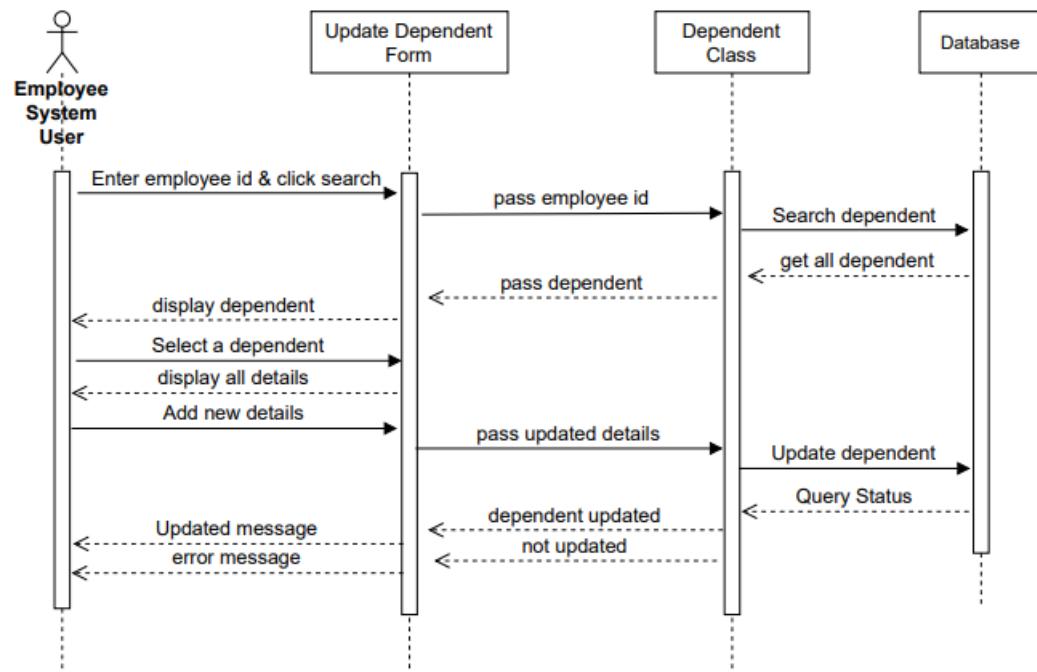
Sequence Diagrams for Remove Employee



Sequence Diagrams for Add Dependent

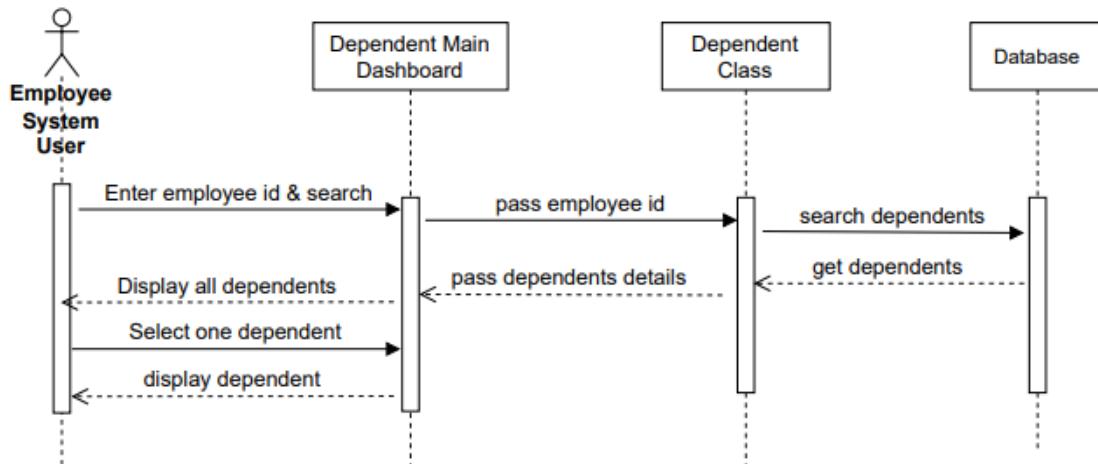


Sequence Diagrams for Update Dependent

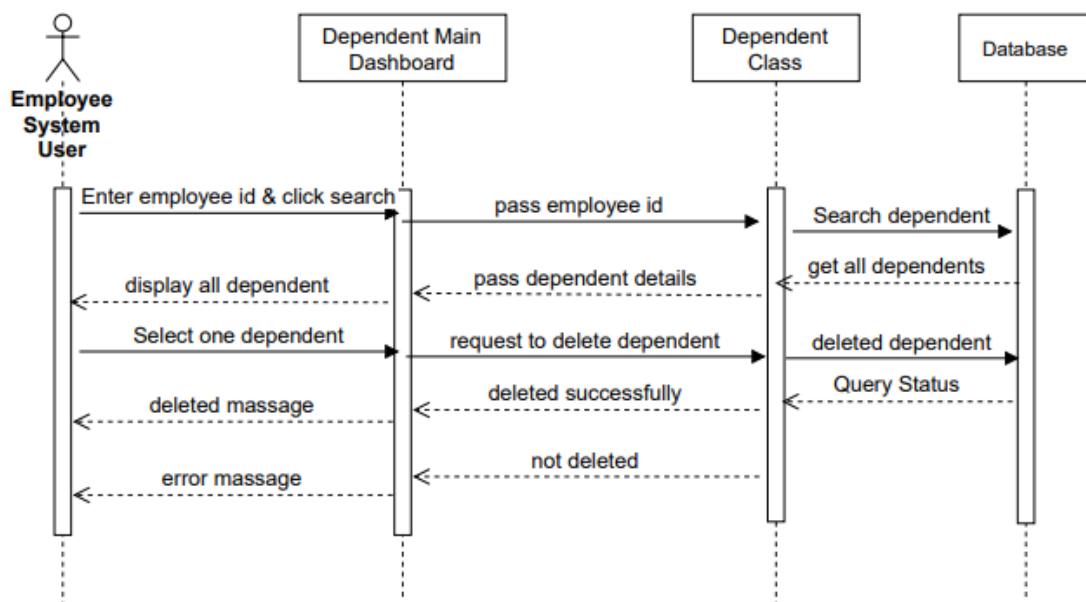


A
G

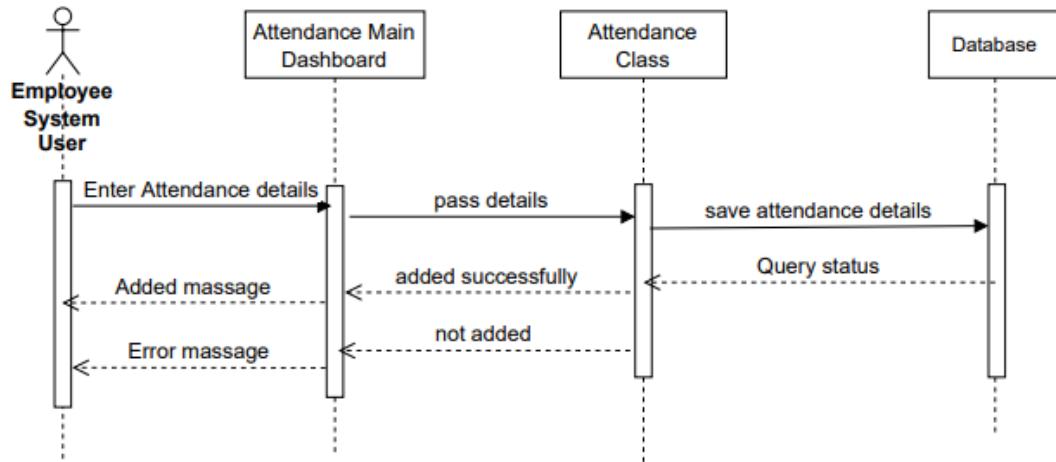
Sequence Diagrams for View Dependent



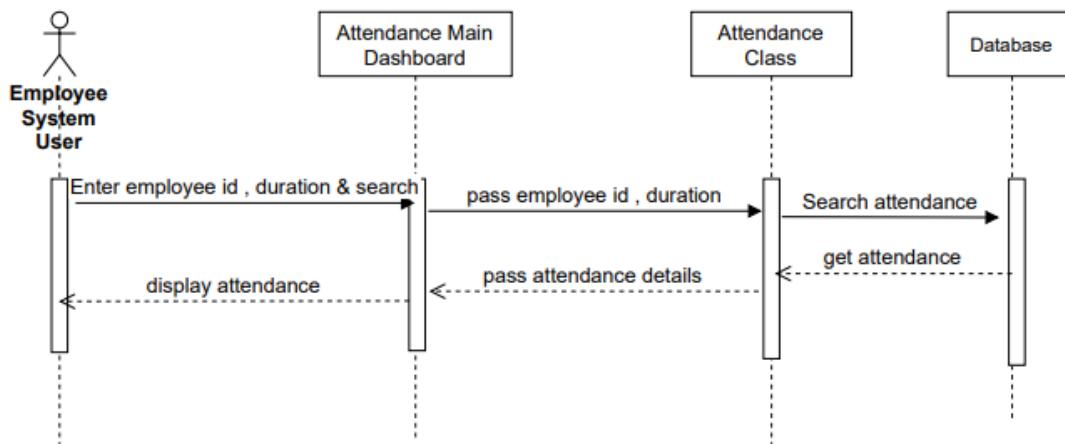
Sequence Diagrams for Remove Dependent



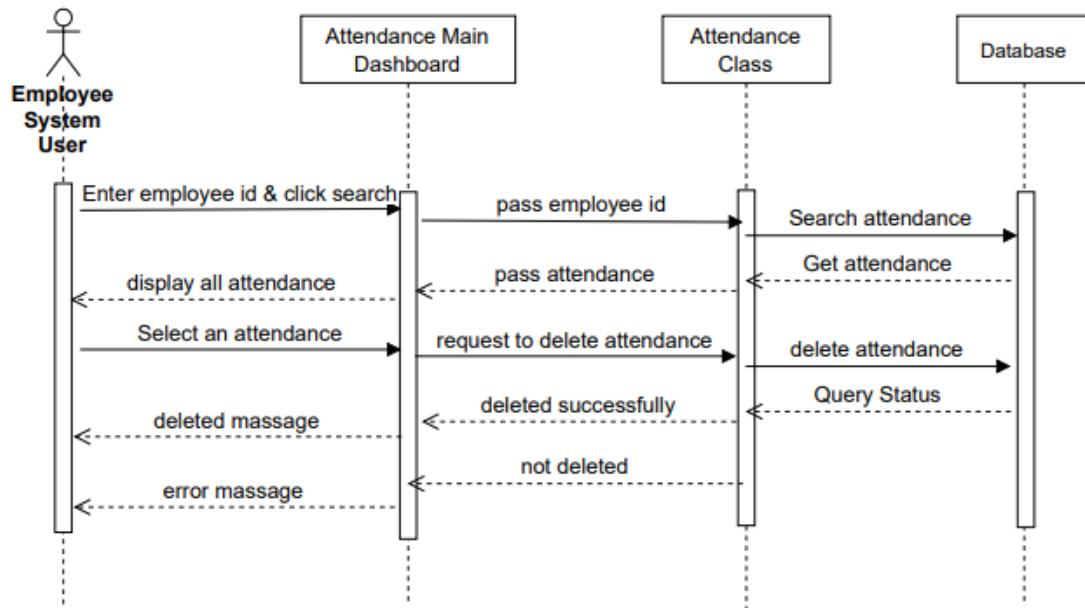
Sequence Diagrams for Add Attendance



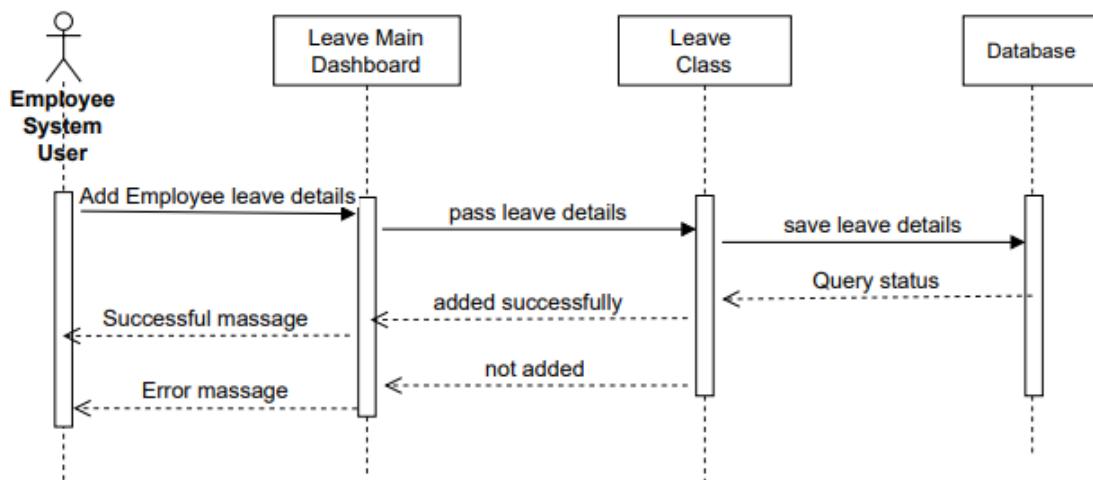
Sequence Diagrams for View Attendance



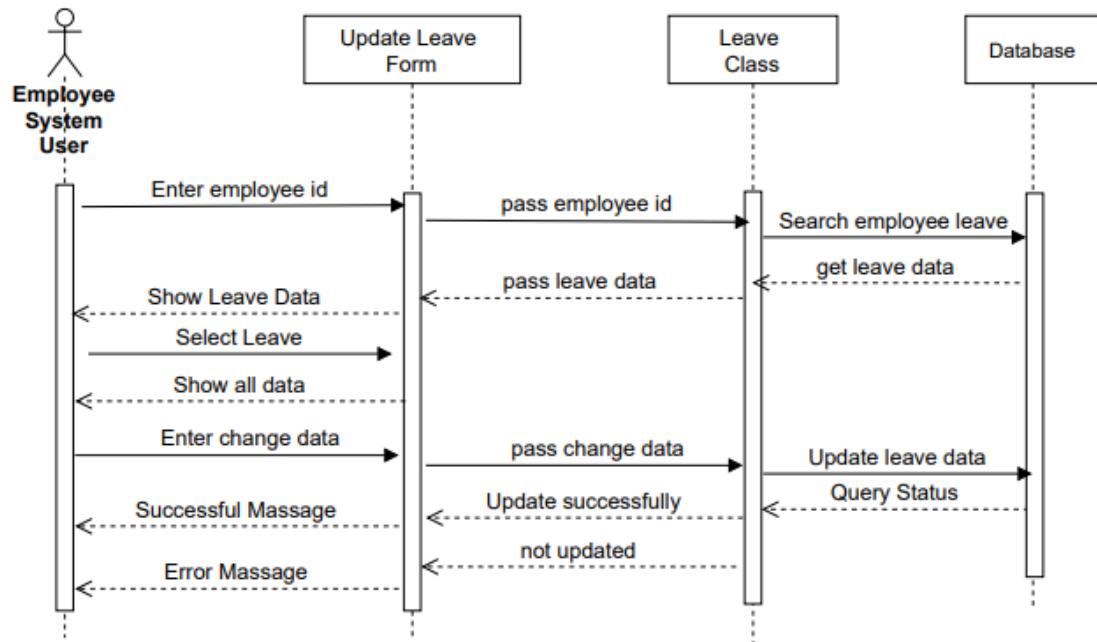
Sequence Diagrams for Remove Attendance



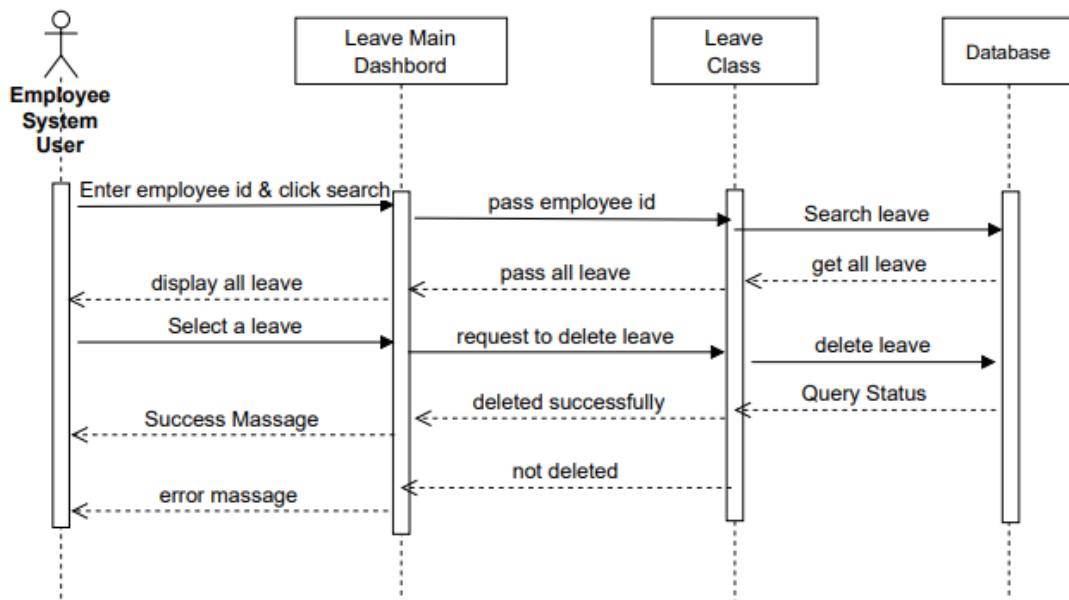
Sequence Diagrams for Add Leave



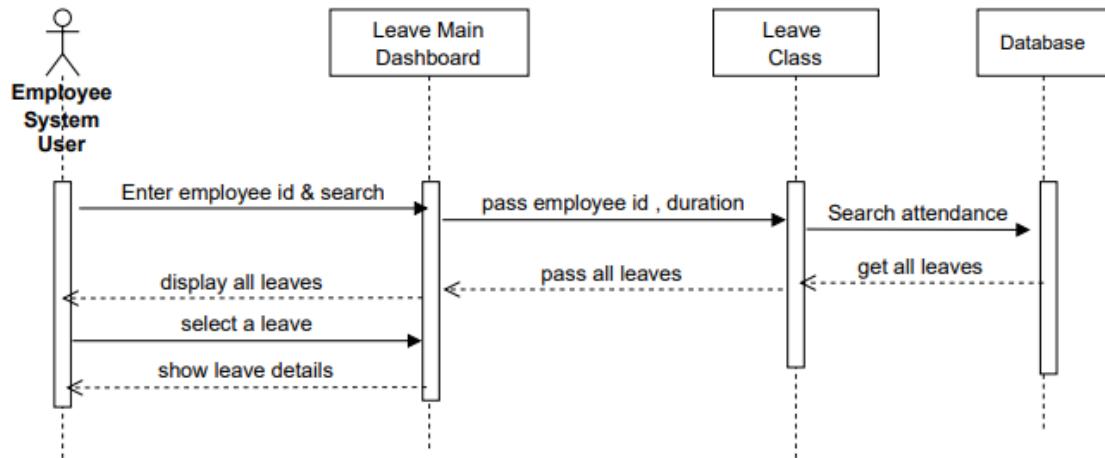
Sequence Diagrams for Update Leave



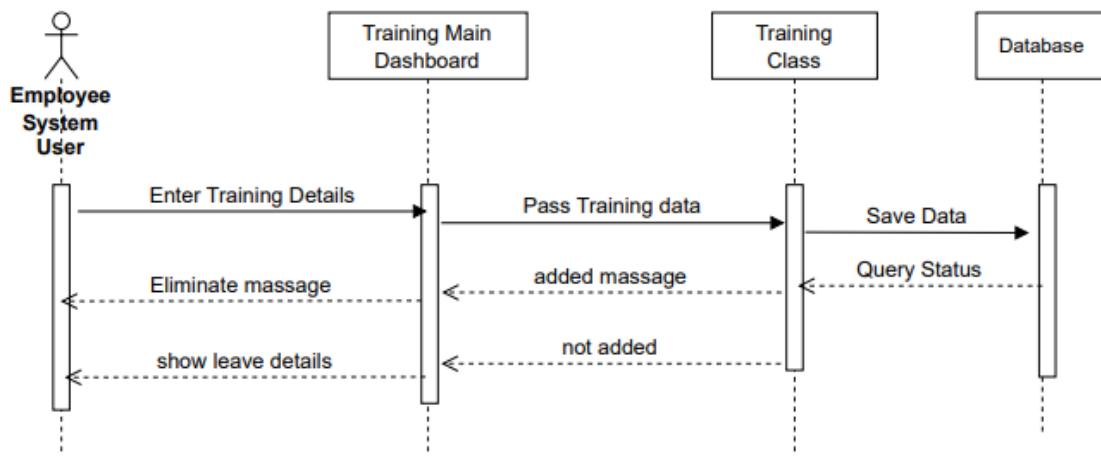
Sequence Diagrams for Remove Leave



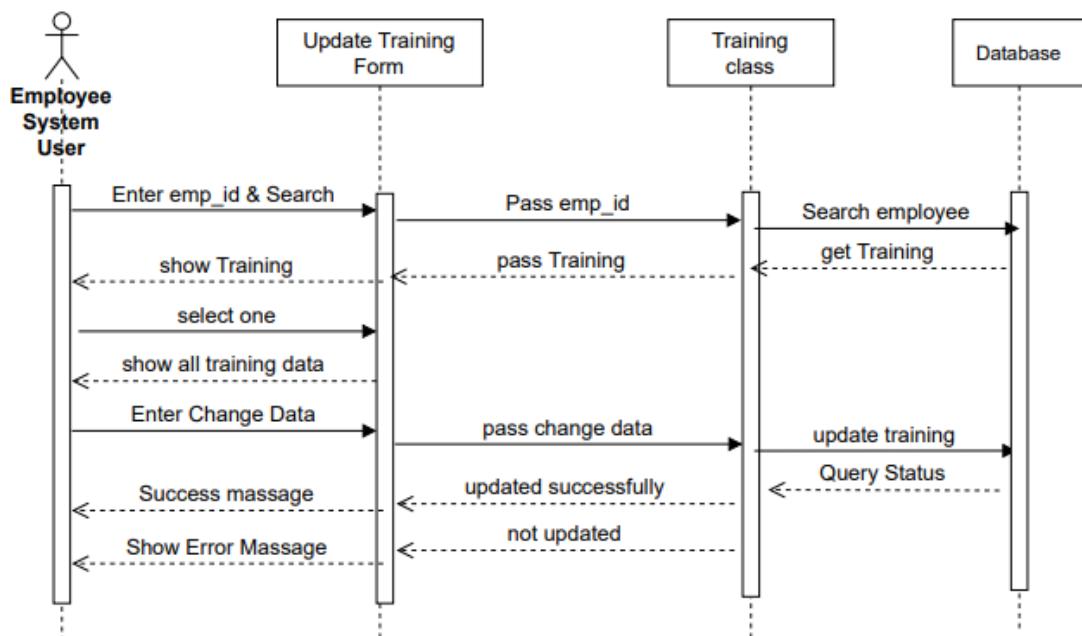
Sequence Diagrams for View Leave



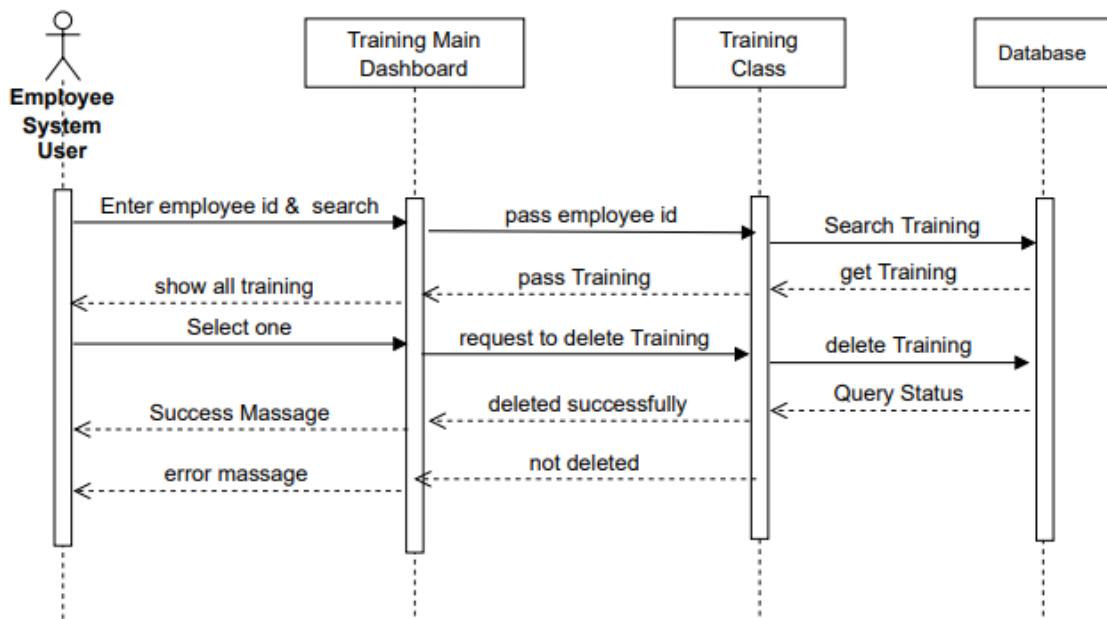
Sequence Diagrams for Add Training



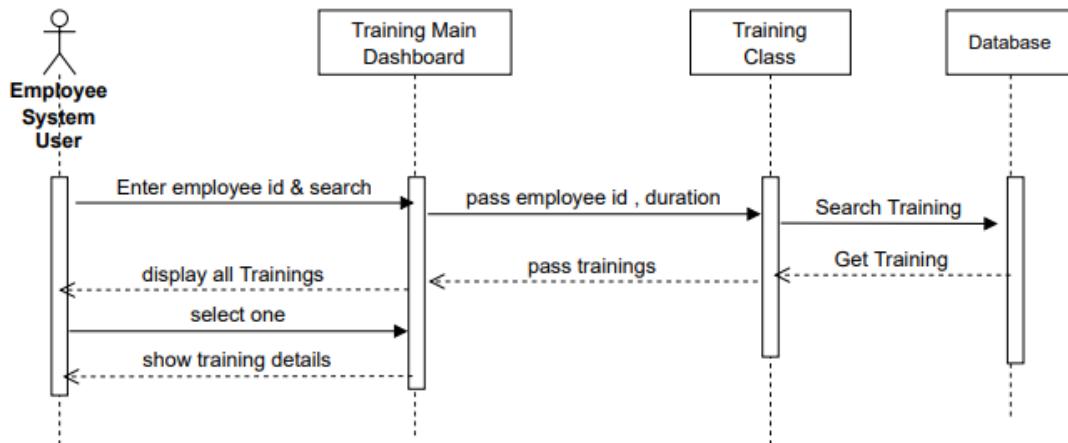
Sequence Diagrams for Update Training



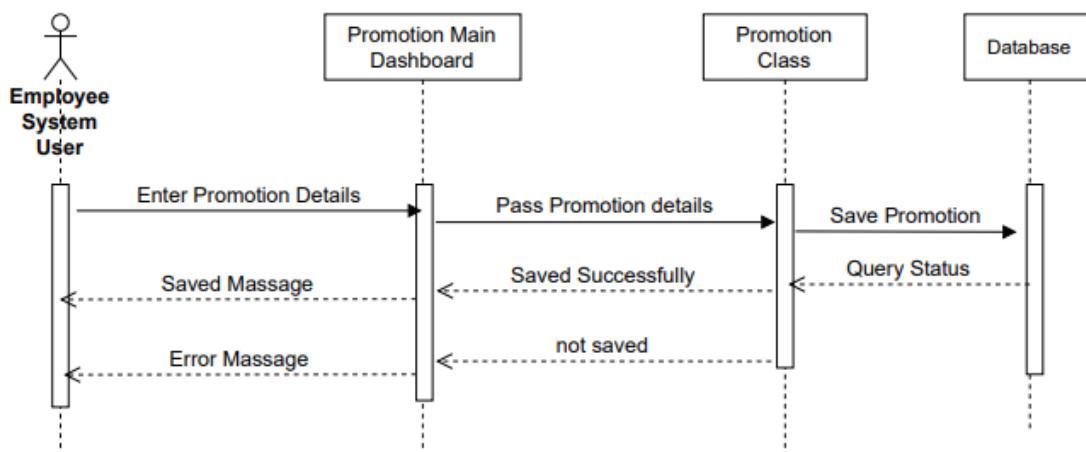
Sequence Diagrams for Remove Training



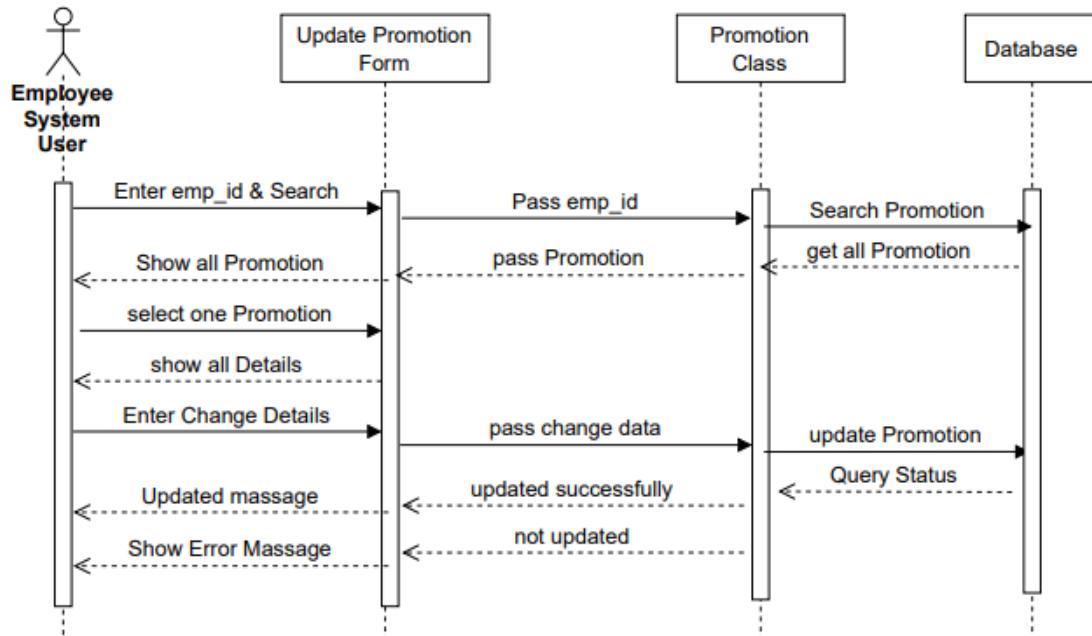
Sequence Diagrams for View Training



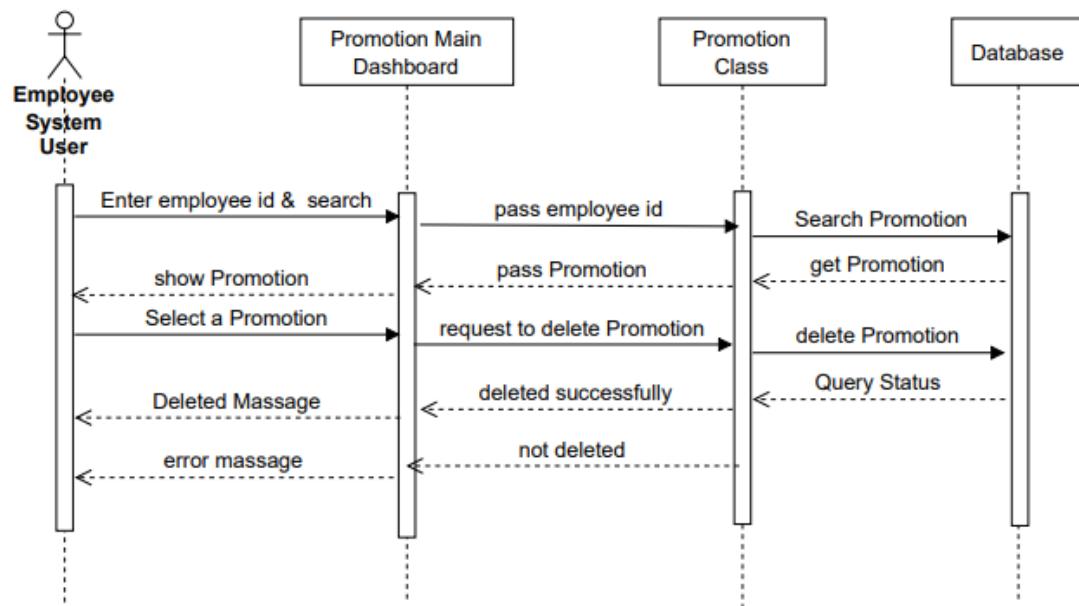
Sequence Diagrams for Add Promotion



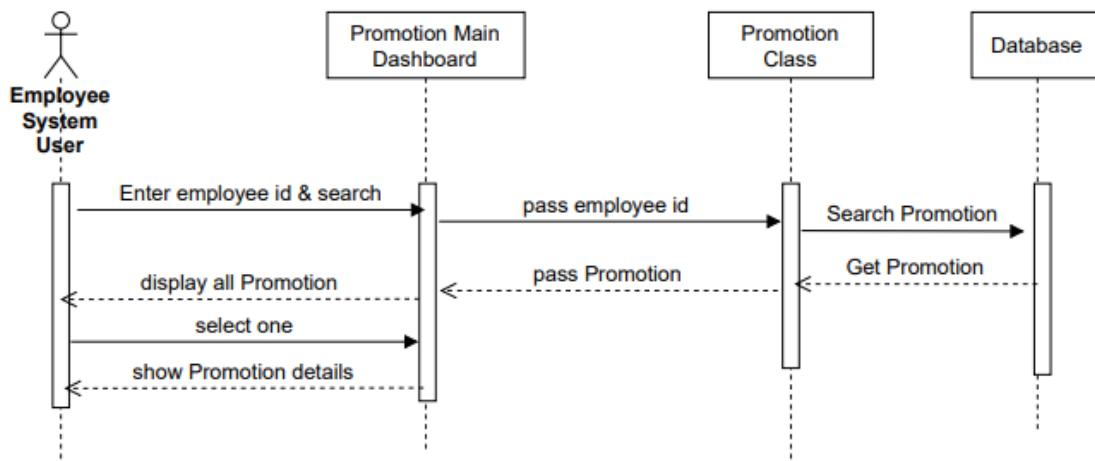
Sequence Diagrams for Update Promotion



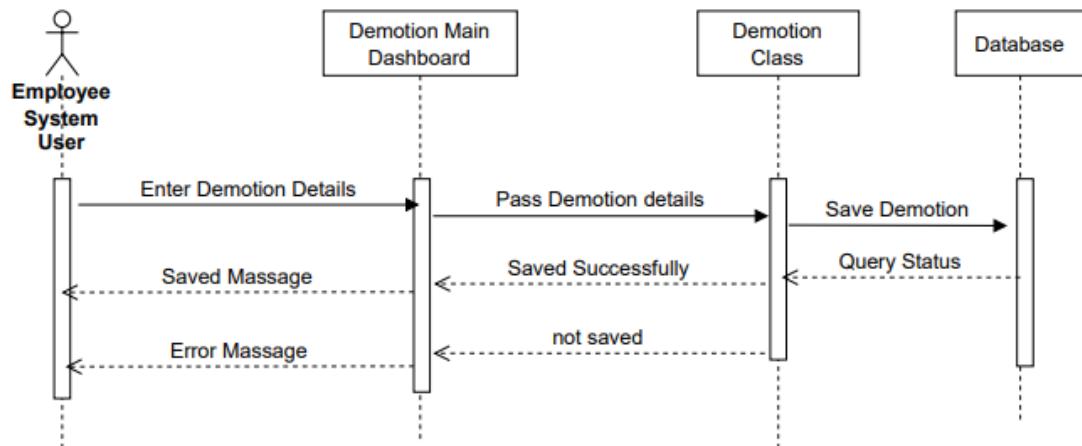
Sequence Diagrams for Remove Promotion



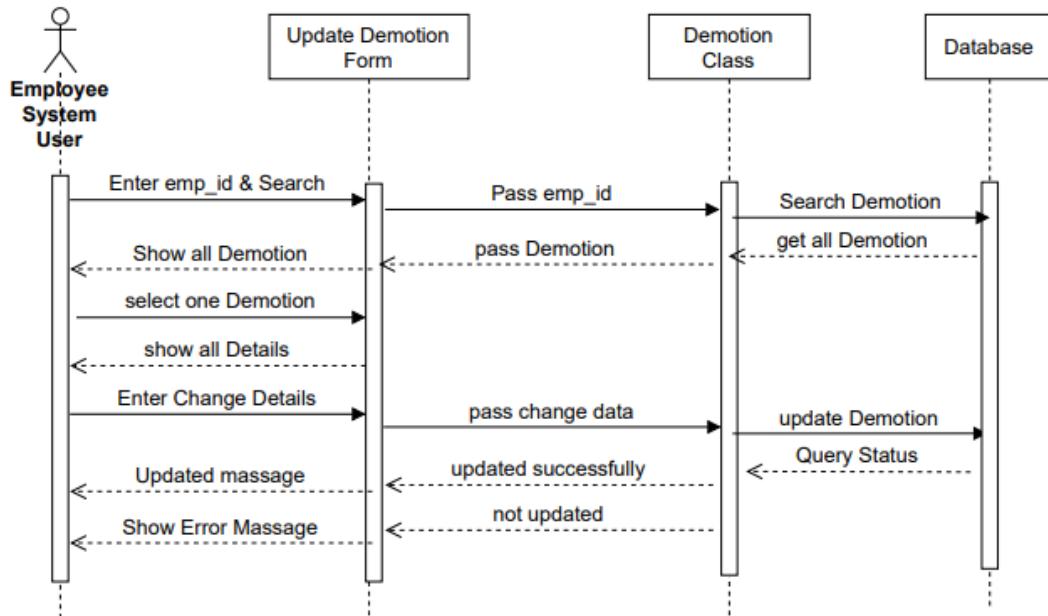
Sequence Diagrams for View Promotion



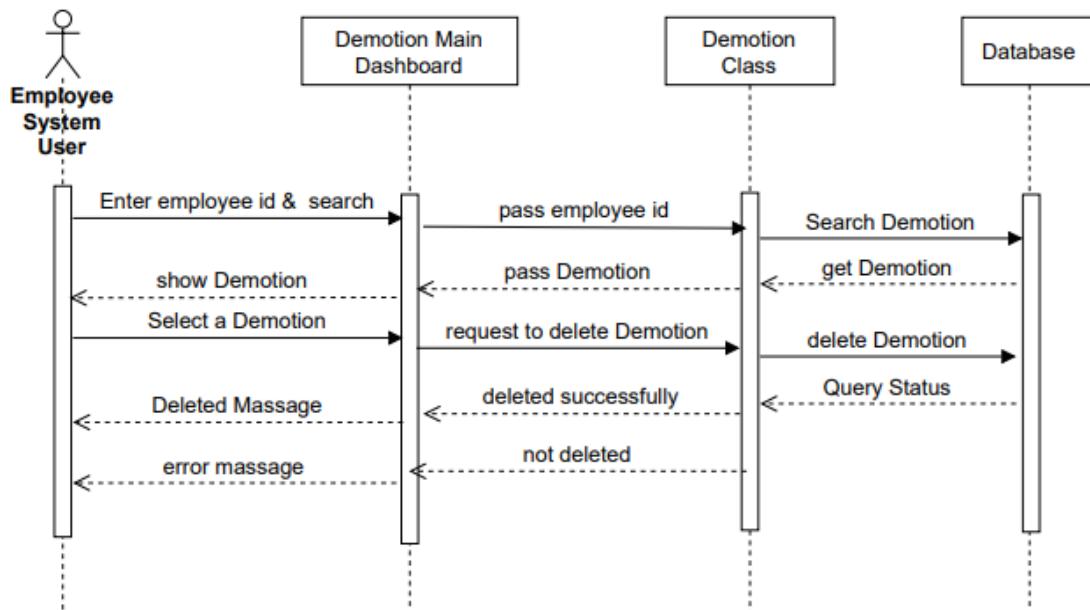
Sequence Diagrams for Add Demotion



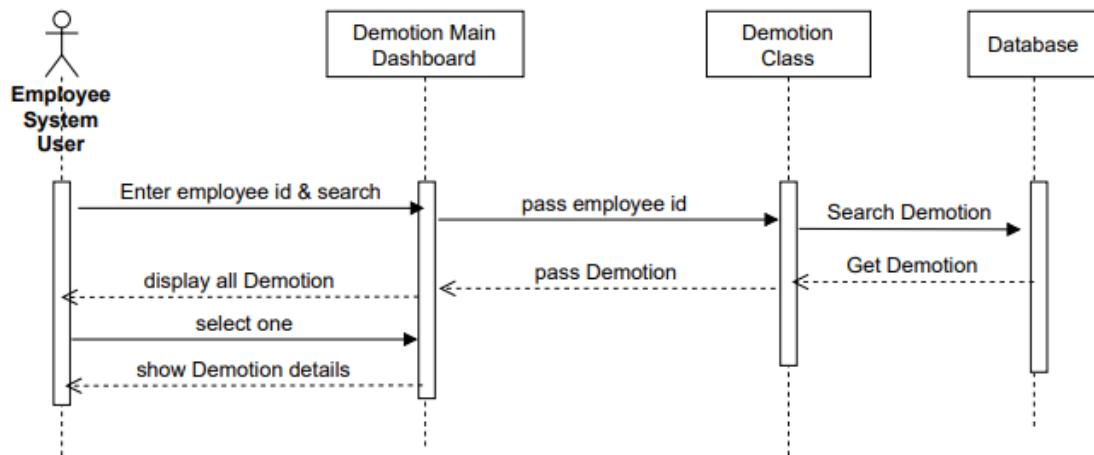
Sequence Diagrams for Update Demotion



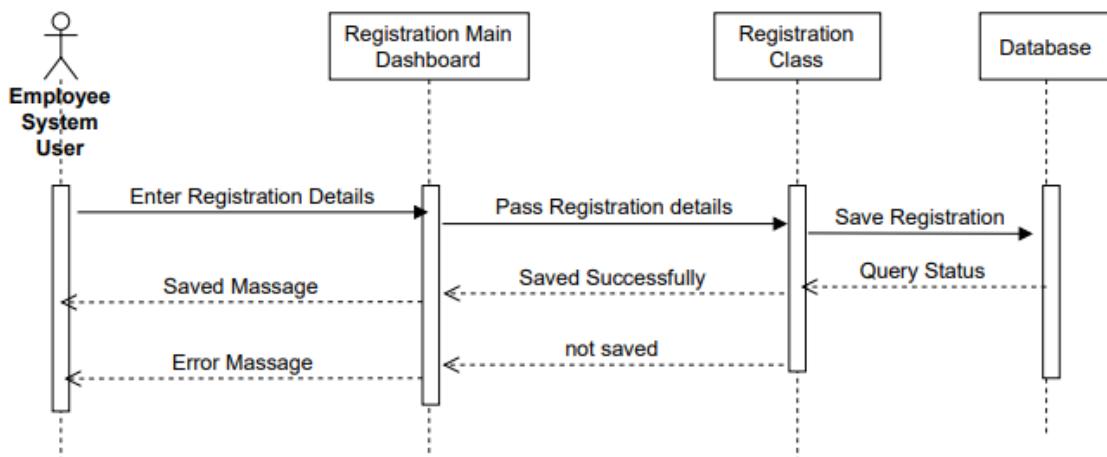
Sequence Diagrams for Remove Demotion



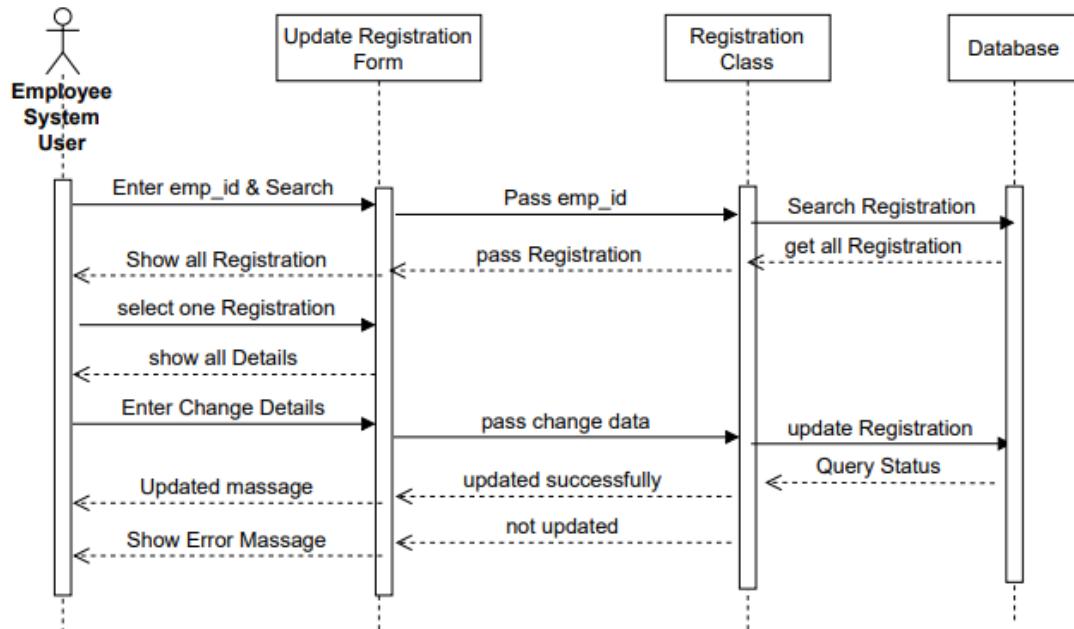
Sequence Diagrams for View Demotion



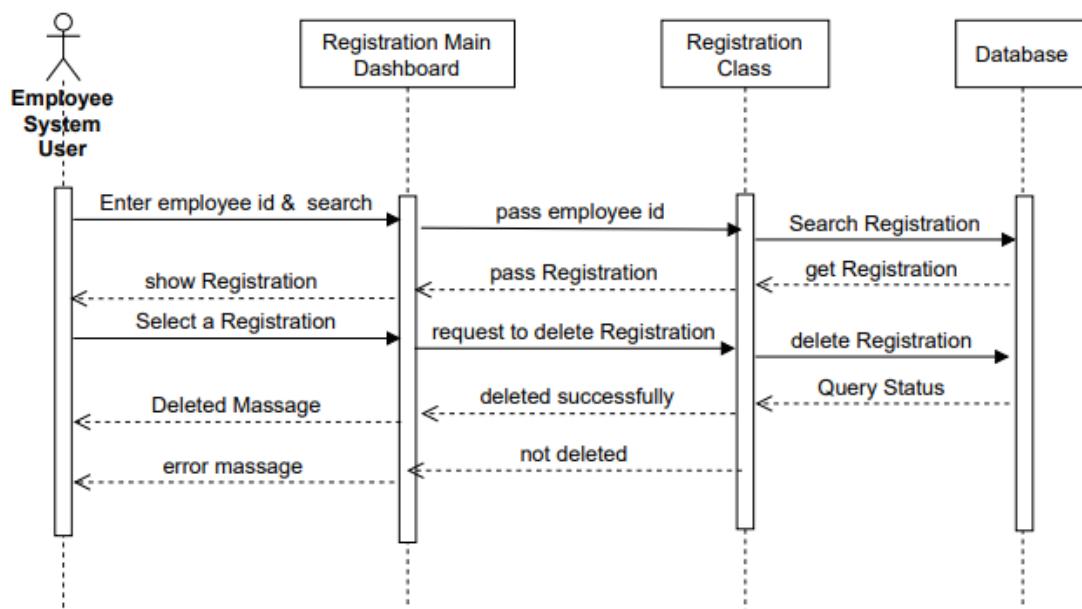
Sequence Diagrams for Add Resignation



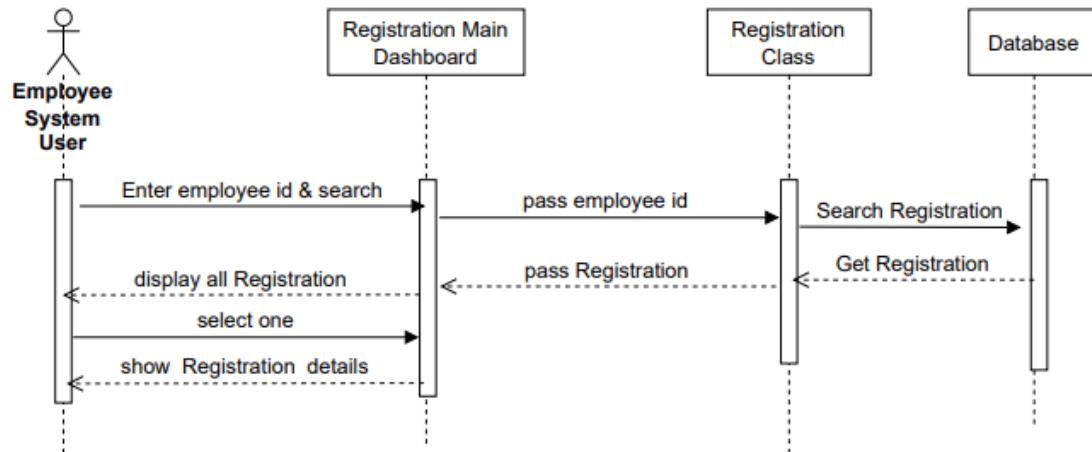
Sequence Diagrams for Update Resignation



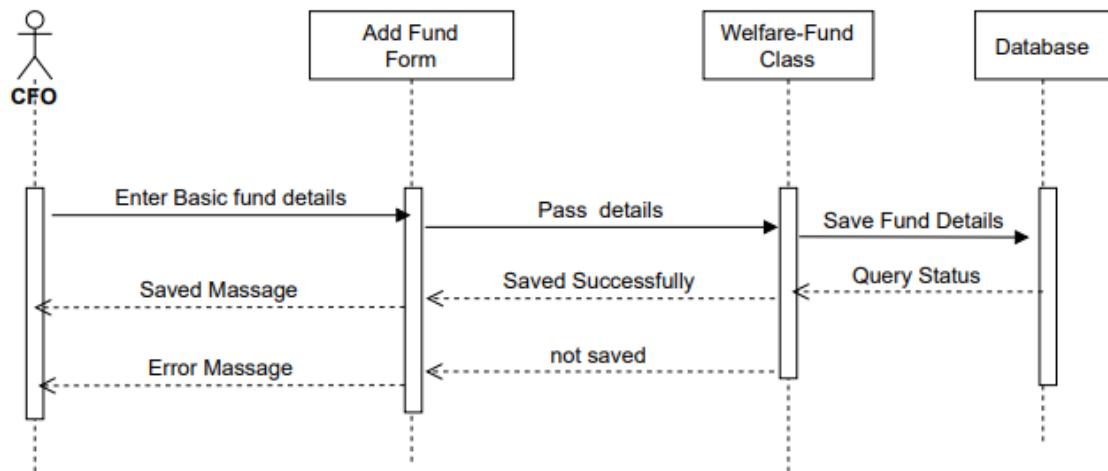
Sequence Diagrams for Remove Resignation



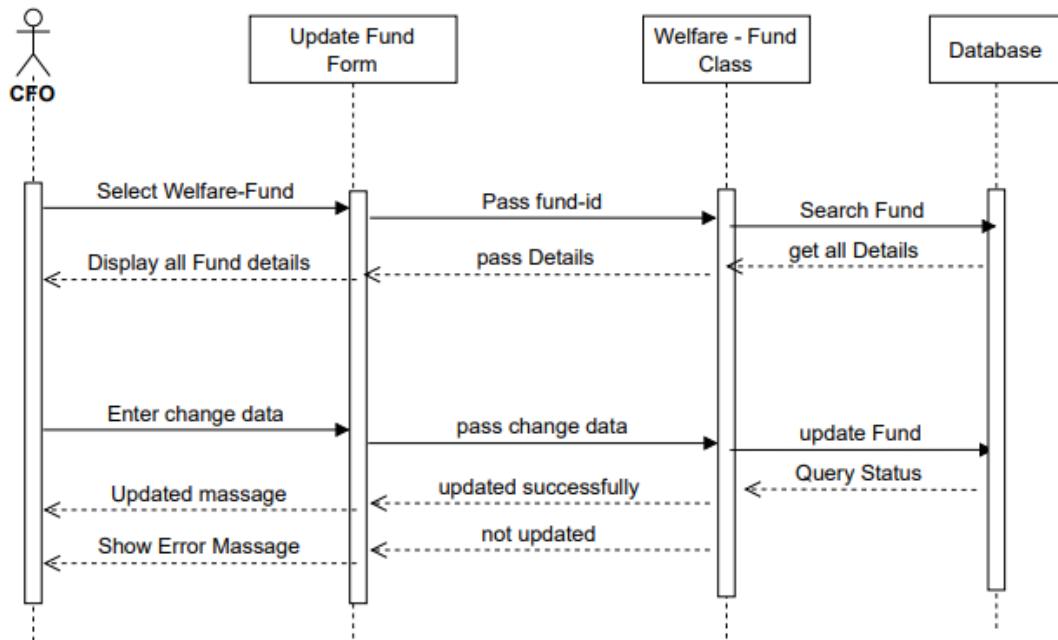
Sequence Diagrams for View Resignation



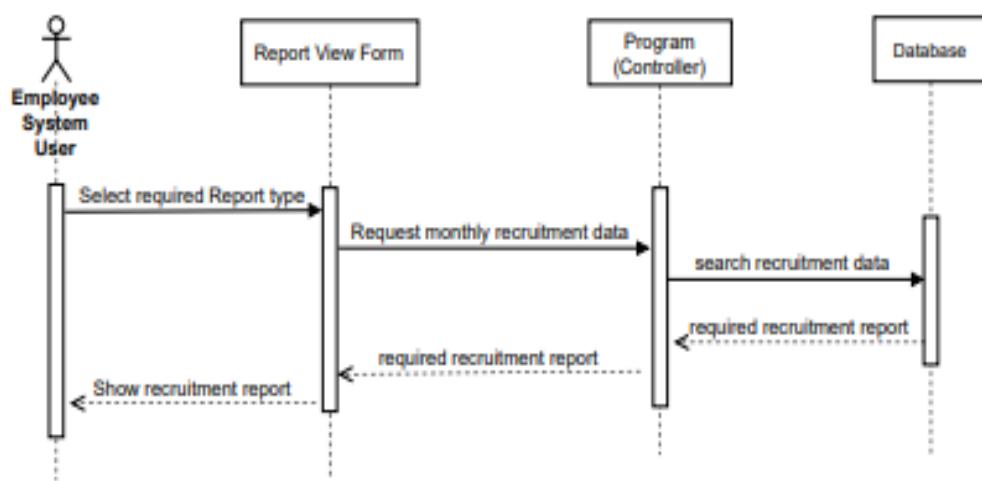
Sequence Diagrams for Add Welfare Fund



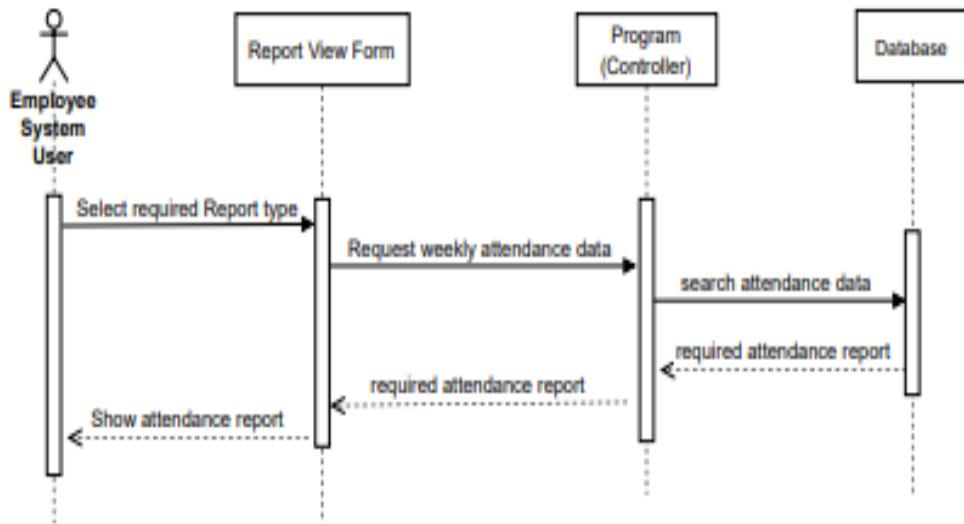
Sequence Diagrams for Update Welfare Fund



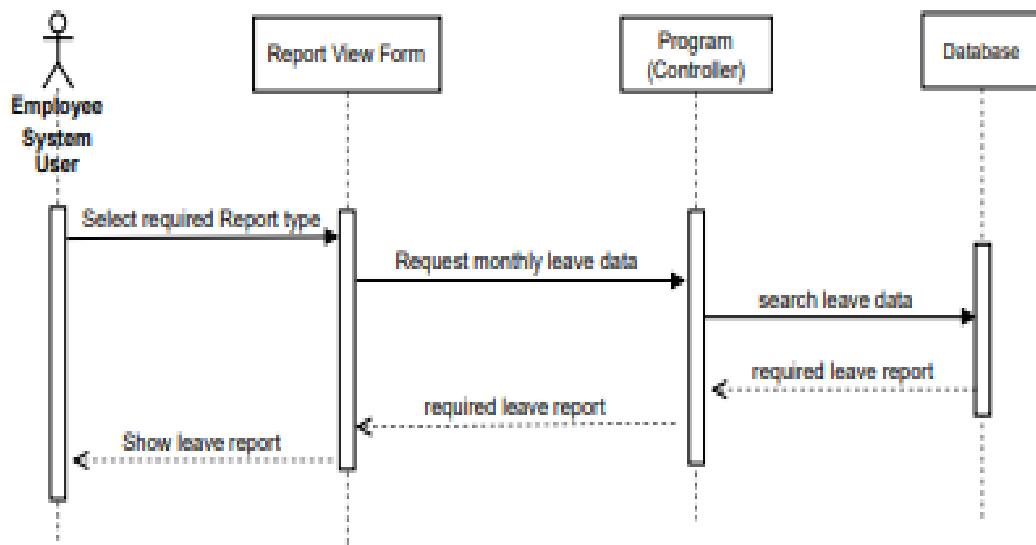
Sequence Diagrams for Generate Recruitment Report



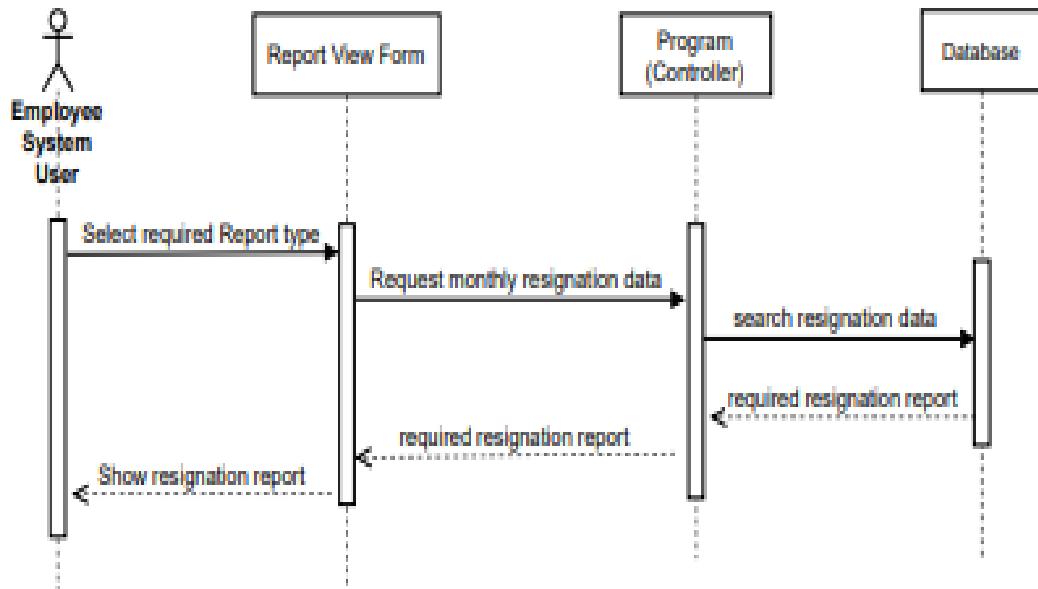
Sequence Diagrams for Generate Attendance Report



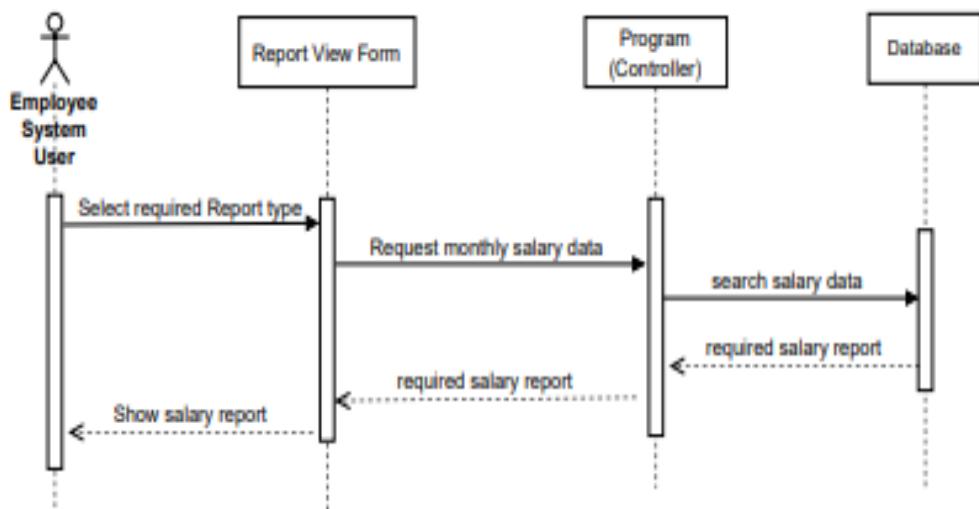
Sequence Diagrams for Generate Leave Report



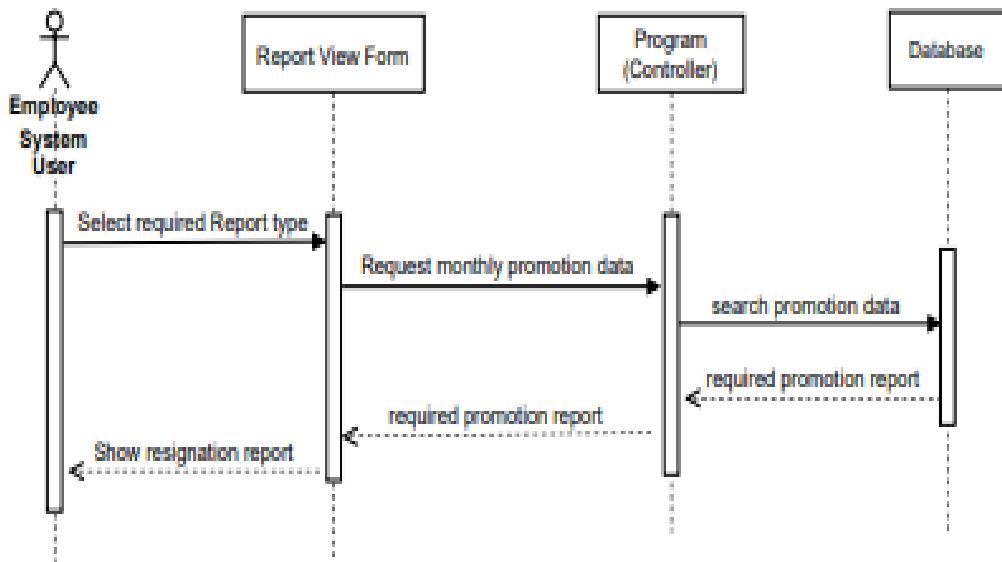
Sequence Diagrams for Resignation Report



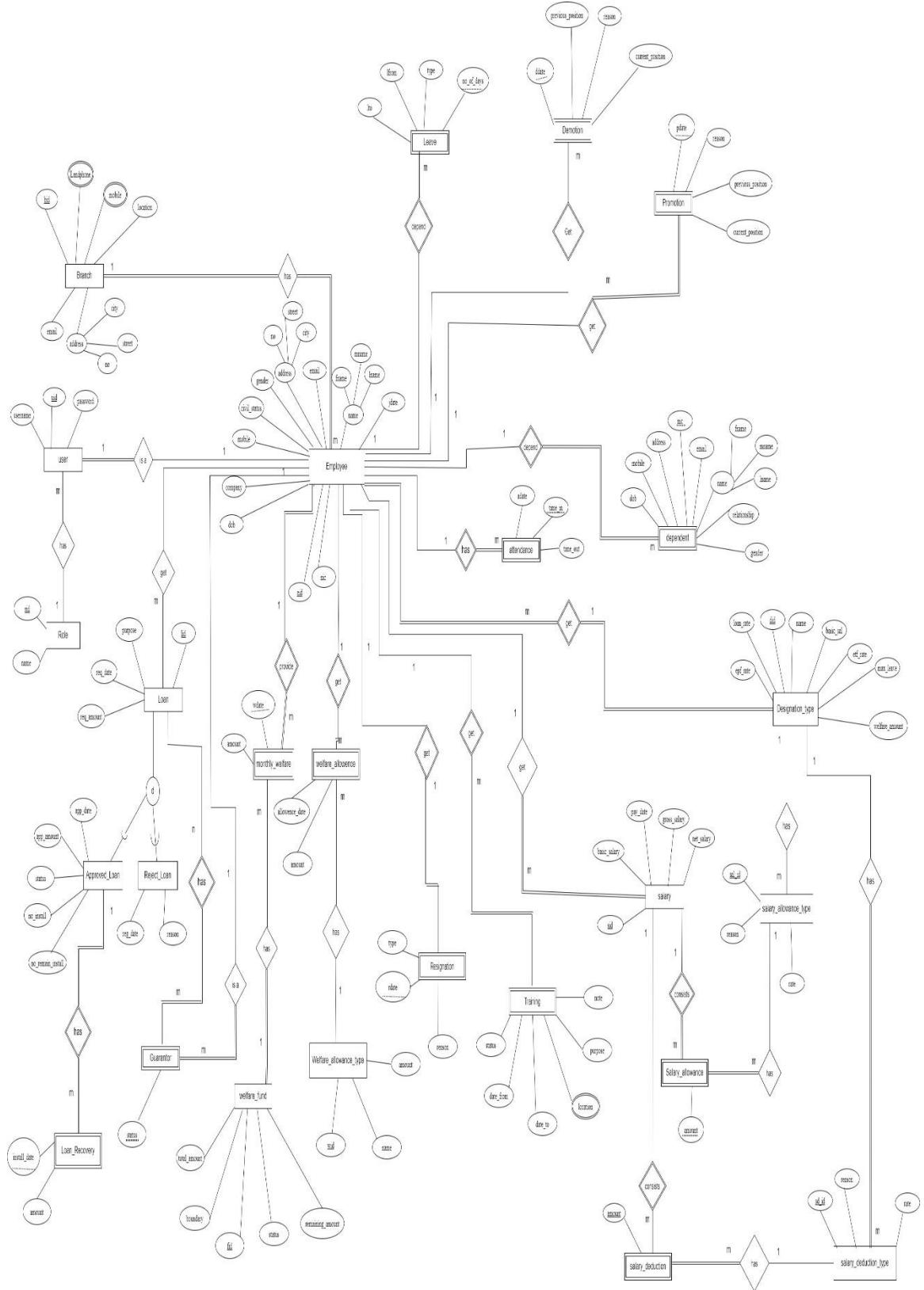
Sequence Diagrams for Salary Report



Sequence Diagrams for Promotion Report



3.3 ER Diagram of the Proposed System



3.4 Summary

When designing a complete software solution, analyzing and designing phase perform main role and it makes perfect foundation for development processes. In this chapter, we have discussed about how we can analyze a system and how we can represent that data using different concepts.

Using use case diagram, class diagram, ER diagram and sequence diagram were able to get complete understanding about the entire system.

Chapter 4 – Solution Design

4.1 Introduction

Solution design is the last phase in the analyzing & designing phase and the first step towards eventual physical development of the solution. This will provide high level visual understanding about the software solution to be made.

No solution can be built without proper design and analysis, therefore in this chapter we are going to focus on screen designs and report layouts those will be made during the development phase.

4.2 Interface Design

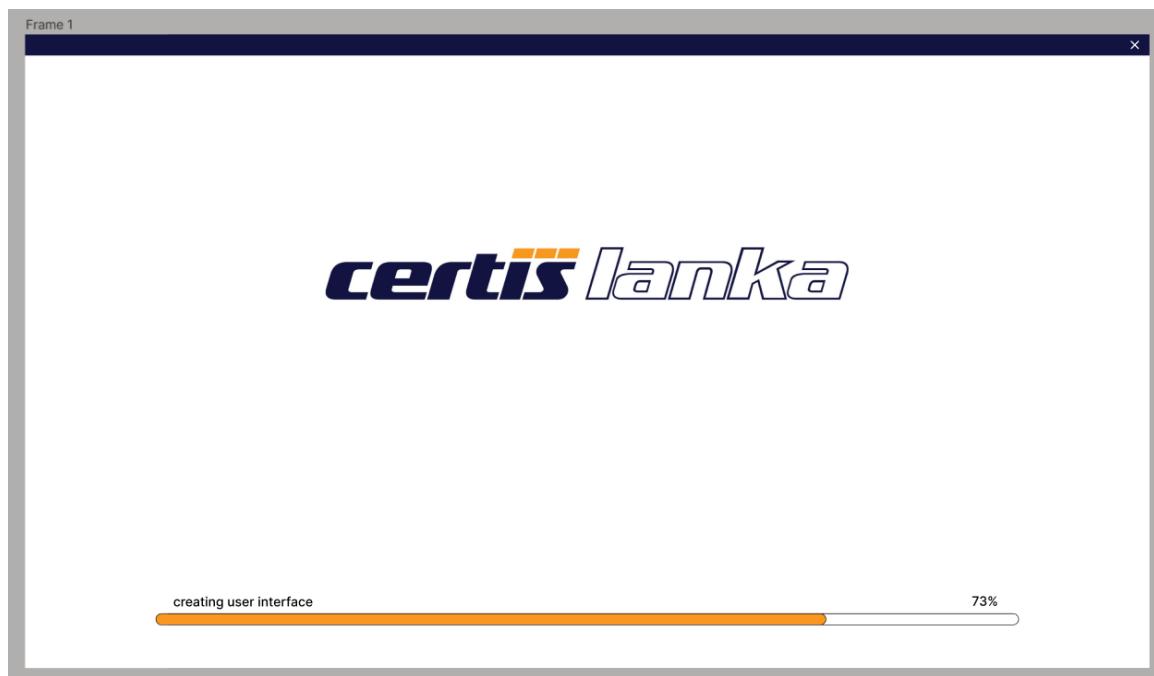


Figure 5 Welcome Screen

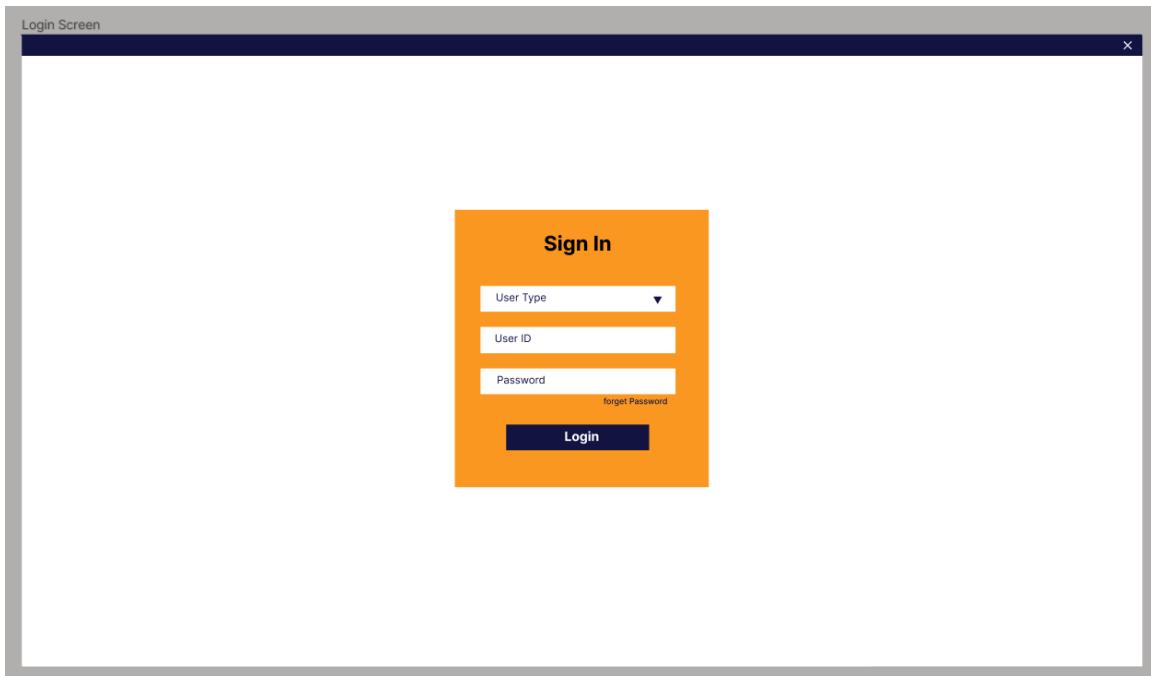


Figure 6 Login Form

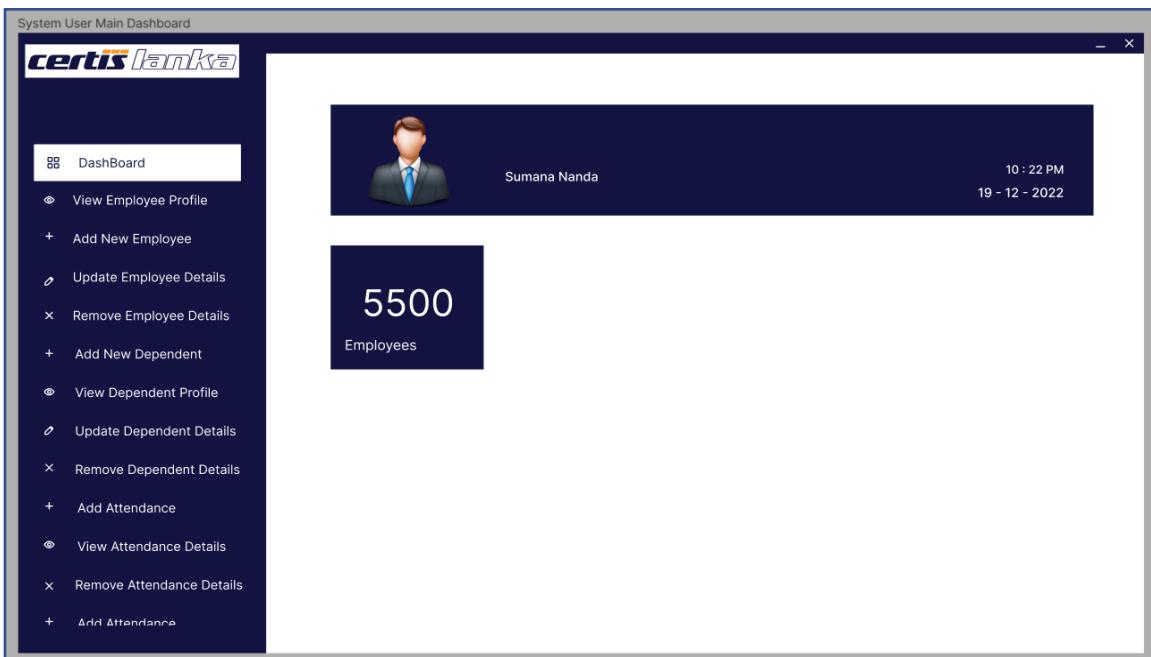


Figure 7 Employee System User Main Dashboard Form

System User View Employee Profile

View Employee Profile

Employee Name or Employee ID Q Search

Source of Hire	Employee Status
Work Phone : 93509424794	Employee Type : Full Time
Active	

Personal Details

Address 1 : 97 Pineland Street West Osborneville	Address 2 : —
City : New Jersey	Country : United States (US)
State : Alabama	Postal Code : 08773
Mobile : 732-864-1462	Other Email : JohnMaleo@gmail.com
Date of Birth : 03/18/1988	Gender : Female
Nationality : United States (US)	Marital Status : Single
Driving License : af1f578-ca77-45f5-891f-230d6622004f	Hobbies : stamps
—	

Work Experience

Previous Company	Job Title	From	To	Job Description
ABC Corporation	Designer	07/17/2013	07/16/2016	image editing

Figure 8 View Employee Form

System User Add New Employee

Add New Employee

Employee ID : Register Date : NIC :

First Name :
Last Name :
Address :
Email Address :
Mobile Number : Land Number :
Date Of Birth : Civil Status : Gender :
Company Name :
Branch Name :

Submitted

Figure 9 Add New Employee Form

System User update Employee Profile

certis lanka

- Dashboard
- View Employee Profile
- + Add New Employee
- Update Employee Details**
- x Remove Employee Details
- + Add New Dependent
- View Dependent Profile
- Update Dependent Details
- x Remove Dependent Details
- + Add Attendance
- View Attendance Details
- x Remove Attendance Details
- + Add Attendance

Update Employee Profile

Employee ID : Register Date : NIC :
 First Name :
 Last Name :
 Address :
 Email Address :
 Mobile Number : Land Number :
 Date Of Birth : Civil Status : Gender :
 Company Name :
 Branch Name :

Update

Figure 10 Update Employee Details Form

System User Remove Employee

certis lanka

- Dashboard
- View Employee Profile
- + Add New Employee
- Update Employee Details**
- x Remove Employee Details**
- + Add New Dependent
- View Dependent Profile
- Update Dependent Details
- x Remove Dependent Details
- + Add Attendance
- View Attendance Details
- x Remove Attendance Details
- + Add Attendance

Remove Employee Profile

Enter Employee ID Remove

Figure 11 Remove Employee Form

System User Add Dependent

Add Dependents

Employee ID :

Employee Name :

NIC :

First Name :

Last Name :

Address :

Email Address :

Mobile Number : Land Number :

Date Of Birth : Relationship : Gender :

Submitted

Figure 12 Add Dependents Form

System User Update Dependent

Update Dependents

Enter Employee ID **Search**

Employee Name :

NIC :

First Name :

Last Name :

Address :

Email Address :

Mobile Number : Land Number :

Date Of Birth : Relationship : Gender :

Update

Figure 13 Update Dependents Form

System User View Dependent

certis lanka

- Dashboard
- View Employee Profile
- Add New Employee
- Update Employee Details
- Remove Employee Details
- Add New Dependent
- View Dependent Profile**
- Update Dependent Details
- Remove Dependent Details
- Add Attendance
- View Attendance Details
- Remove Attendance Details
- Add Attendance

View Dependents

Enter Employee ID Search

Employee Name :
NIC :
First Name :
Last Name :
Address :
Email Address :
Mobile Number : Land Number :
Date Of Birth : Relationship : Gender :

Figure 14 View Dependents Form

System User Remove Dependent

certis lanka

- Dashboard
- View Employee Profile
- Add New Employee
- Update Employee Details
- Remove Employee Details
- Add New Dependent
- View Dependent Profile
- Update Dependent Details
- Remove Dependent Details**
- Add Attendance
- View Attendance Details
- Remove Attendance Details
- Add Attendance

Remove Dependents

Enter Employee ID Remove

Figure 15 Remove Dependent Form

System User Add Promotions

certis lanka

- Update Training Details
- ⊕ View Employee Promotion
 - + Add Employee Promotion
 - ⊖ Update Employee Promotion
 - ×
 - ⊕ Remove Promotion
 - +
 - ⊕ Add Employee Demotions
 - ⊖ View Employee Demotions
 - ⊖ Update Employee Demotions
 - ×
 - ⊕ Remove Employee Demotions
 - +
 - ⊕ Add Resignations Details
 - ⊖ View Resignations Details
 - ×
 - ⊕ Remove Resignations
 - ⊖ Update Resignations

Give promotion

Employee ID :	<input type="text"/>
Employee Name :	<input type="text"/>
Company Name :	<input type="text"/>
Branch Name :	<input type="text"/>
Previous Position :	<input type="text"/>
Current Position :	<input type="text"/>
promotion Date :	<input type="text"/>
Reson	<input type="text"/>

Submit

Figure 16 Add Promotions Form

System User Update Promotions

certis lanka

- Update Training Details
- ⊕ View Employee Promotion
- + Add Employee Promotion
- ⊖ Update Employee Promotion
- ×
- ⊕ Remove Promotion
- +
- ⊕ Add Employee Demotions
- ⊖ View Employee Demotions
- ⊖ Update Employee Demotions
- ×
- ⊕ Remove Employee Demotions
- +
- ⊕ Add Resignations Details
- ⊖ View Resignations Details
- ×
- ⊕ Remove Resignations
- ⊖ Update Resignations

Update promotion

Employee ID :	<input type="text"/>	<input type="button" value="Search"/>
Employee Name :	<input type="text"/>	
Company Name :	<input type="text"/>	
Branch Name :	<input type="text"/>	
Previous Position :	<input type="text"/>	
Current Position :	<input type="text"/>	
promotion Date :	<input type="text"/>	
Reson	<input type="text"/>	

Update

Figure 17 Update Promotion Form

System User View Promotion

certis lanka

View promotion

Employee ID :	<input type="text"/>	<input type="button" value="Search"/>
Employee Name :	<input type="text"/>	
Company Name :	<input type="text"/>	
Branch Name :	<input type="text"/>	
Previous Position :	<input type="text"/>	
Current Position :	<input type="text"/>	
promotion Date :	<input type="text"/>	
Reson	<input type="text"/>	

Figure 18 View Promotion Form

System User Remove Promotions

certis lanka

Remove promotion

Employee ID :	<input type="text"/>	<input type="button" value="Search"/>
---------------	----------------------	---------------------------------------

Figure 19 Remove Promotion Form

System User Add Demotions

Update Training Details
 View Employee Promotion
 + Add Employee Promotion
 ⌂ Update Employee Promotion
 ✗ Remove Promotion
 + Add Employee Demotions
 ⌂ View Employee Demotions
 ⌂ Update Employee Demotions
 ✗ Remove Employee Demotions
 + Add Resignations Details
 ⌂ View Resignations Details
 ✗ Remove Resignations
 ⌂ Update Resignations

Add Demotion

Employee ID :	<input type="text"/>
Employee Name :	<input type="text"/>
Company Name :	<input type="text"/>
Branch Name :	<input type="text"/>
Previous Position :	<input type="text"/>
Current Position :	<input type="text"/>
Demotion Date :	<input type="text"/>
Reson	<input type="text"/>

Submit

Figure 20 Add Demotion Form

System User Update Demotions

Update Training Details
 View Employee Promotion
 + Add Employee Promotion
 ⌂ Update Employee Promotion
 ✗ Remove Promotion
 + Add Employee Demotions
 ⌂ View Employee Demotions
 ⌂ Update Employee Demotions
 ✗ Remove Employee Demotions
 + Add Resignations Details
 ⌂ View Resignations Details
 ✗ Remove Resignations
 ⌂ Update Resignations

Update Demotion

Employee ID :	<input type="text"/>
<input type="button" value="Search"/>	
Employee Name :	<input type="text"/>
Company Name :	<input type="text"/>
Branch Name :	<input type="text"/>
Previous Position :	<input type="text"/>
Current Position :	<input type="text"/>
Demotion Date :	<input type="text"/>
Reson	<input type="text"/>

Update

Figure 21 Update Demotion Form

System User View Demotions

certis lanka

- ⊖ Update Training Details
- ⊕ View Employee Promotion
- + Add Employee Promotion
- ⊖ Update Employee Promotion
- ✗ Remove Promotion
- + Add Employee Demotions
- ⊕ View Employee Demotions
- ⊖ Update Employee Demotions
- ✗ Remove Employee Demotions
- + Add Resignations Details
- ⊕ View Resignations Details
- ✗ Remove Resignations
- ⊖ Update Resignations

View Demotion

Employee ID : Search

Employee Name :

Company Name :

Branch Name :

Previous Position :

Current Position :

Demotion Date :

Reson

Figure 22 View Demotion Form

System User Remove Demotions

certis lanka

- ⊖ Update Training Details
- ⊕ View Employee Promotion
- + Add Employee Promotion
- ⊖ Update Employee Promotion
- ✗ Remove Promotion
- + Add Employee Demotions
- ⊕ View Employee Demotions
- ⊖ Update Employee Demotions
- ✗ Remove Employee Demotion
- + Add Resignations Details
- ⊕ View Resignations Details
- ✗ Remove Resignations
- ⊖ Update Resignations

Remove Demotion

Employee ID : Remove

Figure 23 Remove Demotion Form

System User Add Resignations

certis lanka

Add Resignation

User Type :

Employee ID :

Employee Name :

Compnay Name :

Type :

Resignation Date :

Reason :

Submit

Navigation menu:

- o Update Training Details
- eo View Employee Promotion
- + Add Employee Promotion
- o Update Employee Promotion
- x Remove Promotion
- + Add Employee Demotions
- eo View Employee Demotions
- o Update Employee Demotions
- x Remove Employee Demotions
- + Add Resignations Details
- eo View Resignations Details
- x Remove Resignations
- o Update Resignations

Figure 24 Add Resignations Form

System User View Resignations

certis lanka

View Resignation

Employee ID :

User Type :

Employee Name :

Compnay Name :

Type :

Resignation Date :

Reason :

Submit

Navigation menu:

- o Update Training Details
- eo View Employee Promotion
- + Add Employee Promotion
- o Update Employee Promotion
- x Remove Promotion
- + Add Employee Demotions
- eo View Employee Demotions
- o Update Employee Demotions
- x Remove Employee Demotions
- + Add Resignations Details
- eo View Resignations Details
- x Remove Resignations
- o Update Resignations

Figure 25 View Resignations Form

System User Add Traning

Add Training

Employee ID :	<input type="text"/>
Employee Name :	<input type="text"/>
Company Name :	<input type="text"/> ▼
Date From :	<input type="text"/>
Date To :	<input type="text"/>
Location :	<input type="text"/>
Status :	<input type="text"/>
Purpose :	<input type="text"/>
Note :	<input type="text"/>

Submit

certis lanka

- REMOVE ATTACHMENT DETAILS
- ⊖ View Leaves Details
- + Add Leaves Details
- ⊖ Update Leaves Details
- ×
- Remove Leaves Details
- + Add Employee Designation
- ⊖ View Employee Designation
- ⊖ Update Employee Designation
- ×
- Remove Employee Designation
- + Add Training Details
- ⊖ View Training Details
- ×
- Remove Training Details
- ⊖ Update Training Details

Figure 26 Add Training Form

System User Update Traning

Update Training

Employee ID :	<input type="text"/>	Q Search
Employee Name :	<input type="text"/>	
Company Name :	<input type="text"/> ▼	
Date From :	<input type="text"/>	
Date To :	<input type="text"/>	
Location :	<input type="text"/>	
Status :	<input type="text"/>	
Purpose :	<input type="text"/>	
Note :	<input type="text"/>	

Update

certis lanka

- REMOVE ATTACHMENT DETAILS
- ⊖ View Leaves Details
- + Add Leaves Details
- ⊖ Update Leaves Details
- ×
- Remove Leaves Details
- + Add Employee Designation
- ⊖ View Employee Designation
- ⊖ Update Employee Designation
- ×
- Remove Employee Designation
- + Add Training Details
- ⊖ View Training Details
- ×
- Remove Training Details
- ⊖ Update Training Details

Figure 27 Update Training Form

System User Remove Training

certis lanka

- oo Remove Attendance Details
- ⊕ View Leaves Details
- + Add Leaves Details
- ⊖ Update Leaves Details
- ✗ Remove Leaves Details
- + Add Employee Designation
- ⊕ View Employee Designation
- ⊖ Update Employee Designation
- ✗ Remove Employee Designation
- + Add Training Details
- ⊕ View Training Details
- ✗ Remove Training Details**
- ⊖ Update Training Details

Remove Training

Employee ID :

Remove

Figure 28 Remove Training Form

System User Add Leaves

certis lanka

- oo Remove Attendance Details
- ⊕ View Leaves Details
- + Add Leaves Details**
- ⊖ Update Leaves Details
- ✗ Remove Leaves Details
- + Add Employee Designation
- ⊕ View Employee Designation
- ⊖ Update Employee Designation
- ✗ Remove Employee Designation
- + Add Training Details
- ⊕ View Training Details
- ✗ Remove Training Details
- ⊖ Update Training Details

Add Leaves Details

Employee ID :

Leave Type :

From :

To :

Number Of Days :

Submit

Figure 29 Add Leaves Form

System User Update Leaves

certis lanka

- Remove Attendance Details
- ⊕ View Leaves Details
- + Add Leaves Details
- ⊖ Update Leaves Details**
 - ×
 - Remove Leaves Details
 - +
 - Add Employee Designation
 - ⊕ View Employee Designation
 - ⊖ Update Employee Designation
 - ×
 - Remove Employee Designation
 - +
 - Add Training Details
 - ⊕ View Training Details
 - ×
 - Remove Training Details
 - ⊖ Update Training Details

Update Leaves Details

Enter Employee ID	<input type="button" value="Search"/>
Employee ID :	<input type="text"/>
Leave Type :	<input type="text"/>
From :	<input type="text"/>
To :	<input type="text"/>
Number Of Days :	<input type="text"/>

Figure 30 Update Leaves Form

System User View Leaves

certis lanka

- REMOVE ATTENDANCE DETAILS
- ⊕ View Leaves Details
- + Add Leaves Details
- ⊖ Update Leaves Details**
 - ×
 - Remove Leaves Details
 - +
 - Add Employee Designation
 - ⊕ View Employee Designation
 - ⊖ Update Employee Designation
 - ×
 - Remove Employee Designation
 - +
 - Add Training Details
 - ⊕ View Training Details
 - ×
 - Remove Training Details
 - ⊖ Update Training Details

View Leaves Details

Enter Employee ID	<input type="button" value="Search"/>		
Type	From	To	No Of Days
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Figure 31 View Leaves Form

System User Remove Leaves

certis lanka

- ⊖ Remove Attendance Details
- ⊖ View Leaves Details
- + Add Leaves Details
- ⊖ Update Leaves Details
 - ✗ Remove Leaves Details
 - + Add Employee Designation
 - ⊖ View Employee Designation
 - ⊖ Update Employee Designation
 - ✗ Remove Employee Designation
 - + Add Training Details
 - ⊖ View Training Details
 - ✗ Remove Training Details
 - ⊖ Update Training Details

Remove Leaves Details

Figure 32 Remove Leave Form

System User Add Designation

certis lanka

- ⊖ Remove Attendance Details
- ⊖ View Leaves Details
- + Add Leaves Details
- ⊖ Update Leaves Details
 - ✗ Remove Leaves Details
 - + Add Employee Designation
 - ✗ View Employee Designation
 - ⊖ Update Employee Designation
 - ✗ Remove Employee Designation
 - + Add Training Details
 - ⊖ View Training Details
 - ✗ Remove Training Details
 - ⊖ Update Training Details

View Designation

Designation Name :

Q Search

Designation ID :

Basic Salary :

Welfare Amount :

Max Leave :

Loan Rate :

E.P.F Rate

E.T.F Rate

Figure 33 View Employee Designations Form

System User Update Designation

certis lanka

DD REMOVE ATTENDANCE DETAILS
⌚ View Leaves Details
+ Add Leaves Details
⌚ Update Leaves Details
✖ Remove Leaves Details
+ Add Employee Designation
⌚ View Employee Designation
⌚ Update Employee Designation
✖ Remove Employee Designation
+ Add Training Details
⌚ View Training Details
✖ Remove Training Details
⌚ Update Training Details

Update Designation

Designation Name : Q Search

Designation ID :

Basic Salary :

Welfare Amount :

Max Leave :

Loan Rate :

E.P.F Rate :

E.T.F Rate :

Update

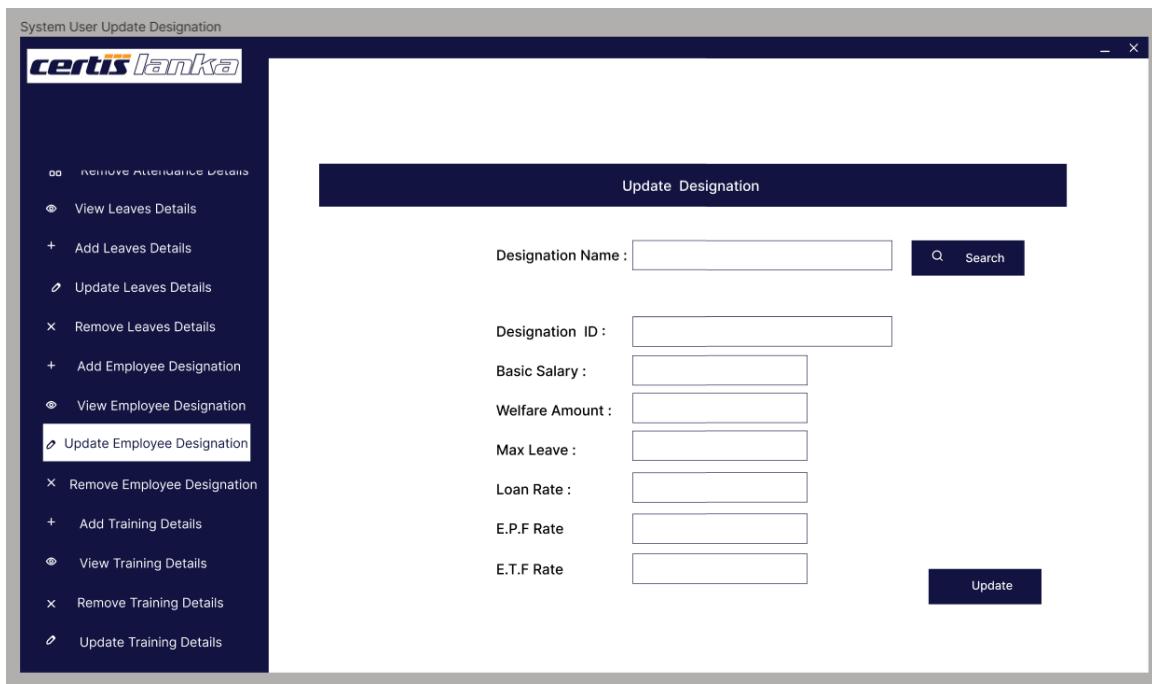


Figure 34 Update Employee Designations Form

System User View Salary

certis Lanka

- Remove Attendance Details
- + View Leaves Details
- + Add Leaves Details
- Update Leaves Details
- Remove Leaves Details
- + Add Employee Designation
- + View Employee Designation
- Update Employee Designation
- Remove Employee Designation
- + Generate Salary
- + View Salary Details
- Remove Salary
- Update Salary Details
- Reports

View Salary

Employee ID :

Companay Name	Branch Name
---------------	-------------

Employee Name :

Basic Salary :

Allowance :

Diduction :

Gross Pay :

Net Salary :

Type	Amount
E.P.F	
E.T.F	
Welfare	
Loan	

Allowance :

Type	Amount
Bonus	
OT Pay	

Net Salary :

Figure 35 View Salary Form

System User Update Salary

certis Lanka

- Remove Attendance Details
- + View Leaves Details
- + Add Leaves Details
- Update Leaves Details
- Remove Leaves Details
- + Add Employee Designation
- + View Employee Designation
- Update Employee Designation
- Remove Employee Designation
- + Generate Salary
- + View Salary Details
- Remove Salary
- + Update Salary Details
- Reports

Update Salary

Employee ID :

Companay Name	Branch Name
---------------	-------------

Employee Name :

Basic Salary :

Allowance :

Diduction :

Gross Pay :

Net Salary :

Type	Amount
E.P.F	
E.T.F	
Welfare	
Loan	

Net Salary :

Figure 36 Update Salary Form

System User Remove Salary

certis lanka

- ⊖ View Leaves Details
- ⊕ Add Leaves Details
- ⊖ Update Leaves Details
- ×
- ⊖ Remove Leaves Details
- +
- ⊕ Add Employee Designation
- ⊖ View Employee Designation
- ⊖ Update Employee Designation
- ×
- ⊖ Remove Employee Designation
- +
- Generate Salary
- ⊖ View Salary Details
- ×
- ⊖ Remove Salary**
- ⊖ Update Salary Details
- Reports

Remove Salary

Employee ID :

Remove

Figure 37 Remove Salary Form

certis lanka

- ⊖ DashBoard**
- ⊕ Add New Loan Form
- ⊖ View Loan Form
- ⊖ Update Loan Form
- ×
- ⊖ Remove Loan Form
- ⊕ Add New Welfare Form
- ⊖ View Welfare Form
- ⊖ Update Welfare Form
- ×
- ⊖ Remove Welfare Form
- ⊖ View Loan Recovery
- Reports
- ⊖ Log Out

CFO Loan Status

Form No	Loan Type	Status
S1002	House Loan	Progress
S2305	Education Loan	Approve
S4567	Medicine Lone	Reject
E7798	House Iaon	Reject
E3457	House Loan	Progress

CFO Welfare Status

Form No	Welfare Type	Status
W1002	Funeral	Progress
W2305	Funeral	Approve
G4567	Hospital	Reject
W7798	Funeral	Reject
F3457	Wedding	Progress

Figure 38 Welfare User Main Dashboard Form

Welfare User Add New Loan

certis lanka

Dashboard
+ Add New Loan Form
⊕ View Loan Form
⊖ Update Loan Form
⊖ Remove Loan Form
+ Add New Welfare Form
⊕ View Welfare Form
⊖ Update Welfare Form
⊖ Remove Welfare Form
⊖ View Loan Recovery
⊖ Reports
⊖ Log Out

Add New Loan

Employee Name :	<input type="text"/>		
Birthday :	<input type="text"/>	NIC :	<input type="text"/>
Perment Address :			
Employee ID :		Register Date :	Service period :
Company Name :		Branch Name :	
Required Amount :			
Purpose :			
01 Guarantor Name :			
Employee ID :		Register Date :	
Company Name :		Branch Name :	

Figure 39 Add New Loan Form

certis lanka

Dashboard
+ Add New Loan Form
⊕ View Loan Form
⊖ Update Loan Form
⊖ Remove Loan Form
+ Add New Welfare Form
⊕ View Welfare Form
⊖ Update Welfare Form
⊖ Remove Welfare Form
⊖ View Loan Recovery
⊖ Reports
⊖ Log Out

Update Loan Form

Enter Loan ID	<input type="text"/>	Search	
Employee Name :	<input type="text"/>		
Birthday :	<input type="text"/>	NIC :	<input type="text"/>
Perment Address :			
Employee ID :		Register Date :	Service period :
Company Name :		Branch Name :	
Required Amount :			
Purpose :			
01 Guarantor Name :			
Update			

Figure 40 Update Loan Form

View Loan Form

Enter Loan ID Search

Employee Name :

Birthday : NIC :

Permeant Address :

Employee ID : Register Date : Service period :

Company Name : Branch Name :

Required Amount :

Purpose :

01 Guarantor Name :

Figure 41 View Loan Form

Remove Loan Form

Enter Loan ID Remove

Figure 42 Remove Loan Form

Welfare User Add New Welfare

Add New Welfare

Employee Name :

Birthday : NIC :

Permanent Address :

Employee ID : Register Date : Service period :

Company Name : Branch Name :

Required Amount :

Purpose :

Submit

Figure 43 Add New Welfare Allowance Form

Welfare User Welfare Update

Update Welfare Form

Enter Welfare ID **Search**

Employee Name :

Birthday : NIC :

Permanent Address :

Employee ID : Register Date : Service period :

Company Name : Branch Name :

Required Amount :

Purpose :

Update

Figure 44 Update Welfare Allowance Form

Welfare User Remove Welfare

certis lanka

- Dashboard
- + Add New Loan Form
- @ View Loan Form
- ⊖ Update Loan Form
- ✗ Remove Loan Form
- + Add New Welfare Form
- @ View Welfare Form
- ⊖ Update Welfare Form
- ✗ Remove Welfare Form**
- @ View Loan Recovery
- Reports
- Log Out

Remove Welfare Form

Enter Welfare ID

Remove

Figure 45 Remove Welfare Allowance Form

CFO User Main Dashboard

certis lanka

- Dashboard
- + Add Welfare Category
- @ View Welfare Category
- ⊖ Update Welfare Category
- ✗ Remove Welfare Category
- + Add Loan Category
- @ View Loan Category
- ⊖ Update Loan Category
- ✗ Remove Loan Category
- ⊖ Manage Welfare Found
- ⊖ Approve Loans
- Reports
- Log Out

Saman Rathnayaka

10 : 22 PM
19 - 12 - 2022

Company Name	Loan Rate
Security Solution . Co	10%
Courier Service . Co	10%
Technolagy . Co	13%
Logistic . Co	13%
Nursing . Co	13%

welfare amount

34 500 000

Pending Loan Form 10

Pending Welfare Form 10

Figure 46 CFO User Main Dashboard Form

CFO User Add Welfare Category

certis lanka

Dashboard

- + Add Welfare Category
- (@) View Welfare Category
- (o) Update Welfare Category
- (x) Remove Welfare Category
- (+) Add Loan Category
- (@) View Loan Category
- (o) Update Loan Category
- (x) Remove Loan Category
- (o) Manage Welfare Found
- (o) Approve Loans
- (d) Reports
- (o) Log Out

Add New Welfare Category

Welfare Name :

Welfare Rules :

Description :

Save

Figure 47 CFO User Add Welfare Category Form

CFO User View Welfare Category

certis lanka

Dashboard

- + Add Welfare Category
- (@) View Welfare Category
- (o) Update Welfare Category
- (x) Remove Welfare Category
- (+) Add Loan Category
- (@) View Loan Category
- (o) Update Loan Category
- (x) Remove Loan Category
- (o) Manage Welfare Found
- (o) Approve Loans
- (d) Reports
- (o) Log Out

View Welfare Category

Select Welfare Category ▾

Search

Welfare Name :

Welfare Rules :

Description :

Figure 48 CFO User View Welfare Category Form

CFO User Update Welfare Category

certis lanka

- Dashboard
- + Add Welfare Category
- ⌚ View Welfare Category
- ⌚ Update Welfare Category**
- ✖ Remove Welfare Category
- + Add Loan Category
- ⌚ View Loan Category
- ⌚ Update Loan Category
- ✖ Remove Loan Category
- ⌚ Manage Welfare Found
- ⌚ Approve Loans
- Reports
- Log Out

Update Welfare Category

Select Welfare Category

Search

Welfare Name :

Welfare Rules :

Description :

Update

Figure 49 CFO User Update Welfare Category Form

CFO User Remove Welfare Category

certis lanka

- Dashboard
- + Add Welfare Category
- ⌚ View Welfare Category
- ⌚ Update Welfare Category
- ✖ Remove Welfare Category**
- + Add Loan Category
- ⌚ View Loan Category
- ⌚ Update Loan Category
- ✖ Remove Loan Category
- ⌚ Manage Welfare Found
- ⌚ Approve Loans
- Reports
- Log Out

Remove Welfare Category

Select Welfare Category

Remove

Figure 50 CFO User Remove Welfare Category Form

CFO User Add Loan Category

certis lanka

Dashboard

- + Add Welfare Category
- View Welfare Category
- Update Welfare Category
- Remove Welfare Category
- + Add Loan Category
- View Loan Category
- Update Loan Category
- Remove Loan Category
- Manage Welfare Found
- Approve Loans
- Reports
- Log Out

Add New Loan Category

Loan Name :

Loan Rules :

Description :

Save

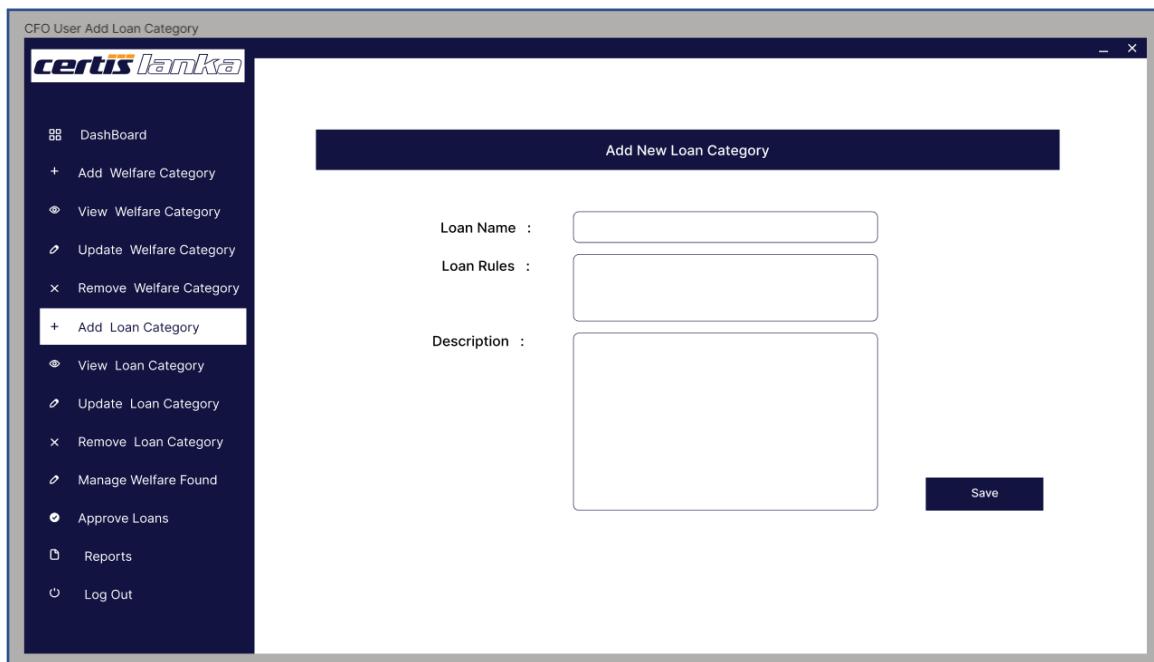


Figure 51 CFO User Add Loan Category Form

CFO User View Loan Category

certis lanka

Dashboard

- + Add Welfare Category
- View Welfare Category
- Update Welfare Category
- Remove Welfare Category
- + Add Loan Category
- View Loan Category
- Update Loan Category
- Remove Loan Category
- Manage Welfare Found
- Approve Loans
- Reports
- Log Out

View Loan Category

Select Loan Category

Loan Name :

Loan Rules :

Description :

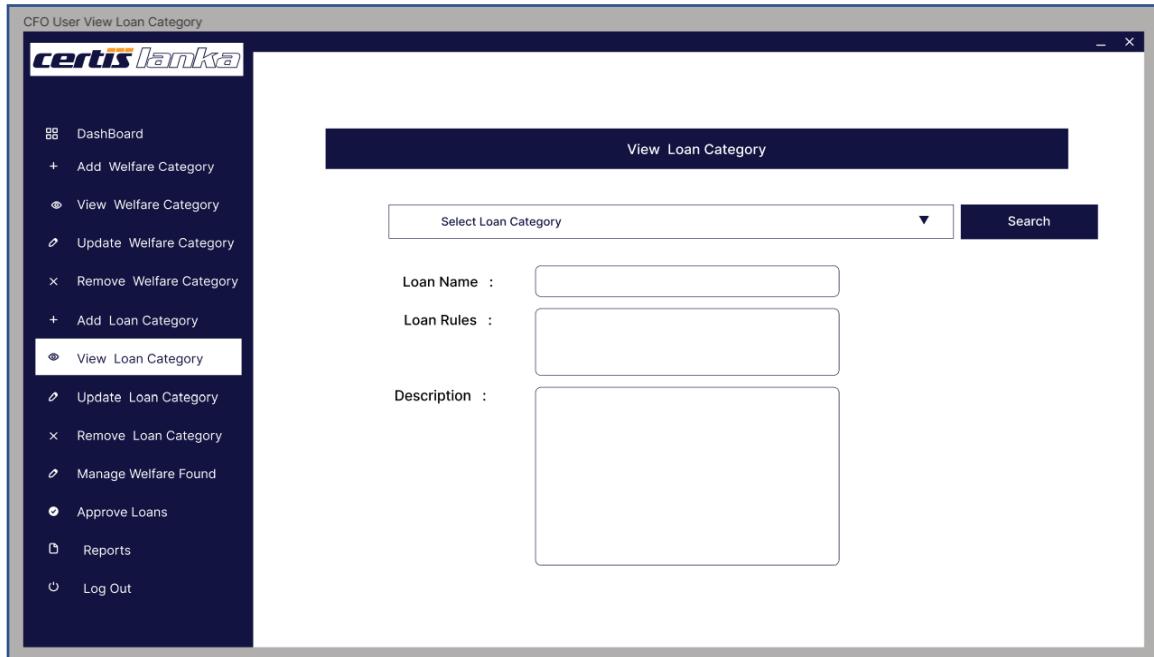


Figure 52 CFO User View Loan Category Form

CFO User Update Loan Category

certis lanka

- Dashboard
- + Add Welfare Category
- @ View Welfare Category
- ⊖ Update Welfare Category
- ✗ Remove Welfare Category
- + Add Loan Category
- @ View Loan Category
- ⊖ Update Loan Category
- ✗ Remove Loan Category
- ⊖ Manage Welfare Found
- Ⓐ Approve Loans
- Reports
- Log Out

Update Loan Category

Select Loan Category ▾

Search

Loan Name :

Loan Rules :

Description :

Update

Figure 53 CFO User Update Loan Category Form

CFO User Remove Loan Category

certis lanka

- Dashboard
- + Add Welfare Category
- @ View Welfare Category
- ⊖ Update Welfare Category
- ✗ Remove Welfare Category
- + Add Loan Category
- @ View Loan Category
- ⊖ Update Loan Category
- ✗ Remove Loan Category
- ⊖ Manage Welfare Found
- Ⓐ Approve Loans
- Reports
- Log Out

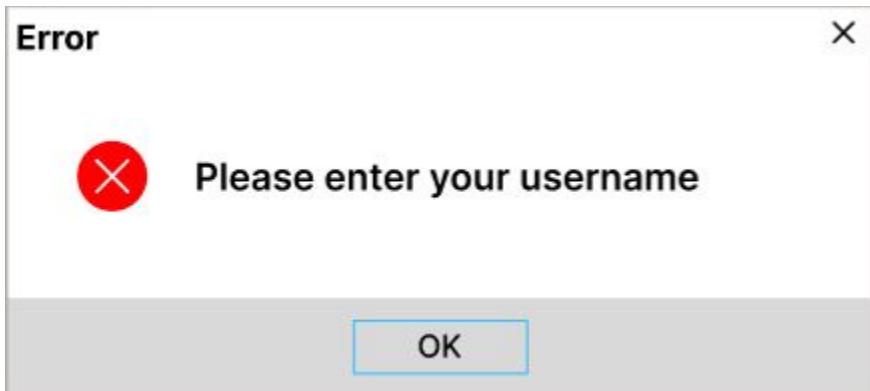
Remove Loan Category

Select Loan Category ▾

Remove

Figure 54 CFO User Remove Loan Category Form

Error Message Boxes:



4.3 Database Design

Branch

Primary Key - bid

Table 1 Branch Table

Field Names	Data type	Data Size	Description
bid	Number	5	Branch Id
address	Text	75	Branch Address
email	Text	75	Branch Email
location	Text	100	Branch Location
Record Size	255		

Role

Primary Key - rid

Table 2 Role Table

Field Names	Data type	Data Size	Description
rid	Number	5	Role Id
name	Text	30	Role Name
Record Size	35		

Designation_Type

Primary Key - did

Table 3 Designation Type Table

Field Names	Data type	Data Size	Description
did	Number	5	Designation Type Id
name	Text	30	Designation Type Name
basic_sal	Number	10	Basic Salary
epf_rate	Number	5	Epf rate for Designation Type
etf_rate	Number	5	Etf rate for Designation Type
loan_rate	Number	5	Loan rate
max_leave	Number	3	Maximum number of loans
welfare_amount	Number	10	Welfare contribution
Record Size	73		

Welfare_Fund

Primary Key - fid

Table 4 Welfare Fund Table

Field Names	Data type	Data Size	Description
fid	Number	5	Fund Id
status	Text	1	Fund Status
total_amount	Number	20	Fund Total Amount
remain_amount	Number	20	Fund amount to spend
boundary_amount	Number	20	Max amount to spend
no_of_loans	Number	10	No of loans under the fund
Record Size	76		

Welfare_Allowance_Type

Primary Key - wid

Table 5 Welfare Allowance Table

Field Names	Data type	Data Size	Description
wid	Number	5	Welfare allowance type Id
name	Text	30	Welfare allowance type name
amount	Number	10	Welfare allowance amount
Record Size	45		

Salary_Allowance_Type

Primary Key – sa_id

Foreign Key – dno

Table 6 Salary Allowance Type Table

Field Names	Data type	Data Size	Description
sa_id	Number	5	Salary Allowance Type Id
reason	Text	100	Salary Allowance Reason
rate	Number	5	Salary Allowance rate
dno	Number	5	Designation Type Id
Record Size	115		

Salary_Deduction_Type

Primary Key – sd_id

Foreign Key – dno

Table 7 Salary Deduction Type Table

Field Names	Data type	Data Size	Description
sd_id	Number	5	Salary Deduction Type Id
reason	Text	100	Salary Deduction Reason
rate	Number	5	Salary Deduction rate
dno	Number	5	Designation Type No
Record Size	115		

Employee

Primary Key – eid

Foreign Key – bno, dno

Table 8 Employee Table

Field Names	Data type	Data Size	Description
eid	Number	5	Employee Id
bno	Number	5	Branch No
dno	Number	5	Designation Type No
fname	Text	20	First Name
mname	Text	20	Middle Name
lname	Text	20	Last Name
jdate	Date		Company Join Date
nic	Text	15	NIC number
email	Text	75	Email Address
gender	Text	1	Gender Type
civil_status	Text	1	Civil Status
company	Text	100	Company Name
mobile	Number	12	Mobile Number
dob	Date		Date of Birth
Record Size	279		

User

Primary Key – uid

Foreign Key –eno, rno

Table 9 User Table

Field Names	Data type	Data Size	Description
uid	Number	5	User Id
username	Text	15	Username
password	Number	15	User Password
rno	Number	5	Role No
eno	Number	5	Employee No
Record Size	45		

Attendance

Primary Key – eno, time_in

Foreign Key –eno

Table 10 Attendance Table

Field Names	Data type	Data Size	Description
eno	Number	5	Employee No
attendance_date	Date		Attendance Date
time_in	Text	25	Attendance Time
time_out	Text	25	Leaving Time
Record Size	55		

Leave

Primary Key – eno, no_of_days

Foreign Key –eno

Table 11 Leave Table

Field Names	Data type	Data Size	Description
eno	Number	5	Employee No
from	Text	25	Salary Allowance Reason
to	Text	25	Salary Allowance rate
type	Text	50	Designation Type Id
no_of_days	Number	5	Number of Days of the leave
Record Size	110		

Dependent

Primary Key – eno, nic

Foreign Key –eno

Table 12 Dependent Table

Field Names	Data type	Data Size	Description
eno	Number	5	Employee Id
fname	Text	20	First Name
mname	Text	20	Middle Name
lname	Text	20	Last Name
address	Text	100	Dependent Address
nic	Text	15	NIC number
email	Text	75	Email Address
gender	Text	1	Gender Type
relationship	Text	50	Relationship in between
mobile	Number	12	Mobile Number
dob	Date		Date of Birth
Record Size	318		

Promotion

Primary Key – eno, date

Foreign Key –eno

Table 13 Promotion Table

Field Names	Data type	Data Size	Description
eno	Number	5	Employee No
date	Date		Promotion Date
reason	Text	100	Promotion Reason
previous_pos	Number	5	Previous Position Id
current_pos	Number	5	Current Position Id
Record Size	115		

Demotion

Primary Key – eno, date

Foreign Key –eno

Table 14 Demotion Table

Field Names	Data type	Data Size	Description
eno	Number	5	Employee No
date	Date		Demotion Date
reason	Text	100	Demotion Reason
previous_pos	Number	5	Previous Position Id
current_pos	Number	5	Current Position Id
Record Size	115		

Training

Primary Key – eno, date_from

Foreign Key –eno

Table 15 Training Table

Field Names	Data type	Data Size	Description
eno	Number	5	Employee No
datefrom	Date		Training Starting Date
dateto	Date		Training Ending Date
status	Text	1	Training Status
purpose	Text	100	Purpose for the training
note	Text	100	Training Note
Record Size	206		

Welfare_Allowance

Primary Key – eno, allowance_date

Foreign Key –eno ,wno

Table 16 Welfare Allowance Table

Field Names	Data type	Data Size	Description
eno	Number	5	Employee No
allowance_date	Date		Allowance Date
amount	Number	10	Welfare Allowance Amount
wno	Number	5	Welfare Allowance Type No
Record Size	20		

Salary

Primary Key – sid

Foreign Key –eno

Table 17 Salary Table

Field Names	Data type	Data Size	Description
sid	Number	5	Salary Id
eno	Number	5	Employee No
net_sal	Number	10	Net Salary
basic_sal	Number	10	Basic Salary
gross_sal	Number	10	Gross Salary
pay_date	Date		Payment Date
Record Size	40		

Salary_Allowance

Primary Key – sno, amount

Foreign Key –sa_no, sno

Table 18 Salary Allowance Table

Field Names	Data type	Data Size	Description
sno	Number	5	Salary No
sa_no	Number	5	Salary Allowance Type No
amount	Number	10	Salary Allowance Amount
Record Size	20		

Salary_Deduction

Primary Key – sno, amount

Foreign Key –sd_no, sno

Table 19 Salary Deduction Table

Field Names	Data type	Data Size	Description
sno	Number	5	Salary No
sd_no	Number	5	Salary Deduction Type No
amount	Number	10	Salary Deduction Amount
Record Size	20		

Loan

Primary Key – lid

Foreign Key – eno

Table 20 Loan Table

Field Names	Data type	Data Size	Description
lid	Number	5	Loan Id
eno	Number	5	Employee No
req_date	Date		Loan Request Date
req_amount	Number	10	Loan Request Amount
purpose	Text	50	Loan purpose
Record Size	70		

Approved_Loan

Primary Key – lid

Foreign Key – lid

Table 21 Approved Loan Table

Field Names	Data type	Data Size	Description
lid	Number	5	Loan Id
app_date	Date		Approval Date
app_amount	Number	10	Approval Amount
status	Text	1	Loan Status
no_total_installments	Number	5	No of Total Installments
no_remain_installments	Number	5	No of Remain Installments
Record Size	26		

Rejected_Loan

Primary Key – lid

Foreign Key – lid

Table 22 Rejected Loan Table

Field Names	Data type	Data Size	Description
lid	Number	5	Loan Id
Rejected_date	Date		Loan Reject Date
reason	Text	100	Loan Reject Reason
Record Size	105		

Monthly_Welfare

Primary Key – eno, date

Foreign Key – eno, fno

Table 23 Monthly Welfare Table

Field Names	Data type	Data Size	Description
eno	Number	5	Employee No
fno	Number	5	Welfare Fund No
date	Date		Welfare Date
amount	Number	10	Monthly Welfare Amount
Record Size	20		

Resignation

Primary Key – eno, date

Foreign Key – eno

Table 24 Resignation Table

Field Names	Data type	Data Size	Description
eno	Number	5	Employee No
date	Date		Resignation Date
reason	Text	100	Resignation Reason
type	Text	1	Resignation Type
Record Size	106		

Loan_Recovery

Primary Key – lid, installment_date

Foreign Key – lid

Table 25 Loan Recovery Table

Field Names	Data type	Data Size	Description
lid	Number	5	Loan Id
installment_date	Date		Installment Payment Date
amount	Number	10	Installment Amount
Record Size	15		

Guarantor

Primary Key – lid, status

Foreign Key – lid,eno

Table 26 Guarantor Table

Field Names	Data type	Data Size	Description
lid	Number	5	Loan Id
eno	Number	5	Employee No
status	Text	1	Guarantor Status
Record Size	11		

Loan_Guarantor

Primary Key – lno, status

Foreign Key – lno

Table 27 Loan Guarantor Table

Field Names	Data type	Data Size	Description
lno	Number	5	Loan No
status	Text	1	Guarantor Status
Record Size	6		

Branch_Mobile

Primary Key – bno, mobile

Foreign Key – bno

Table 28 Branch Mobile Table

Field Names	Data type	Data Size	Description
bno	Number	5	Branch No
mobile	Number	12	Branch Mobile Number
Record Size	17		

Branch_Land

Primary Key – bno, land

Foreign Key – bno

Table 29 Branch Land Table

Field Names	Data type	Data Size	Description
bno	Number	5	Branch No
land	Number	12	Branch Landphone Number
Record Size	17		

Employee_Address

Primary Key – eno, address

Foreign Key – eno

Table 30 Employee Address Table

Field Names	Data type	Data Size	Description
eno	Number	5	Employee No
address	Text	100	Employee Address
Record Size	105		

Training_Location

Primary Key – eno, datefrom, location

Foreign Key – eno

Table 31 Training Location Table

Field Names	Data type	Data Size	Description
eno	Number	5	Employee No
datefrom	Date		Training Starting Date
location	Text	50	Training Location
Record Size	55		

4.4 Report Layout Design

• Monthly Recruitment Report Layout

certis lanka

Certis Lanka Centre,
No: 15, De Fonseka Place
Colombo 04, Sri Lanka.

Monthly Recruitment Report (January)

Report Date: 2022-02-01
Report Time: 08.53 am

A bar chart titled "January" showing recruitment counts for five departments: Security Solutions, Courier Services, Secure Logistics, Technology, and Home Nursing. The Y-axis represents the number of recruits from 0 to 50. Blue bars represent males and orange bars represent females. The chart shows the highest recruitment in Technology (Males ~35, Females ~42) and Courier Services (Males ~45, Females ~12).

Department	Male	Female
Security Solutions	5	2
Courier Services	45	12
Secure Logistics	23	2
Technology	35	42
Home Nursing	11	5

Employee Id	First Name	Last Name	Address	Email	Company
E001	Malith	Deshan	Colombo	malith@gmail.com	Security Solutions
E002	Lakindu	Perera	Jaffna	lakindu@gmail.com	Courier Services
E003	Tharaka	Perera	Matara	tharaka@gmail.com	Home Nursing
E004	Vishva	Dilantha	Colombo	malith@gmail.com	Security Solutions
E005	Malshan	Perera	Matara	lakindu@gmail.com	Courier Services
E006	Bingushan	Wimansa	Matara	tharaka@gmail.com	Home Nursing

Total Recruitments for Month January: 183

- Weekly Attendance Report Layout

Certis Lanka

Certis Lanka Centre,
No: 15, De Fonseka Place
Colombo 04, Sri Lanka.

Weekly Attendance Report

Report Date: 2022-08-13
Report Time: 08.53 am

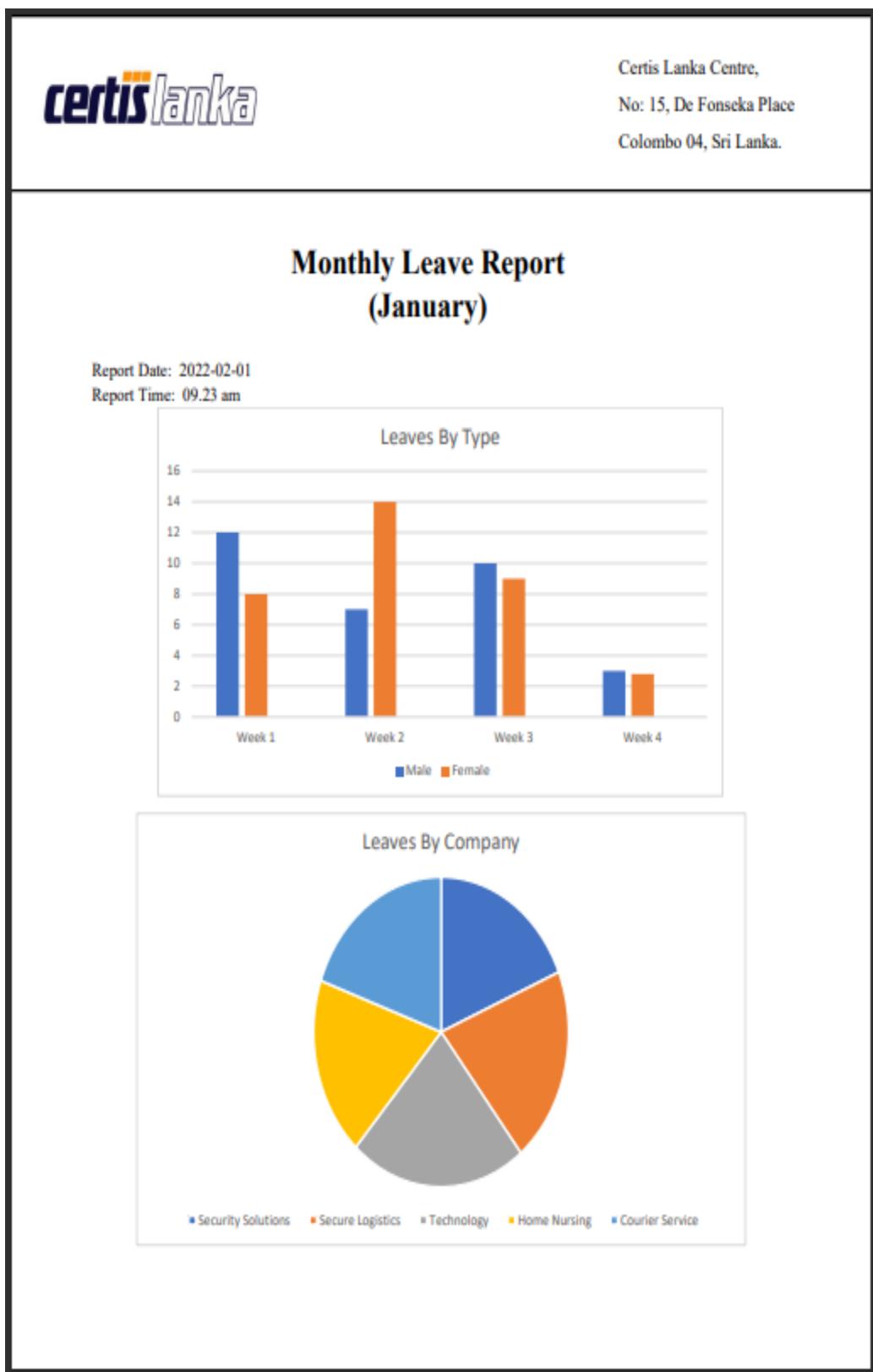
A bar chart titled "2022-08-05 - 2022-08-12" showing weekly attendance. The Y-axis represents attendance counts from 0 to 4000. The X-axis lists the days of the week: Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, and Sunday. Blue bars represent males and orange bars represent females. The chart shows a general decline in attendance from Monday to Sunday.

Day	Male	Female
Monday	3100	2700
Tuesday	3600	2800
Wednesday	3000	3400
Thursday	3100	2000
Friday	1800	3100
Saturday	300	100
Sunday	200	0

Total Attendance for (2022-08-05 – 2022-08-12) time period by company

Certis Lanka Security Solutions (PVT) LTD	: 1201
Certis Lanka Secure logistics (PVT) LTD	: 985
Certis Lanka Technology & Consultancy (PVT) LTD	: 4526
Certis Lanka Courier Service (PVT) LTD	: 486
Certis Lanka Home Nursing & Swiftcare (PVT) LTD	: 1984

- Monthly Leave Report Layout



- Monthly Resignation Report Layout

certis lanka

Certis Lanka Centre,
No: 15, De Fonseka Place
Colombo 04, Sri Lanka.

Monthly Resignation Report (January)

Report Date: 2022-02-01
Report Time: 08.53 am

Resignation Distribution Over Companies

■ Security Solutions	■ Courier Services	■ Secure Logistics	■ Home Nursing	■ Technology
----------------------	--------------------	--------------------	----------------	--------------

Employee Id	Name	Join Date	Resignation Date	Reason	Company
E001	Malith	2017-08-15	2022-01-13	Health Issues	Security Solutions
E002	Lakindu	2019-05-13	2022-01-15	Health Issues	Courier Services
E003	Tharaka	2018-10-19	2022-01-19	Health Issues	Home Nursing
E004	Vishva	2021-09-17	2022-01-25	Health Issues	Security Solutions
E005	Malshan	2018-07-11	2022-01-06	Health Issues	Courier Services
E006	Bingushan	2020-08-13	2022-01-13	Health Issues	Home Nursing

Total Resignations for Month January: 23

- **Monthly Salary Report Layout**

	Certis Lanka Centre, No: 15, De Fonseka Place Colombo 04, Sri Lanka.																								
<h2 style="text-align: center;">Monthly Salary Report (January)</h2>																									
Report Date: 2022-02-01 Report Time: 08.53 am																									
Summary Of Company Salary Expenses																									
<ul style="list-style-type: none">• Security Solutions : Rs. 30 020 150.00• Secure Logistics : Rs. 25 421 122.00• Home Nursing : Rs. 31 000 108.00• Technology : Rs. 28 455 012.00• Courier Service : Rs. 18 171 529.00																									
Total Company Salary Expense Rs. 133 067 921.00																									
<table border="1"><thead><tr><th>Company Name</th><th>Average Basic Salary</th><th>Average Gross Salary</th><th>Average Net Salary</th></tr></thead><tbody><tr><td>Security Solutions</td><td>25 000.00</td><td>40 500.00</td><td>45 650.00</td></tr><tr><td>Secure Logistics</td><td>24 250.00</td><td>39 200.00</td><td>45 500.00</td></tr><tr><td>Home Nursing</td><td>20 500.00</td><td>29 750.00</td><td>44 987.00</td></tr><tr><td>Technology</td><td>23 929.00</td><td>41 358.00</td><td>46 258.00</td></tr><tr><td>Courier Service</td><td>21 200.00</td><td>42 000.00</td><td>48 300.00</td></tr></tbody></table>		Company Name	Average Basic Salary	Average Gross Salary	Average Net Salary	Security Solutions	25 000.00	40 500.00	45 650.00	Secure Logistics	24 250.00	39 200.00	45 500.00	Home Nursing	20 500.00	29 750.00	44 987.00	Technology	23 929.00	41 358.00	46 258.00	Courier Service	21 200.00	42 000.00	48 300.00
Company Name	Average Basic Salary	Average Gross Salary	Average Net Salary																						
Security Solutions	25 000.00	40 500.00	45 650.00																						
Secure Logistics	24 250.00	39 200.00	45 500.00																						
Home Nursing	20 500.00	29 750.00	44 987.00																						
Technology	23 929.00	41 358.00	46 258.00																						
Courier Service	21 200.00	42 000.00	48 300.00																						

- Monthly Promotion Report Layout

<p> Certis Lanka Centre, No: 15, De Fonseka Place Colombo 04, Sri Lanka.</p>					
<p style="text-align: center;">Monthly Promotion Report (January)</p>					
<p>Report Date: 2022-02-01 Report Time: 09.30 am</p>					
Employee Id	Name	Previous Position	Current Position	Promotion Date	Reason
E001	Malith	Worker	Group Leader	2022-01-30	Performance
E002	Lakindu	Assistant Manager	Manager	2022-01-15	Performance
E003	Tharaka	Assistant Accountant	Accountant	2022-01-17	Performance
E004	Vishva	Worker	Group Leader	2022-01-23	Performance
E005	Malshan	Deputy Secretary	Secretary	2022-01-29	Performance
E006	Bingushan	Nurse	Senior Nurse	2022-01-12	Performance

Total Number of Promotions for January(2022): 13

Total Number of Promotions by company (2022)

- Security Solutions (PVT) LTD : 02
- Secure Logistics (PVT) LTD : 03
- Technology (PVT) LTD : 02
- Home Nursing(PVT) LTD : 03
- Courier Service(PVT) LTD : 03

- Monthly Loan Report Layout

certis lanka

Certis Lanka Centre,
No: 15, De Fonseka Place
Colombo 04, Sri Lanka.

Monthly Loan Report (January)

Report Date: 2022-02-01
Report Time: 08.53 am

No of Loans



Approved Loans Rejected Loans Progressing Loans

Employee Id	First Name	Loan number	Request Amount	Request Date	Purpose
E001	Malith	L0012	150 000.00	2022-01-18	Wedding
E002	Lakindu	L0013	100 000.00	2022-01-14	Constructions
E003	Tharaka	L0014	50 000.00	2022-01-13	Private Reasons
E004	Vishva	L0015	120 000.00	2022-01-18	Constructions
E005	Malshan	L0016	3000 000.00	2022-01-25	Private Reasons
E006	Bingushan	L0017	175 000.00	2022-01-05	Health Care

Total Loans Approved for Month January: 15

- Monthly Loan Recovery Report Layout

		Certis Lanka Centre, No: 15, De Fonseka Place Colombo 04, Sri Lanka.			
<h2>Monthly Loan Recovery Report</h2> <h3>(January)</h3>					
<p>Report Date: 2022-02-01 Report Time: 09.23 am</p>					
Loan Id	Employee Name	Loan Amount	Pay Date	Payment	Number of Remain Instalments
L001	Malith	Rs.120 000.00	2022-01-10	Rs.10 000.00	5
L002	Lakindu	Rs.150 000.00	2022-01-10	Rs.15 000.00	7
L003	Tharaka	Rs.135 000.00	2022-01-10	Rs.12 000.00	9
L004	Vishva	Rs.180 000.00	2022-01-10	Rs.18 000.00	6
L005	Malshan	Rs.175 000.00	2022-01-10	Rs.10 000.00	5
L006	Bingushan	Rs.140 000.00	2022-01-10	Rs.8 000.00	10
				Total Number Of Progressing Loans In January	13
				Total Number Of Recovered Loans In January	10
				Total Number Of Unrecovered Loans In January	03

- Monthly Welfare Report Layout

	Certis Lanka Centre, No: 15, De Fonseka Place Colombo 04, Sri Lanka.
---	--

Monthly Welfare Report
(January)

Report Date: 2022-02-01
Report Time: 09.23 am

Monthly Welfare Amount By Designation

Designation	Welfare Amount
Truck Driver	Rs.150.00
Manager	Rs.250.00
Director	Rs.250.00
Nurse	Rs.175.00

Welfare Contribution By Designation

Welfare Contribution



■ Truck Driver ■ Manager ■ Director ■ Nurse

- Monthly Welfare Allowance Report Layout

	Certis Lanka Centre, No: 15, De Fonseka Place Colombo 04, Sri Lanka.																									
<h2 style="text-align: center;">Monthly Welfare Allowance Report (January)</h2> <p>Report Date: 2022-02-01 Report Time: 09.23 am</p> <h3>Welfare Allowance Type</h3> <table border="1"><thead><tr><th>Allowance Type</th><th>Amount</th></tr></thead><tbody><tr><td>Funeral</td><td>Rs. 75 000.00</td></tr><tr><td>Wedding</td><td>Rs.120 000.00</td></tr><tr><td>Medical</td><td>Rs. 50 000.00</td></tr><tr><td>Other</td><td>Decided By The Director Board</td></tr></tbody></table> <h3>Welfare Allowances Summary For This Month</h3> <table border="1"><thead><tr><th>Allowance Received Date</th><th>Received Amount</th><th>Type</th></tr></thead><tbody><tr><td>2022-01-26</td><td>Rs.120 000.00</td><td>Wedding</td></tr><tr><td>2022-01-27</td><td>Rs. 50 000.00</td><td>Medical</td></tr><tr><td>2022-01-28</td><td>Rs. 50 000.00</td><td>Medical</td></tr><tr><td>2022-01-29</td><td>Rs. 100 00.00</td><td>Other</td></tr></tbody></table>		Allowance Type	Amount	Funeral	Rs. 75 000.00	Wedding	Rs.120 000.00	Medical	Rs. 50 000.00	Other	Decided By The Director Board	Allowance Received Date	Received Amount	Type	2022-01-26	Rs.120 000.00	Wedding	2022-01-27	Rs. 50 000.00	Medical	2022-01-28	Rs. 50 000.00	Medical	2022-01-29	Rs. 100 00.00	Other
Allowance Type	Amount																									
Funeral	Rs. 75 000.00																									
Wedding	Rs.120 000.00																									
Medical	Rs. 50 000.00																									
Other	Decided By The Director Board																									
Allowance Received Date	Received Amount	Type																								
2022-01-26	Rs.120 000.00	Wedding																								
2022-01-27	Rs. 50 000.00	Medical																								
2022-01-28	Rs. 50 000.00	Medical																								
2022-01-29	Rs. 100 00.00	Other																								

- Welfare Fund Report Layout

certis lanka

Certis Lanka Centre,
No: 15, De Fonseka Place
Colombo 04, Sri Lanka.

Welfare Fund Report

Report Date: 2022-02-01
Report Time: 10.45 am

Current Condition

Fund Status	Good
Current Available Amount	Rs.18 657 342.00
Maximum Amount To Reach	Rs.14 000 000.00
Usable Amount	Rs.14 000 000.00

Welfare Fund Contribution by Company

Welfare Contribution

Company	Contribution Amount
Security Solutions	Rs. 10,000,000.00
Secure Logistics	Rs. 2,000,000.00
Technology	Rs. 1,500,000.00
Home Nursing	Rs. 1,000,000.00
Courier Service	Rs. 2,000,000.00

- Employee Designation Report Layout

certis lanka

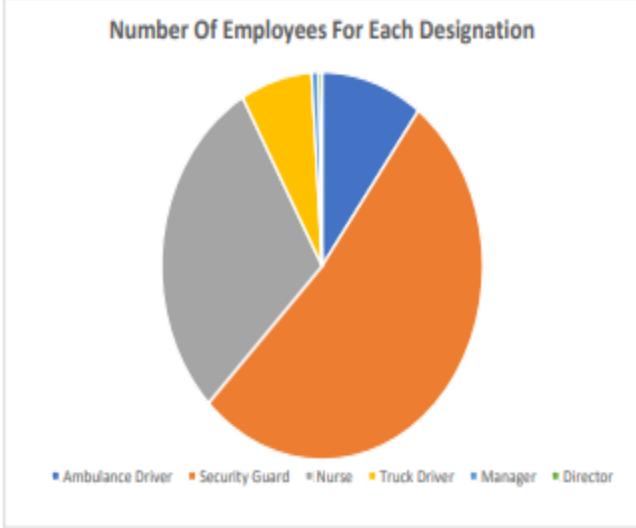
Certis Lanka Centre,
No: 15, De Fonseka Place
Colombo 04, Sri Lanka.

Employee Designation Report

Report Date: 2022-10-30
Report Time: 11.23 am

Designation Type	Basic Salary	EPF Rate	ETF Rate	Loan Rate
Ambulance Driver	22 000.00	8%	3%	6.25%
Security Guard	18 000.00	8%	3%	7.5%
Nurse	25 000.00	8%	3%	5.8%
Truck Driver	20 000.00	8%	3%	6.25%
Manager	100 000.00	8%	3%	4.5%
Director	150 000.00	8%	3%	3.8%

Number Of Employees For Each Designation



A pie chart titled "Number Of Employees For Each Designation" showing the relative proportions of different employee designations. The chart is divided into five segments: Security Guard (large orange segment), Ambulance Driver (grey segment), Manager (blue segment), Truck Driver (yellow segment), and Nurse (green segment). The legend below the chart identifies the colors for each designation: Ambulance Driver (grey), Security Guard (orange), Nurse (green), Truck Driver (yellow), Manager (blue), and Director (purple).

Designation	Percentage
Security Guard	~45%
Ambulance Driver	~25%
Manager	~10%
Truck Driver	~5%
Nurse	~5%
Director	~0%

Chapter 5 – Conclusion

In conclusion, managing a group of companies is a very crucial process in this competitive business world. For Certis Lanka Group, Loan and welfare management system is a main problem with their current management system. Without suitable software solution, Business cannot take business decisions without having updated information. Business decision-making is also a main process of this modern business world. Therefore, this software will address the major problems in current system and also it addresses the objectives of this project.

In order to develop a complete bug free software solution, System analyzing and designing performs major role throughout the software development life cycle. Therefore, in this software project, Use case diagram, Class diagram, ER diagram and sequence diagrams have been used to develop the main understanding of the system. Not only the diagrams, but this documentation also contains the Screen designing and Report layout designs to get the overall idea about the system by any type of stakeholder.

According to that, This employee management system is the best solution suitable for above business requirements and this system will be capable of archiving all the business needs in the future.

References

- Schmuller, J. (2006) *SAMS Tech Yourself UML* [Online] 3rd edn. USA: Sams, available from <[Joseph Schmuller - Sams Teach Yourself Uml in 24 Hours-Sams \(2001\) PDF | PDF | Unified Modeling Language | Object \(Computer Science\) \(scribd.com\)](https://www.scribd.com/doc/10000000/Joseph-Schmuller-Sams-Tech-Yourself-UML-in-24-Hours)> [22 Nov 2022]
- Certis Lanka Group (2021) *Introduction of the Organization and the Structure* [online] available from <[Certis Lanka Group | Integrated Solutions Provider](https://www.certis.lk/introduction-of-the-organization-and-the-structure/)> [9 October 2022]
- Rikhi, I. (2021) *Why You Should Always Backup Your Data*. 25 June. available from <[Why You Should Always Backup Your Data? \(stellarinfo.com\)](https://stellarinfo.com/why-you-should-always-backup-your-data/)> [6 October 2022]
- Trintech (n.d.) *5 Problems with spreadsheets in finance & accounting* [online] available from <[5 Reasons Spreadsheets Are a Problem | Trintech](https://www.trintech.com/5-reasons-spreadsheets-are-a-problem/)> [6 October 2022]

Appendices

- Log Sheet

