SECJ/SCSJ 2253 Requirements Engineering & Software Modeling

Sem.2 2021/2022

Software Requirements Specification

MindCare System
Version 2.0

24/6/2022

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Think Out of the Box

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a. Overview

The latest version of the Software Requirements Specification includes Introduction, Overall Description, and Specific Terms. This document will detail the development of the software requirements specifications that we have received from our system stakeholders, depending on three requirements modeling perspectives for our proposed system, including Data, Functional, and Behavioral perspectives. Each chapter in the Software Requirements Specification is discussed specifically and follows the learning concepts of Requirements Engineering and Software Modeling.

b. Target Audience

- MindCare Centre
- Developer team
- Customer (public)

c. Project Team Members

Member Name	Module
Eunice Lim Xian Ni	Module Customer Bank Data
Nafis Ahmed	Module Inquiry Received
Muhammad Arkan Al Rasyid	Module Appointment Setup
Shabrina Salsabila Sakroni	Module Customer Consultation

d. Version Control History

Version	Primary Author(s)	Description of Version	Date Completed
1.0	Nafis Ahmed	1. User Requirements Definition 2. Requirements Model Document (Functional, Data, Behavioral Perspectives)	12/06/2022
2.0	Eunice Lim Xian Ni	Software Requirements Specification of MindCare System	25/06/2022

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1. Introduction

1.1 Purpose

This SRS outlines the MindCare System's proposed requirements. SRS explains and analyzes what MindCare System will do and how it will function. The purpose of this System Requirements Specification is to provide a comprehensive description of individual requirements and constraints in order to cater to the requirements of stakeholders (eg: Users, Admins, Therapists). The functionality of the software product is also described to meet the needs of stakeholders. A more efficient system will be proposed but the functional requirements will be more complicated and complex. Use cases will be separated into several modules under System Features. A specific diagram is included in each module. To ensure that the proposed solution is more understandable to the intended users, use case descriptions and activity diagrams will be provided. Our main stakeholder – MindCare Center will verify improvements and suggestions submitted by our team to see if the proposed system is suitable for their workflow. And will verify the functionality of the proposed system which will only include reporting functions to the relevant departments.

1.2 Scope

MindCare System Version 2.0 is a software product that replaces the existing manual MindCare System. The MindCare system is designed to be a web-based system as stakeholders prefer it as a method over using mobile devices. This system will be used to schedule therapy appointments for prospective customers based on availability and other considerations, as well as to manage customer, therapist, and appointment information. Inquiry Received Process, Customer Consultation Process, Appointment Setup Process, and Customer Bank Data Process are the four processes in this system. This system is intended to be used in a MindCare system that is both efficient and effective.

The MindCare System includes three main objectives. The following are the significant objectives where the system is supposed to be more efficient, can increase system performance, and avoid errors:

1) Preferably, the registration process is done online
2) Coordinated system operation
3) Efficient system operation

The MindCare System was developed with the intent of digitizing most of the manual processes involved in the operation. The resulting MindCare System should be capable of fulfilling the necessary operations at the end of development:

1) Customers must log in to the system to access the services provided by MindCare System.
2) All user login information is kept confidential and only the admin can access the data.
3) Password for login must be a string that consists of minimum length and complexity.
4) Customers must accept the Terms & Conditions while registering the account.
5) Inquiries are sorted based on priorities. Most important and potential inquiries are attended to first.
6) Communication with therapists can be established only during office hours.
7) All user inquiries will be kept confidential, and users cannot see the inquiries of other us.
8) The customer must log in to the system to make an appointment.
9) The customer that does walk in must bring all required documents.
10) Appointments online based on FCFS basis.
11) Customer information is stored in the centralized Customer Bank Data.
12) All data will be stored in a centralized Customer Bank Data.
13) Customer feedback forms are filled out manually. Created and stored in a centralized customer Bank Data.
14) Monthly sales reports will impact marketing campaign analysis automatically.
15) All customer data will be kept confidential, and only MindCare System admins can view data from customers.

1.3 Definitions, Acronyms, and Abbreviations

Acronyms/ Abbreviations	Full-Form	Definitions
SRS	Software Requirements Specification	The document that contains a complete statement about what the software is capable of doing
FCFS		Operating systems and networks employ this form of scheduling algorithm to efficiently and

	First Come, First Served	automatically execute queued tasks, processes, and requests in the order in which they arrive.
Stakeholders		people with an involvement in the issues and problems expressed
MindCare Center		A rehabilitation center that provides Occupational Therapy, Speech therapy, Physiotherapy, and Early Intervention Program. The trusted center in caring for people and advancing health.

1.4 References

Kruger, N. (2018). How to Write a Software Requirements Specification (SRS Document). Retrieved from perforce: How to Write a Software Requirements Specification (SRS Document) | Perforce

Fernando B. (2012). People, Organizational and Technological Dimensions of Software Requirements Specification. Retrieved from Procedia Technology: https://www.sciencedirect.com/science/article/pii/S2212017312004653

John. (2011). Use Case Specification Example. All About Requirements. https://www.allaboutrequirements.com/2011/09/use-case-specification-example.html

1.5 Overview

The Software Requirements Specification is a document that outlines what the system performs and how it will satisfy the requirements of the stakeholders. The objective, scope, references, and an overview of the complete SRS are provided in the introduction. The relevant aspects affecting the system and its requirements will be described in the overall description section. Product views and functions, user characteristics, constraints, assumptions and dependencies, and division of divisions and requirements are all illustrations of these. The product perspective shows how the system is positioned in relation to other products and how it functions under various constraints. The product function, on the other hand, contains the system's main functions. Lastly, the External Interface Requirements, System Features, Performance Requirements, Design Constraints, and Software System Attributes will be specified in the

specific requirements section. Each chapter in the Software Requirements Specification is discussed specifically and in accordance with the learning concepts of Requirements Engineering and Software Modeling.

2. Overall Description

Figure 1 shows the Use Case Diagram (UCD) for MindCare System. There are total of three actors which are customer, therapist and admin along with 14 uses cases. Customer and therapist can manage appointment in UC001 where they can book or cancel the appointment. The customer can also fill in the feedback form in UC002 and submit to the system. The customer can send inquiries in UC003 to the system and is received by the therapist and admin. Next, the customer can book appointment in UC004 where it includes make payment in UC005. In UC006, the therapist consults the customer by providing therapy session and later requests customer to provide feedback about the consultation process. For UC007, it allows all three actors, customer, therapist and admin to manage their account which includes login and register account. Besides, the system also allows the admin and therapist to manage inquiries in UC009 which includes sending two types of auto reply message and sort the inquiries. The admin can also manage customer data in UC010 such as edit, delete and sort the customer information. The system also enables the admin to generate report in UC011. UC012 Manage customer feedback form is extended from UC011 as it is optional for the admin to manage customer feedback. Meanwhile, UC013 Generate customer feedback form has a mandatory relation with UC012 as it allows the admin to create a feedback form for the customer to fill in. Lastly, UC014 Manage sales data by admin is extended from UC011 where admin can edit and delete the sales data as well as cancelling the operation.
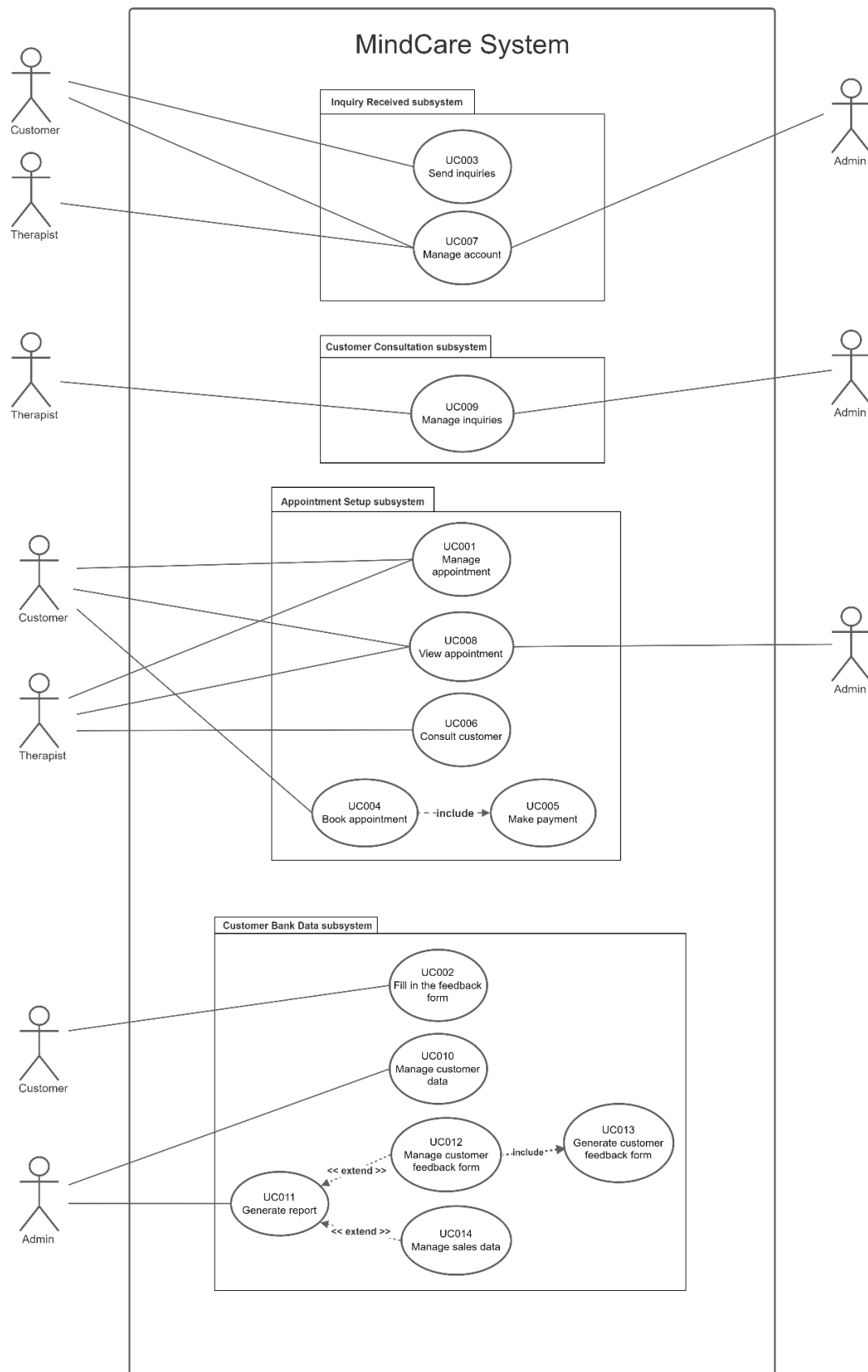
Figure 2.1: Use Case Diagram of MindCare System

2.1 Product Perspective

The MindCare System is an efficient automated web based MindCare System. According to Figure 2.1, there are four sub-goals which are secure user authentication system, efficient customer service, centralized customer database and customer feedback form. To achieve secure user authentication system, the system will be able to utilize recovery email or OTP authentication via SMS. The system will also require the user to enter a minimum password length and complexity in order to increase protection towards user account. In terms of efficient customer service, the system will need to ease the process of customers booking an appointment with therapist by showing the available therapist at that time slot and to automatically sort the appointment based on date. The second sub-goal for efficient customer service is to provide simplified appointment form by improving the user experience (UX) for appointment booking form. Meanwhile, the system will be able to automatically sort new customer inquiries based on date. For centralized customer database, the sub-goal is all customers information are collected and sorted. Besides, the system should be able to update, delete and save customers information. Lastly, the system shall generate customer feedback form and generate a monthly report based on the feedback received, so that the stakeholder can analyze the effectiveness of their marketing campaign towards the MindCare Centre.
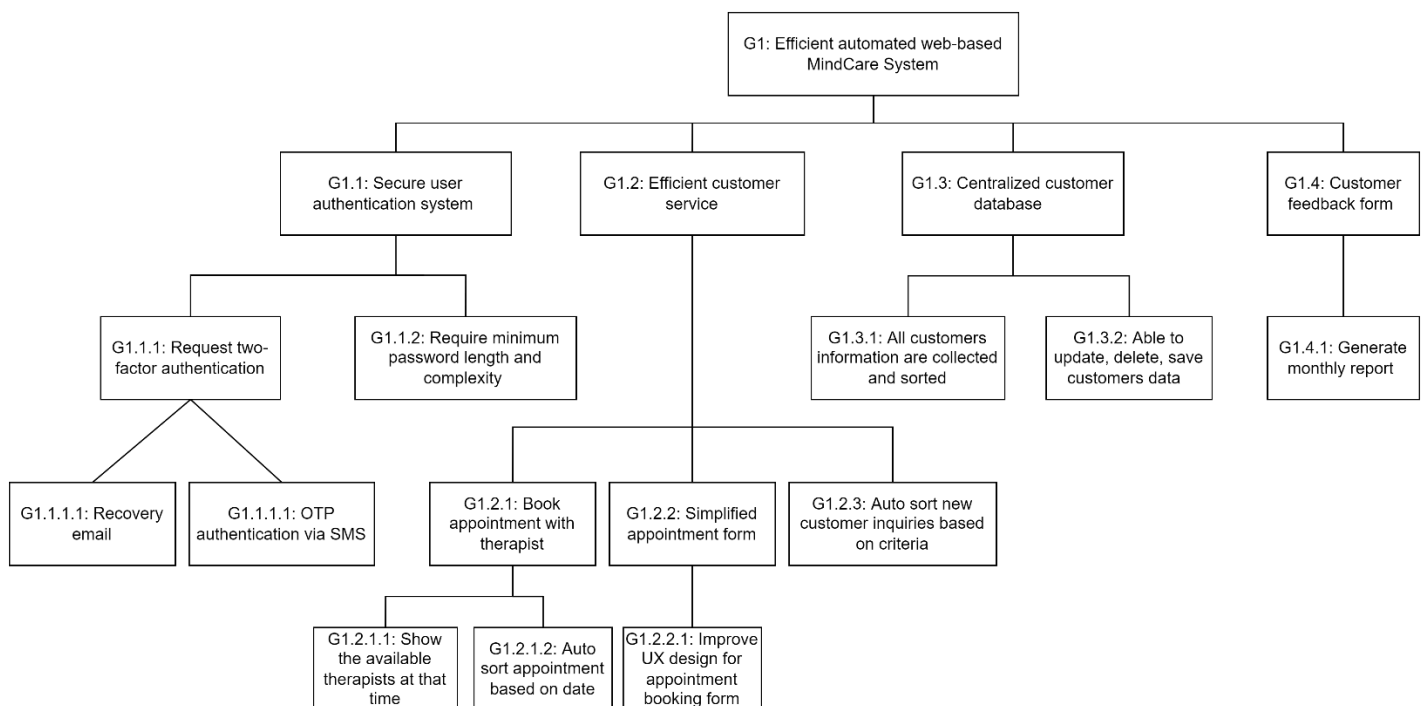

Figure 2.2: Goal Model of MindCare System

2.1.1 System Interfaces

a) Database will organize by Database Management System to ensure the availability and reliability

b) all customer personal data will be stored in the centralized Customer Bank Data.

2.1.2 User Interfaces

The system will have a simple and easy-to-understand format. This system will display the homepage and the login button, on the homepage the system will display current and future events. The user must be logged in before he/she can use another function. After the user login into the system, the menu on the homepage will be different for each user. For the admin account, the menu will display manage account, manage inquiries, and view appointments. For the therapist account, it will display manage account, manage inquiries, manage appointments, view appointments, and consult customers. For the customer account, the menu will display send inquiries, book appointments, view appointments, manage appointments and fill in the feedback form. The user also can update their account detail such as password and customer data if the user is a customer. in the profile.

2.1.3 Hardware Interfaces

MindCare System Version 2.0 is compatible with laptops and desktop computers that have Wi-Fi and network connectivity. The system will also request permission to use the camera and microphone so that the customer can speak with the therapist in person.

2.1.4 Software Interfaces

The system will use Database Management System and centralized Customer Bank Data to organize and store all the data of the appointment, customer's personal information, inquiries, and feedback from the customer.

2.1.5 Communication Interfaces

The system will communicate with another system via an internet network, a database server, and web browsers of all types.

2.1.6 Memory

MindCare System Version 2.0 is a data-centric system. As a result, data storage will be required. Cloud data storage will be used for this because cloud data storage can provide large memory space for backing up and storing data.

2.1.7 Operations

The MindCare System is used by three users which are customer, admin and the therapist. Therefore, the system shall be able to have data processing functions to process the data collected from customers and store in centralized Customer Bank Data. The system shall allow the admin and therapist to update, delete and sort the data. Besides, the system should also be able to request password recovery.

2.1.8 Site Adaptation Requirements

There are only a few adoption requirements to meet because MindCare System Version 2.0 can be accessed at any time and works with any type of portable device. As a result, in order to achieve the highest level of performance possible, a fast and stable internet connection is required.

2.2 Product Functions

According to the use case diagram in Figure 2.1, three users which are customer, therapist and admin shall login to their account and may manage their account details as in UC007. Besides, the customer will be able to send inquiries to the system in UC003. Next, in UC009, the system shall provide the therapist and admin to manage inquries which includes sending two types of auto reply message and sort the inquiries. Moreover, the system shall allow the customer to manage their appointment as in UC001. Customer, therapist and admin can view appointment made by customer in UC008. Meanwhile, in UC006, the system shall allow the therapist to consult the customer about their mental health problem. In UC002, the customer should fill in the feedback form that is provided by the system. Besides, the customer may book appointment using the system as in UC004 and make payment for the appointment in UC005. The system shall allow the admin to manage customer data in UC010 and generate report in UC011. To generate report, the system will allow the admin to manage customer feedback form in UC012

that includes the functionality of generating customer feedback form in UC013. Moreover, the system will allow the admin to manage sales data in UC014 so that it can generate report.

2.3 User Characteristics

There are three types of users that will interact with MindCare System which are customer, admin and therapist. Each user has their own characteristics and so the system is developed based on these requirements. To use the MindCare System, all users must be above 12 years old and own a MindCare System account. If they do not have an account, they need to register to access the system features. The user can apply an appointment and should make payment to complete the booking process. For the admin, it must be a staff from MindCare Center and can be anyone even without technical background. The admin can access and manage all the data stored in centralized Customer Bank Data. Meanwhile, the therapist must be a staff from MindCare Center with the appointed job title therapist. The therapist can consult the customer, manage appointments and inquiries collected from customers.

2.4 Constraints

a) The system is only available in Malaysia.

b) The login information shall be verified within five seconds.

c) Only Malay and English language will be used in the system.

d) Only authorized admin can access the complete account book of MindCare System.

e) The user interface shall not take more than 10 seconds to load.

f) HTML, CSS, JS, PHP and MySQL will be used to develop the system.

g) TCP/IP protocol will be utilized by system to create a connection between local host and server which will be used to connect customers with therapist during consultation.

h) The maximum downtime for the system should be within 15 minutes.

i) All customer data shall be encrypted before they are stored in the centralized Customer Bank Data to keep the data confidential.

2.5 Assumption and Dependencies

1. One assumption about the system is that it will be mostly web based. It will be used mainly on computers or tablets with decent performance. If the devices don't have enough hardware resources available for the system, then the system can malfunction.

2. Another assumption is that the inquiries are arranged according to the priorities and needs of the customer, which is also not true. The reason behind is that in this system, the inquiries are following the FCFS. So, whoever sends the inquiry first gets the service first and so on.

3. The system is assumed to function on a few operating systems such as macOS, windows and Linux.

4. It is assumed that if the device of the user is of very old specifications or version, the actual interface of the MindCare System might not appear and it would look a bit different than the actual one.

2.6 Apportioning of Requirements

Version 1.0 of the system is only web based but not mobile based yet. In this case, the project is delayed and there are some requirements that can be transferred to the next version of the system. The new features may be suspended until the future versions are developed since it is not important in the current latest version.

3. Specific Requirements
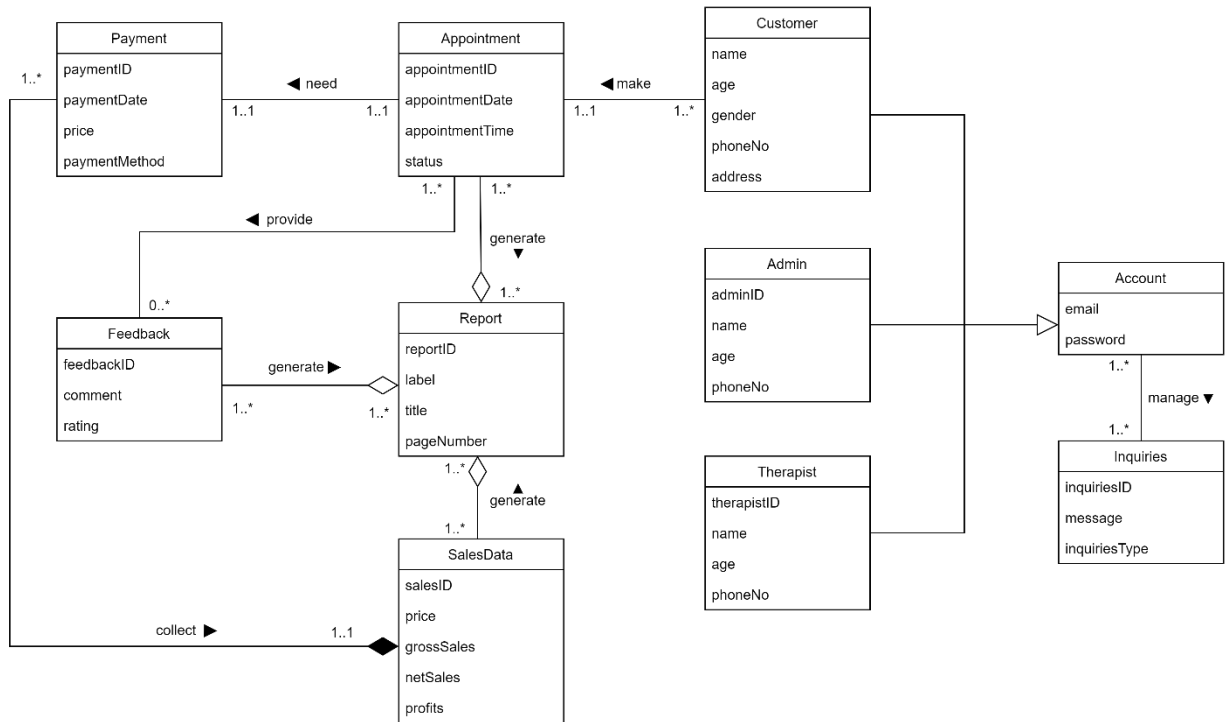
DM001 - Domain Model of MindCare System

The domain class diagram for MindCare System consists of 10 classes which are Payment, Appointment, Feedback, Report, SalesData, Customer, Admin, Therapist, Account and Inquiries. Generalization takes place where the Customer, Admin, and Therapist are subclasses and Account is superclass because all three of the subclasses contain an account. After owning an account, the customer can send inquiries while the admin will manage the inquiries that are stored in Inquiries class. Appointment class is created as the customers make appointment with MindCare System. Payment class is also formed to store the payment details for the appointment made by customers. Once the customers have attended the appointment, they need to provide feedbacks which are stored in Feedback class. Feedback, Appointment and SalesData class have aggregation relationship with Report class because if Report class does not exist, Feedback, Appointment and SalesData class will still available. Payment class also has composition relationship with SalesData class as they are highly dependent on each other.
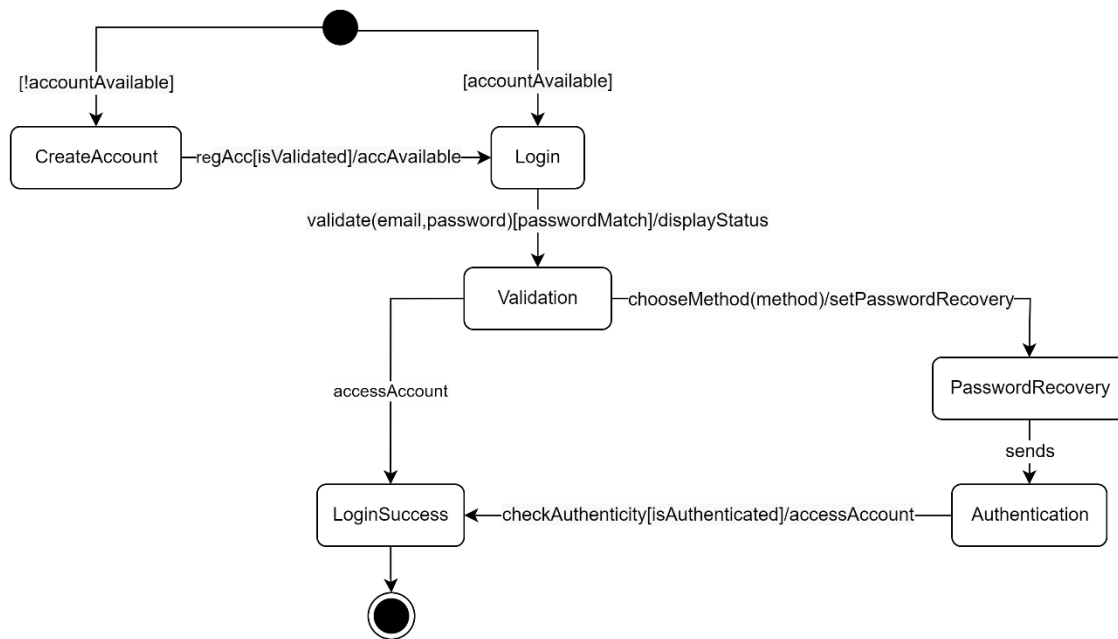
STD001 - State Transition Diagram of Account Class

Figure 4.1 shows the state transition diagram for Account class. The state transition diagram starts with checking if the user has an account. For the condition of login state, the user needs to have an account. On the other hand, the condition for create account state is when user does not own an account. From create account state, it will change into login state once the user has registered an account. After that, it will change into validation state if the email and password entered by user match the registered password and display the status of login. Then, the state will change to login success if the password matches the registered email by enabling the user to access the account. Meanwhile, password recovery state will occur if the login is failed and the user can choose different method to recover his password. Next, it will change to authentication state and once it is authenticated, it will change to login success state. The state transition ends here.
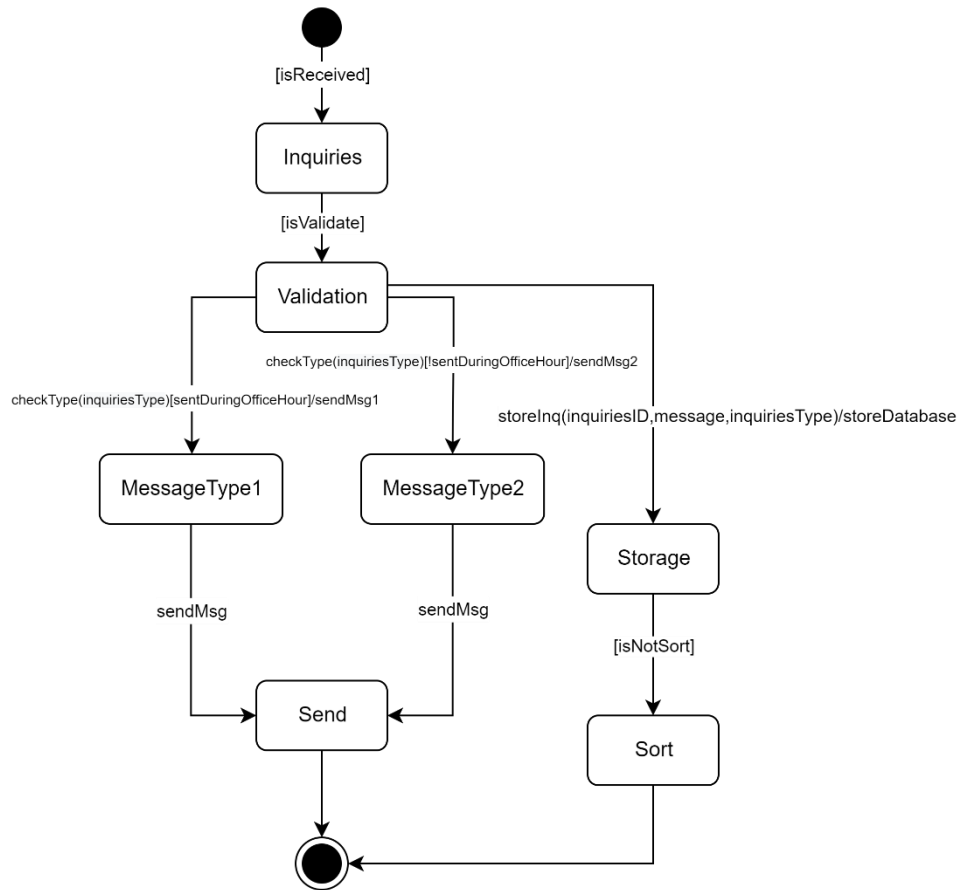
STD002 - State Transition Diagram of Inquiries Class

Figure 4.2 illustrates the state transition diagram for Inquiries class. A new inquiries will be received by the system. Then, the system will turn into validation state. From validation state, there are three states available for the system. The first state is when the inquiries is sent during office hour, it will send message type 1 state, otherwise, will become message type 2 state. After that, it will turn into send state. The third state is when the inquiries ID, message and inquiries type are stored and change to storage state. After that, the state will change to sort if the condition of inquiries are not sorted. The state transition diagram then ends here.

13
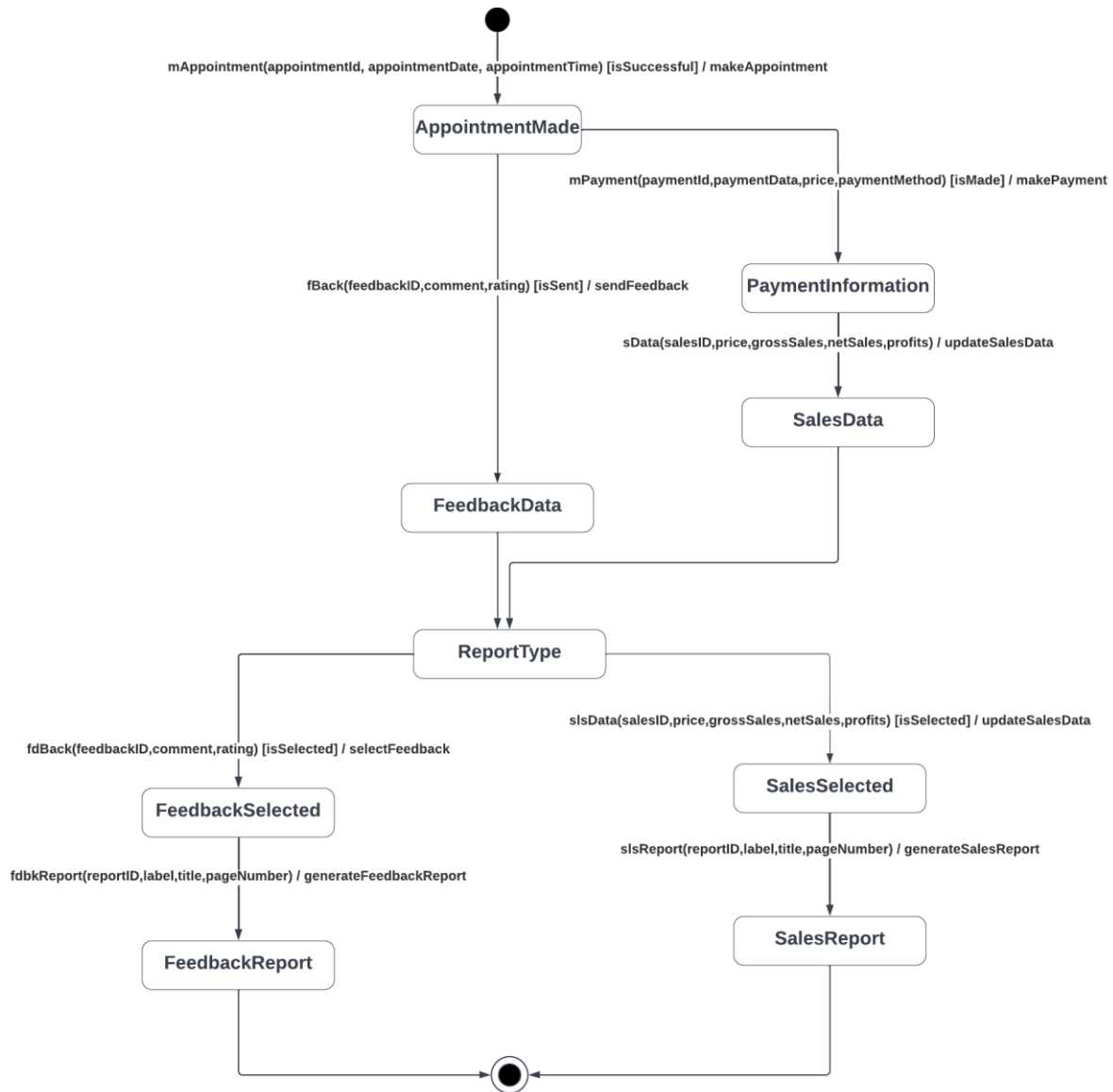
STD003 - State Transition Diagram of Report Class

The figure shows the state transition diagram for the report class. The report class is associated with 4 other classes that are: Payment, Appointment, Feedback and SalesData. At first, the appointment is made by the customers and attributes of the Appointment class which are appointmentID, appointmentDate, appointmentTime and status are allotted for a particular appointment. If the appointment is successful, the class will change the state into AppointmentMade state. After this, 2 possible states can happen to the report based on the arguments and conditions. The first condition is when the payment is made which results into the state named as PaymentInformation and the second condition is if feedback is sent, it results into the state named as FeedbackData. In the ReportType state there are also 2 conditions. The

first condition is that if the customer selects Feedback, then it results into the state named as FeedbackSelected which means that the report related to feedback will be generated. On the other hand, if sales is selected it results into a state named as SalesSelected. After FeedbackSelected state and SalesSelected state, by providing report ID, label, title and page number, feedback report and sales report will be generated through FeedbackReport state and SalesReport state which will result in the end of the state transition.

3.1 External Interface Requirements

3.1.1 User Interfaces

Our user interface will follow the rule of Nielsen's heuristic and Ben Shneiderman's "Eight Golden Rules" so that our stakeholder, MindCare Centre can easily recognise and learn how to use the MindCare System 2.0. There will be three different views of user interface for admin, customer and therapist. All the users must login before accessing the system. If the user does not have an account, they can fill in their email and password and click "Create An Account" button to create account as shown in Figure 3.1.1. Once the user successfully login to the system, they can view the dashboard which shall display upcoming events, recent events and previous events. For customer, he needs to book appointment first then can seek for consultion with the therapist. Once the consultation process is completed, the customer is required to provide feedback by filling in the feedback form as shown in Figure 3.1.3.

The only link to an external system is the feedback form. Customer feedback is required to improve our proposed system. The user interface is shown as below:

Figure 3.1.1: User interface prototype Sign Up page
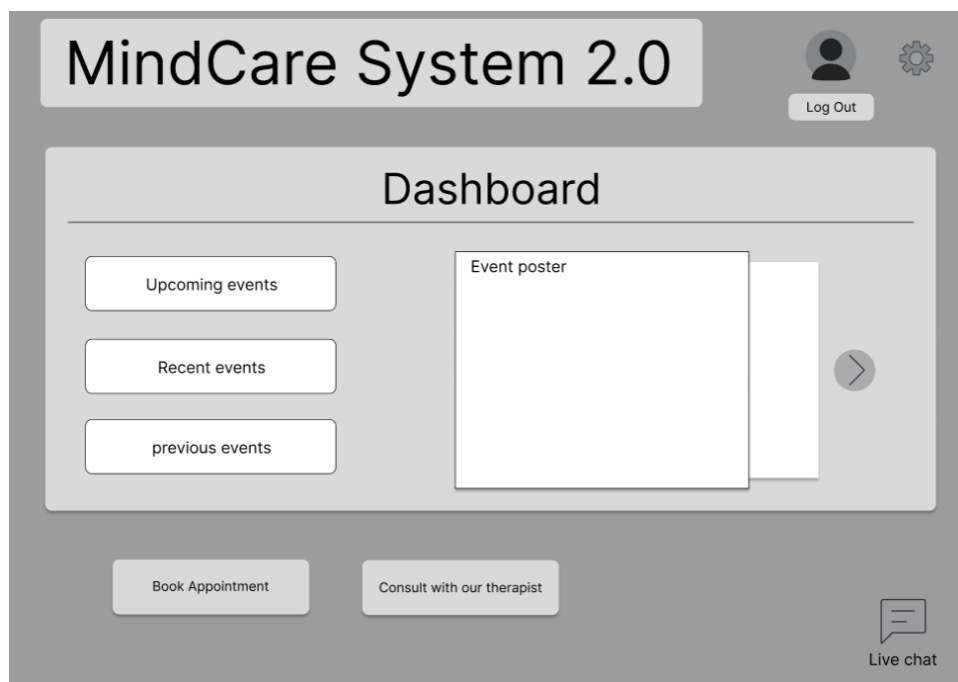
Figure 3.1.2: User interface prototype Home page

Figure 3.1.3: User interface prototype Feedback form page

3.1.2 Hardware Interfaces

Any type of computer such as PC, tablet will act as an interface to access the MindCare System. The minimum recommended hardware requirements are described below:

Browser	Processor	RAM	OS	HDD/SSD	Disk Space
All browsers can be used but opera will provide the fastest service.	Intel Core i3 (sixth generation or newer) or equivalent	2GB	Windows/ Mac OS/ Linux (any version)	200 mb	150 mb

3.1.3 Software Interfaces

Name	Mnemonic	Specification	Version	Source
Bootstrap	Bootstrap	Free and open-source software used for efficient web	V2.3.2	Open Source

		development using HTML and CSS based design. Also used to create intuitive user interface.		
MySQL DBMS	MySQL	It makes it easy for the developers to manage and create databases in the form of tables which are formatted and it has an open-source user interface.	V8.0	Open Source
Visual Studio Code	vscode	Used to ease web developer in editing the code. Allows the developers to create and manage codes written in different programming languages.	V1.6.8	Open Source

3.1.4 Communication Interfaces

HTTP protocol will be used as standard protocol that is encrypted by TSL/SSL is used to send data between web browser and MindCare System website. It allows the customers to make

payment securely as HTTPS protocol can secure the transmission of sensitive data such as banking information and customers data which are confidential. Through SSL/TLS handshake in HTTPS, it can ensure that the data is sent securely without being read by third party. FTP protocol is also applied to allow the system to transfer files over the internet. In MindCare System, admin can share and receive the files on TCP/IP network.

3.2 System Features
3.2.1 Module Inquiry Received Process

Inquiry received module is a module where the customer, therapist and admin can register a MindCare System account and access the website. With an account, the customer then can start to send inquiries to the live chatbot. The purpose of this module is to provide the users a platform to manage their account and customer to send inquiries. The functional requirement are UC003: Send inquiries and UC007: Manage account.
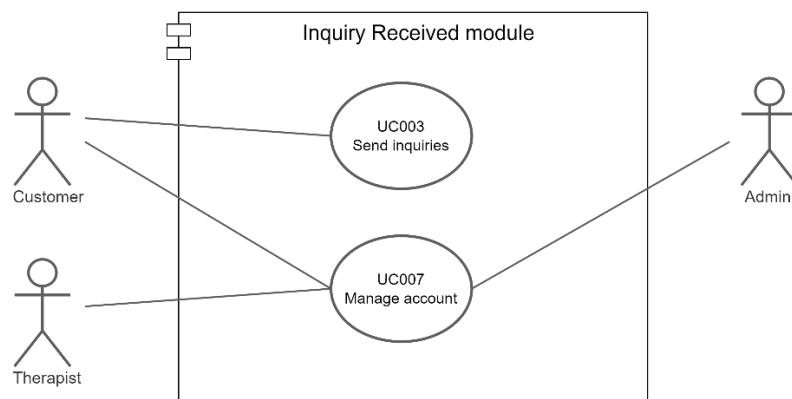
Figure 3.2: Inquiry Received module/subsystem

3.2.1.1 UC003: Use Case Send inquiries
Table 3.2.1.1: Use Case Specification for Send inquiries

History Log:	1.0	Create initial use case
	1.1	Fixed pre-conditions
	1.2	Fixed normal flow
	2.0	Added related requirements
Version:	2.0	
Use Case ID:	UC003	

Use Case Name:	Send inquiries			
Created By:	Shabrina Salsabila Sakroni	**Last Updated By:**	Shabrina Salsabila Sakroni	
Date Created:	8th June 2022	**Last Revision Date:**	23rd June 2022	
Actors:	Customer			
Description:	The customer sends inquiries to the live chatbot which will be answered by the admin.			
Pre-conditions:	1. Customer successfully logged into the system.			
Normal Flow:	1. Use case starts. 2. Customer sends questions to live chatbot (AF1). 3. The live chatbot (system) receives a list of questions (EF1). 4. Use case ends.			
Alternative Flow:	**AF1. Cancel operation** 1.1 The customer requests to cancel the operation. 1.2 The system directs the customer back to the homepage. 1.3 The use case ends.			
Exception:	**EF1. System failures to update centralized Customer Bank Data** 1.1 The system displays an error message on the screen. 1.2 NF2 is executed again.			
Post-conditions:	Customer inquiries are successfully stored in centralized Customer Bank Data. The process continues in UC009.			
Related Requirement:	**ID**	**Requirement**		**Priority**
	FR UC003-01	The system shall be able to display a live chatbot for customers		**Basic**
	FR UC003-02	The customers shall be able to send questions to the live chatbot		**Basic**
	FR UC003-03	The system (live chatbot) shall be able to receive the list of questions		**Basic**

	FR UC003-04	The customer shall be able to request to cancel the operation.	**Performance**
	QR UC003-01	The system shall be able to redirect the customer back to the home page.	**Basic**
	QR UC003-02	The system shall be able to display an error message on the screen if there is any system failure updating.	**Performance**
	QR UC003-03	The system shall be able to store customer data in the centralized Customer Data Bank	**Performance**
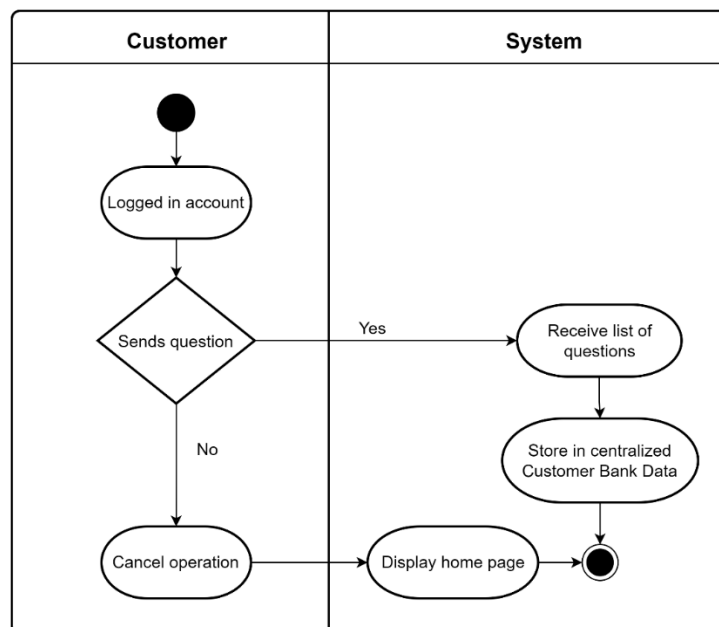
Figure 3.2.1.1: Activity Diagram of UC003 Send inquiries

3.2.1.2 UC007: Use Case Manage account

Table 3.2.1.2: Use Case Specification for Manage account

History Log:	1.0	Create initial use case
	1.1	Fixed pre-conditions
	2.0	Fixed normal flow

	2.0	Added related requirements
Version:	2.0	
Use Case ID:	UC007	
Use Case Name:	Manage account	
Created By:	Eunice Lim Xian Ni	**Last Updated By:** Eunice Lim Xian Ni
Date Created:	8ᵗʰ June 2022	**Last Revision Date:** 22ⁿᵈ June 2022
Actors:	Customer, Admin and Therapist	
Description:	Manage user account details including register account and login.	
Pre-conditions:	User browses the web page of system.	
Normal Flow:	1. The system displays the login page. 2. If user has an account, user enters their email and password to login to the system (AF1). 3. Else, the user registers an account for the system (AF2).	
Alternative Flow:	**AF1. Login to their own account** 1.1 User enters email and password. 1.2 The system validates the login info (EF1). 1.3 The system displays login successful. **AF2. Registers account** 2.1 The system directs the user to register account page. 2.2 User enters his/her personal information including name, age, gender, phone number and address. 2.3 User chooses "confirm" and passes the form validation (EF2). 2.4 User's registered information is stored in centralized Customer Bank Data. 2.5 The system directs the user to login account page.	

Exception:	**EF1. Request password recovery** 1.1 User requests password recovery using two-factor authentication. 1.2 **If** user chooses using recovery email 1.3 The system sends security alert via email. 1.4 User clicks the form which will direct user to login into their own account. 1.5 **Else if** user chooses using OTP authentication 1.6 The system sends OTP to user via SMS. 1.7 User receives the OTP and enters them into the authentication form. 1.8 The system directs the user to their own account. **EF2. Validation failed** 2.1 The system displays error message on the form 2.2 AF2 is executed again.
Post-conditions:	New user information is stored in the system's centralized Customer Bank Data.

Related Requirement:	ID	Requirement	Priority
	FR UC007-01	The system shall be able to display the login details in the database.	**Basic**
	FR UC007-02	The system shall be able to validate the login info.	**Basic**
	QR UC-003-01	The system shall be able to display error message when the validation fails.	**Performance**
	CR UC-003-01	The user needs to own an account to access the system, otherwise they can register an account.	**Performance**
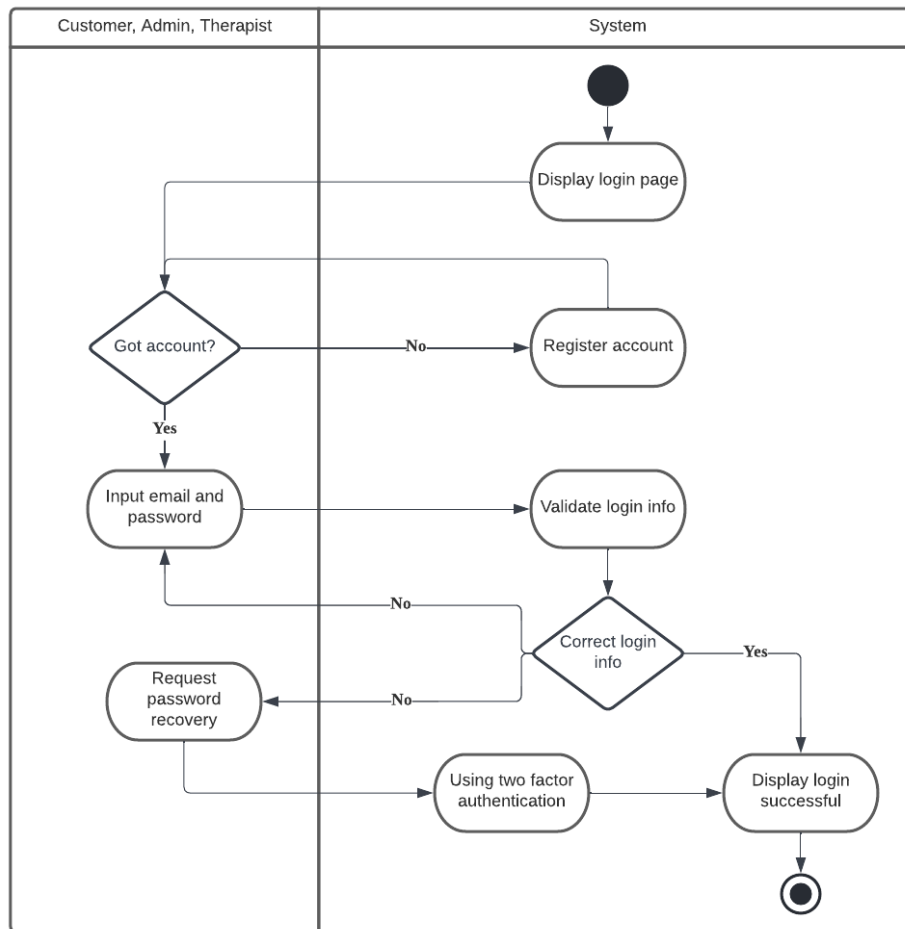
Figure 2.7: Activity Diagram for UC007 Manage Account

3.2.2 Module Customer Consultation

Customer consultation module is a module where admin and therapist will manage the inquiries sent by customer by determining whether the inquries are sent during the office hours or not and sort the inquiries. The functional requirement is UC009: Manage inquiries.
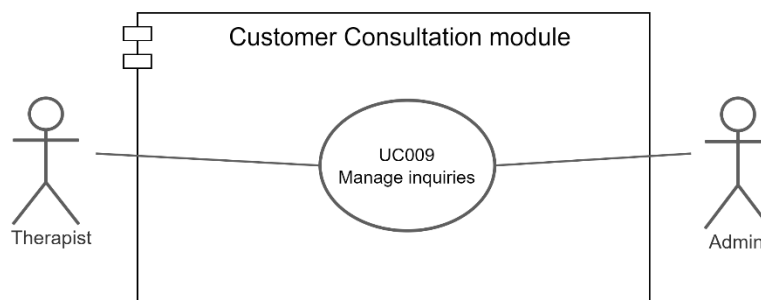
Figure 3.2: Customer Concultation module/subsystem

3.2.2.1 UC009: Use Case Manage inquiries

Table 3.2.2.1: Use Case Specification for Manage inquiries

History Log:	1.0	Create initial use case	
	1.1	Fixed pre-conditions	
	1.2	Fixed normal flow	
	2.0	Added related requirements	
Version:	2.0		
Use Case ID:	UC009		
Use Case Name:	Manage Inquiries		
Created By:	Nafis Ahmed	**Last Updated By:**	Nafis Ahmed
Date Created:	8th June,2022	**Last Revision Date:**	21st June, 2022
Actors:	Live chat-bot (Admin), therapist		
Description:	This use case is used by the system admin and the therapists to manage the customer inquiries.		
Pre-conditions:	1. Therapist logged in to the system 2. The customer logged in to the system. 3. The customer sends inquiries to the system. 4. Live chatbot is introduced to the system.		
Normal Flow:	1. Use case starts. 2. The therapist chooses to perform AF3. 3. Customer inquiries are received by the live chatbot from the sorted inquiries document. 4. If the customer inquiries sent during the office hours, then live chatbot choose to perform AF1.		

	5. Else the chatbot choose to perform AF2 if the inquiries are sent outside of the office hours. After performing AF2, the chatbot performs AF3 again.
Alternative Flow:	**1. Auto Reply Type 1 message** 1.1 The live chatbot receives the inquiry. 1.2 The live chatbot verifies that the inquiry has been sent during the office hours. 1.3 Type 1 message is sent to the customer which says "Thank You for connecting to MindCare System. You will be connected to an available therapist soon. Please wait. Thank You very much for your patience." **2. Auto Reply Type 2 message** 2.1 The live chatbot receives the inquiry. 2.2 The chatbot verifies that the inquiry has been sent outside office hours. 2.3 Type 2 message will be sent to the customer which says "Sorry, your request couldn't be processed. We will get back to you soon during service hours. Thanks for connecting with us." **3. Auto Sorting of the inquiries** 3.1 The therapist sends all the customer inquiries to be sorted. 3.2 The inquiries sorted automatically by the system. 3.3 The sorted inquiries are stored in a document. 3.4 The sorted inquiries are sent to the live chatbot.
Exception:	**1. Auto reply failed** 1.1 Customer exit from the system before submitting the inquiry. 1.2 Too much traffic in the system at the same time. 1.3 Chatbot stopped working due to bugs.

	2. Inquiry unsuccessful 2.1 The therapist fogot to send the inquiry to the sorting system. 2.2 Deletion of inquiry due to the malfunctioning of the automatic sorting system. 2.3 The data from the sorted inquiry document not sent to the live chatbot.		
Post-conditions:	Managing inquiries is successful.		
Related Requirement:	**ID**	**Requirement**	**Priority**
	FR UC009-01	The system shall be able to display the list of all the inquiries in the system database	**Basic**
	FR UC009-02	The live chat bot shall be able to receive inquiries from the customers	**Basic**
	FR UC009-03	The live chatbot shall be able to distinguish whether the inquiries are sent during the office hours or outside office hours	**Basic**
	QR UC009-01	The system shall be able to display error messages when the inquiry is unsuccessful	**Performance**
	QR UC009-02	The system shall be able to store the sorted inquiries in a particular document	**Performance**
	CR UC009-01	The system shall prompt confirmation for exiting the system	**Performance**
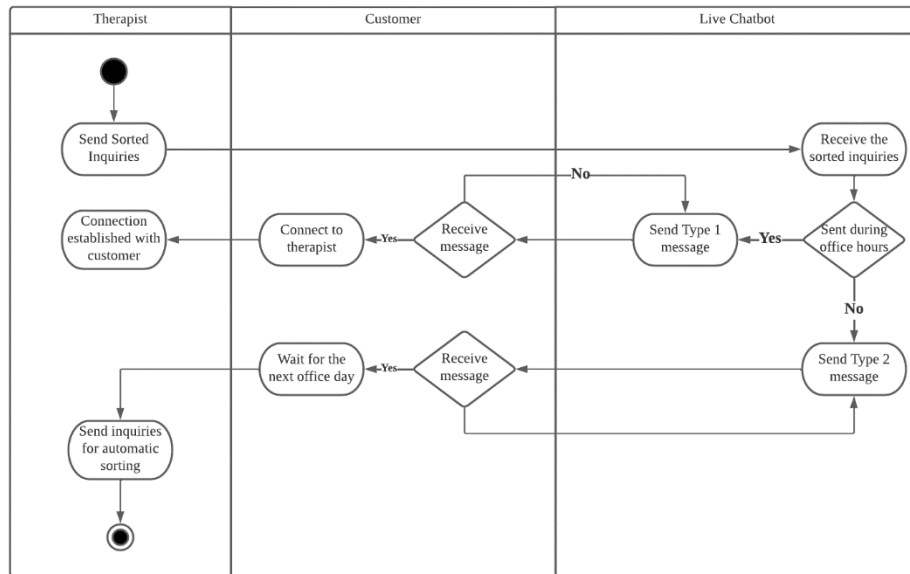
Figure: Activity Diagram for UC009 Manage Inquiries

3.2.3 Module Appointment Setup

According to Figure 3.2, the appointment setup module is a module for the complete process of appointment, from appointment booking to consulting customer. The functional requirements are UC001: Manage appointment, UC008: View appointment, UC006: Consult customer, UC004: Book appointment and UC005: Make payment.
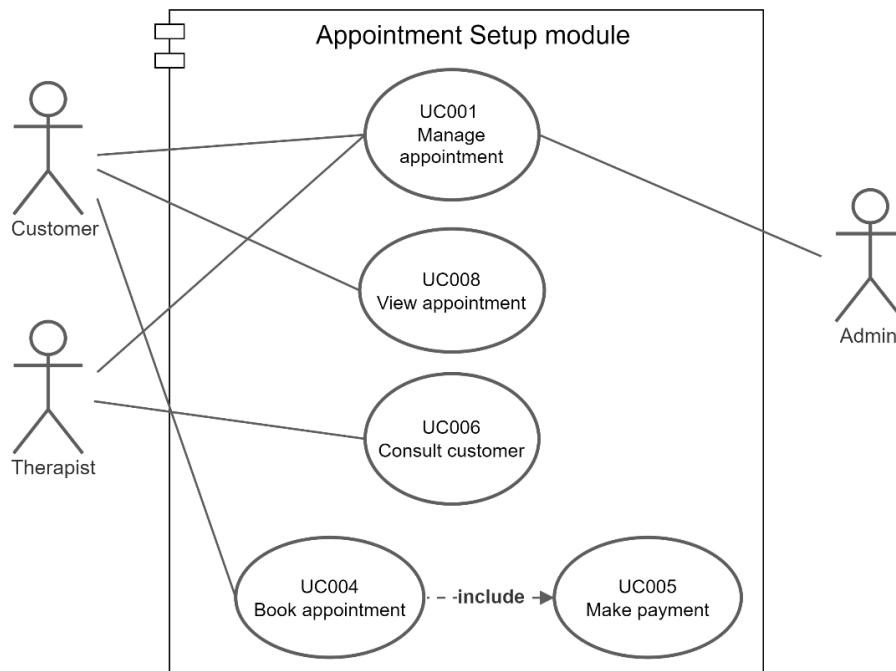
Figure 3.2: Appointment Setup module/subsystem

3.2.3.1 UC004: Use Case Book appointment

Table 3.2.3.1: Use Case Specification for Book appointment

History Log:	1.0	Create initial use case
	1.1	Fixed pre-conditions
	1.2	Fixed normal flow
	2.0	Added related requirements
Version:	2.0	
Use Case ID:	UC004	
Use Case Name:	Book appointment	
Created By:	Muhammad Arkan Al Rasyid	**Last Updated By:** Muhammad Arkan Al Rasyid
Date Created:	8th June 2022	**Last Revision Date:** 23rd June 2022
Actors:	Customer	
Description:	Make an appointment online with therapist on the MindCare System website.	
Pre-conditions:	1. Customer successfully creates a MindCare System account. 2. Fill in the customer's personal information.	
Normal Flow:	1. The use case starts when the customer chooses to book an appointment on the Mindcare System website. 2. The system displays page for appointment booking. 3. The customer selects the time, date of appointment and category of treatment. 4. If a customer does not book online (walk-in), perform operation (AF1). 5. Use case ends.	

Alternative Flow:	**AF1. The customer does not book online** 2.1 Customer goes to MindCare branch in their town. 2.2 Customer must bring all required documents. 2.3 **If** the therapist is available, the customer can go and consult with the therapist. 2.4 **Else** the customer must book online and go back to NF1.		
Exception:	**EF1. Appointment making unsuccessful** 1.1. The system displays an error message. 1.2. NF1 is executed again.		
Post-conditions:	Customer's appointment data is stored in the system's centralized Customer Bank Data.		
Related Requirement:	**ID**	**Requirement**	**Priority**
	FR UC004-01	The system shall be able to display the date for the appointment.	**Basic**
	FR UC004-02	The system shall be able to display the list of all the categories of treatment in the system database.	**Basic**
	FR UC004-03	The system shall be able to allow customers to enter details into the category treatment.	**Basic**
	QR UC004-01	The system shall be able to display an error message when appointment making unsuccessful found in system.	**Performance**
	CR UC-004-01	The system shall prompt confirmation for Date appointment selection and category treatment selection before the use case end	**Performance**
	CR UC-004-02	The customer shall be able to print the appointment proof after the appointment has been successfully created in the system database	**Performance**
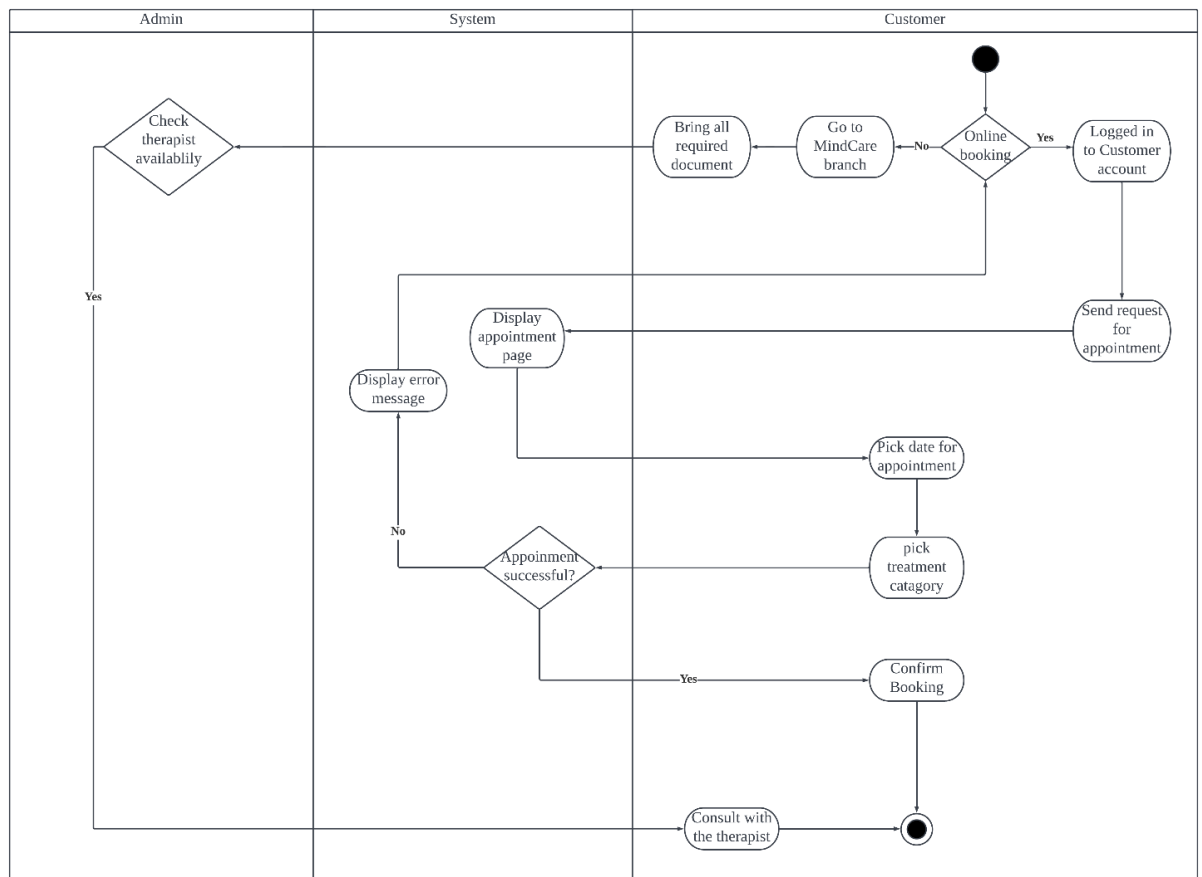
Figure: Activity Diagram for UC004 Book Appointment

3.2.3.2 UC005: Use Case Make payment

Table 3.2.3.2: Use Case Specification for Make payment

History Log:	1.0	Create initial use case
	1.1	Fixed pre-conditions
	1.2	Fixed normal flow
	2.0	Added related requirements
Version:	2.0	
Use Case ID:	UC005	
Use Case Name:	Make payment	

Created By:	Muhammad Arkan Al Rasyid	Last Updated By:	Muhammad Arkan Al Rasyid
Date Created:	8th June 2022	Last Revision Date:	22nd June 2022
Actors:	Customer		
Description:	The customer pays for a consultation with a MindCare therapist.		
Pre-conditions:	1. Customer successfully logged in his/her MindCare account. 2. UC004 is performed by the customer.		
Normal Flow:	1. The use case starts when the customer has carried out UC004. 2. MindCare system will display the payment gateway. 3. The customer pays the consultation fee to MindsCare. 4. The system successfully validates the customer's payment. 5. The MindCare system admin will send invoice to the customer. 6. Use case ends.		
Alternative Flow:	None		
Exception:	**EF1. The system failed to verify the payment** 1. The system will display the error message. 2. Customer will provide the payment proof. 3. The system admin double validates the payment. 4. Continue to NF5.		
Post-conditions:	The customer's payment is stored in the system's centralized Customer Bank Data.		

Related Requirement:	ID	Requirement	Priority
	FR UC005-01	The system shall be able to display the price for the consultation on the payment page	**Basic**
	FR UC005-02	The system shall be able to display the payment gateway	**Basic**

|	QR UC005-01	The system shall be able to display error message when the verification of the payment unsuccessful found in the system database	**Performance**
	CR UC005-01	The system shall prompt confirmation for payment before the customer pays for the consultation fee	**Performance**
	CR UC005-02	The customer shall be able to print the payment proof after the payment has been successfully saved in the system database	**Performance**
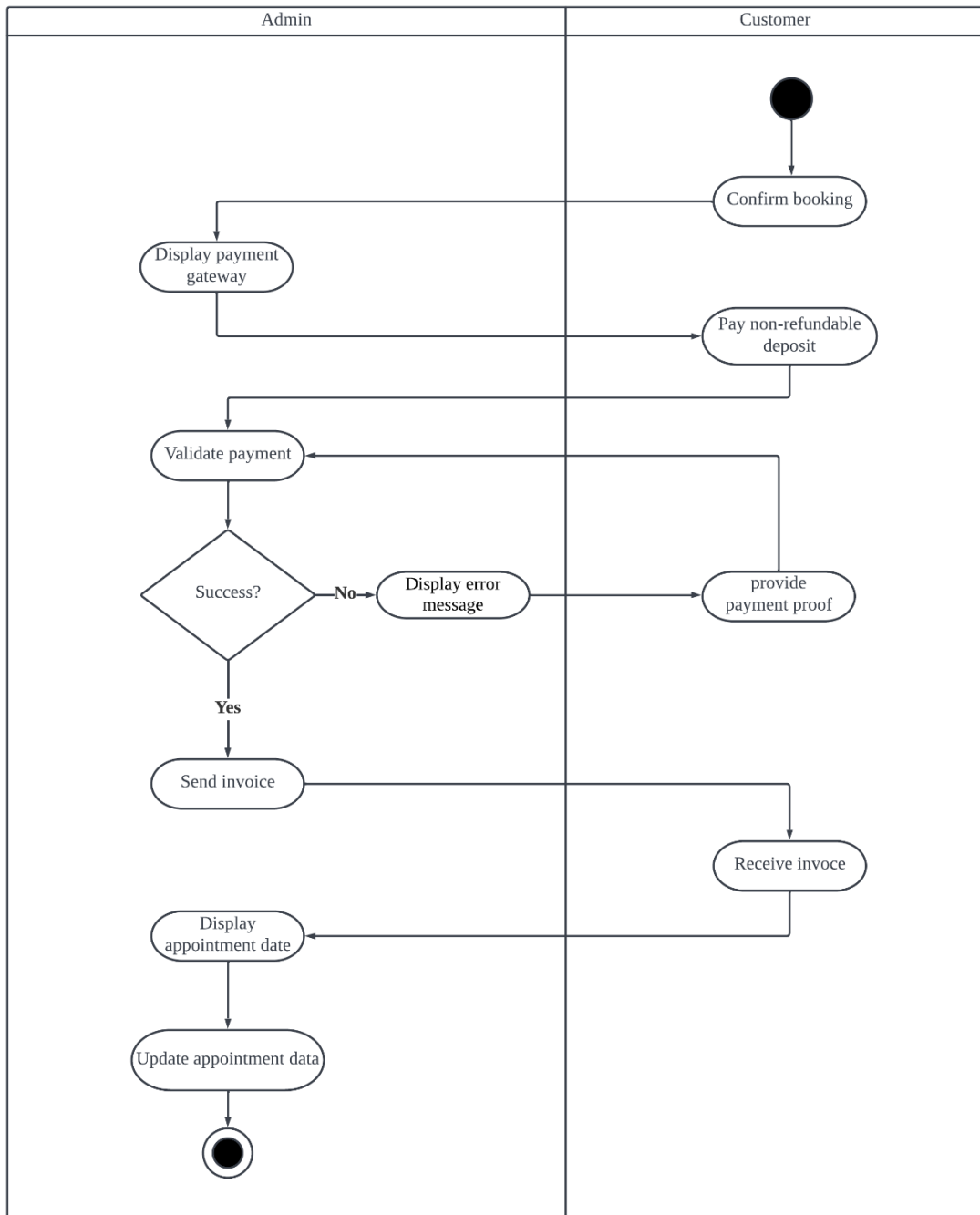
Figure: Activity Diagram for UC005 Make payment

3.2.3.3 UC001: Use Case Manage appointment

Table 3.2.3.3: Use Case Specification for Manage appointment

History Log:	1.0	Create initial use case
	1.1	Fixed pre-conditions
	1.2	Fixed normal flow
	2.0	Added related requirements
Version:	2.0	
Use Case ID:	UC-001	
Use Case Name:	Manage appointment	
Created By:	Shabrina Salsabila Sakroni	**Last Updated By:** Shabrina Salsabila Sakroni
Date Created:	8th June 2022	**Last Revision Date:** 23rd June 2022
Actors:	Customer, Therapist	
Description:	This process is a managed appointment between the therapist and the customer. Appointments can be arranged according to the availability of the therapist. Appointments made online are FCFS.	
Pre-conditions:	1. MindCare System therapist and customer logged into the system. 2. The customer made an appointment. 3. Completed UC004 and UC005.	
Normal Flow:	1. Use case starts. 2. The system stores customer data in centralized Customer Bank Data. 3. The therapist checks the availability of the appointment (AF1). 4. Use case ends.	
Alternative Flow:	**AF1. The therapist reschedules the customer's schedule.** 1.1 The therapist finds the appointment schedule (time and date). 1.2 If there are therapist available, sends the confirmation of the appointment schedule to the customer. 1.3 Else if no therapist is available at the time slot, the system reschedules the appointment schedule for the customer	

Exception:	**EF1. The customer refuses to reschedule the appointment**
	1.1 The system displays again the options.
	1.2 AF1 is executed again.
Post-conditions:	Managing appointments is successful.
Related Requirement:	**ID**	**Requirement**	**Priority**
	FR UC001-01	The system shall be able to display the schedule of appointments between customers and therapists	**Basic**
	FR UC001-02	The system shall be able to display the therapist appointment schedule to the customer	**Basic**
	FR UC001-03	The system shall be able to reschedule the appointment schedule for the customer	**Performance**
	FR UC001-04	The system shall be able to display the latest appointment after the data is successfully saved in the system database	**Performance**
	QR UC001-01	The customer data shall be able to be stored in the centralized Customer Bank Data.	**Performance**
	QR UC001-02	The system shall be able to display error messages when there is an error in making an appointment between the customer and the therapist	**Performance**
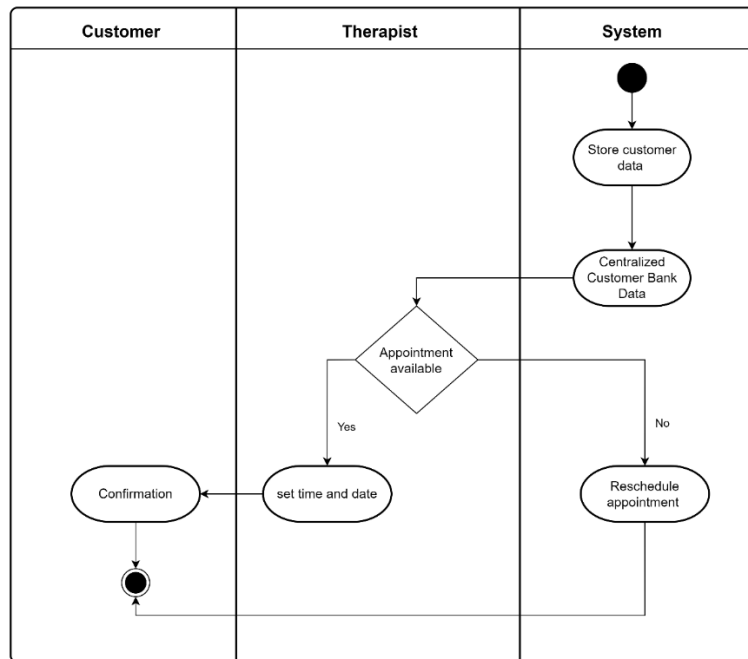
Figure 3.2.3.1: Activity Diagram of UC001 Manage appointment

3.2.3.4 UC006: Consult customer

Table 3.2.3.2: Use Case Specification for Consult customer

History Log:	1.0	Create initial use case
	1.1	Fixed pre-conditions
	1.2	Fixed normal flow
	2.0	Added related requirements
Version:	2.0	
Use Case ID:	UC006	
Use Case Name:	Consult Customer	
Created By:	Muhammad Arkan Al Rasyid	**Last Updated By:** Muhammad Arkan Al Rasyid
Date Created:	8th June 2022	**Last Revision Date:** 23th June 2022
Actors:	Therapist	

Description:	The therapist carried out consultation session with the customer about their problem.
Pre-conditions:	1. MindCare System therapist and customer logged into the system. 2. The customer made an appointment. 3. Completed UC004 and UC005.
Normal Flow:	1. Therapists retrieve customer's personal information from the centralized Customer Bank Data. 2. The therapist evaluates the customer's problem. 3. The therapist suggests a treatment. 4. Customer accepts the treatment. 5. The therapist starts the consultation with the customer. 6. MindCare system admin informs the customer to provide feedback.
Alternative Flow:	NONE
Exception:	NONE
Post-conditions:	NONE

Related Requirement:	ID	Requirement	Priority
	FR UC006-01	The system shall be able to display the customer information in the system database for the therapist.	**Basic**
	FR UC006-02	The system shall be able to display the treatment suggestion in the system database for the customer.	**Basic**
	FR UC006-03	The system shall be able to allow customers to enter details into the treatment suggestion from the therapist.	**Basic**
	FR UC006-04	The system shall allow the customer to print the treatment details after the consultation.	**Excitement**

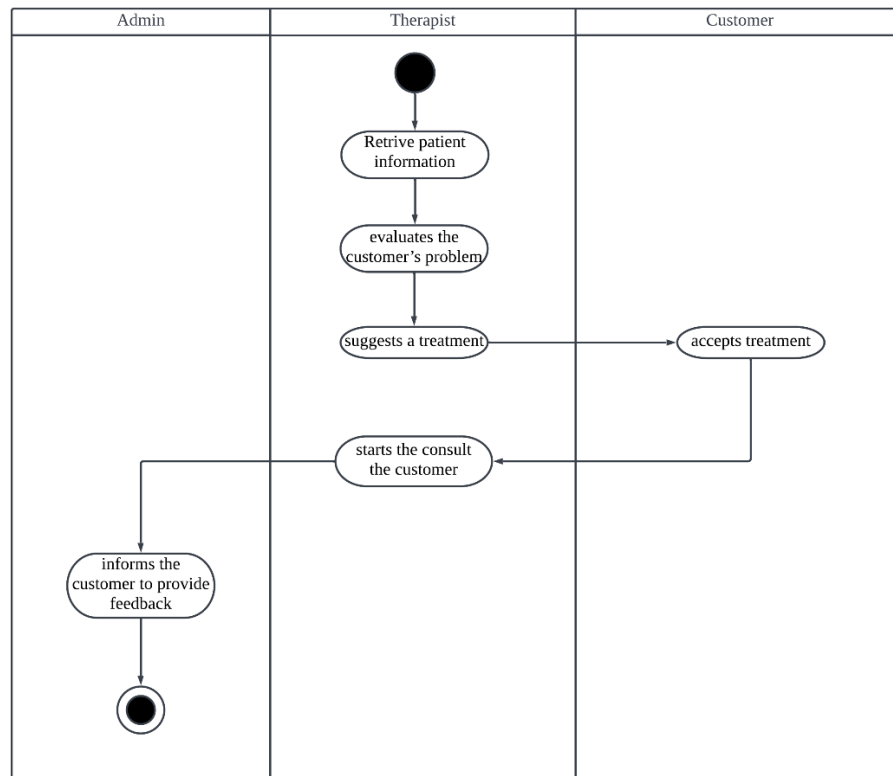| | FR UC006-05 | The system shall be able to display the feedback form. | **Basic** |
| | CR UC006-01 | The system shall prompt confirmation for treatment suggestions the therapist starts the consultation. | **Performance** |

Figure 3.2.3.2: Activity Diagram of UC006 Consult Customer

3.2.3.5 UC008: Use Case View appointment

Table 3.2.3.3: Use Case Specification for View appointment

History Log:	1.0	Create initial use case
	1.1	Fixed pre-conditions
	1.2	Fixed normal flow
	2.0	Added related requirements
Version:	2.0	

Use Case ID:	UC008
Use Case Name:	View appointment
Created By:	Nafis Ahmed

Created By:	Nafis Ahmed	**Last Updated By:**	Nafis Ahmed
Date Created:	8th June, 2022	**Last Revision Date:**	21st June 2022

Actors:	Therapist, customer, admin
Description:	This use case is used by all the actors to view the appointment details.
Pre-conditions:	1. Admin, Customer and Therapist successfully logged in to the system. 2. UC004 and UC005 are performed by the customer.
Normal Flow:	1. The use case starts when the customer has carried out the UC004 and UC005. 2. The user accesses their account by providing their email address and password. 3. The customer chooses the action to perform (AF1) 4. The admin and therapists choose the action to perform (AF2) 5. Use case ends.
Alternative Flow:	**AF1 View appointment date and time** 1. The customer enters the Appointlet. 2. The customer selects the appointment section. 3. The Appointlet shows the appointment date and time. 4. The customer views the appointment date, time and the therapist assigned for the therapy. **AF2 View all appointmets** 1. The user enters the Appointlet. 2. The system user goes to the appointment section. 3. The Appointlet shows all the upcoming appointments which contain date, time, information of the customer and the therapist assigned for that customer on that date.

Exception:	1. Appointment making unsuccessful		
	1.1 The system displays error message.		
	1.2 NF1 is executed again.		
	2. Appointlet failed to display the appointment information		
	2.1 The appointment section will be empty.		
	2.2 NF1 is executed again.		
Post-conditions:	None		
Related Requirement:	**ID**	**Requirement**	**Priority**
	FR UC008-01	The system shall be able to display the login informations in the database	**Basic**
	FR UC008-02	The system shall be able to display the date and time for all the appointments	**Basic**
	QR UC008-01	The system shall be able to display error message when the making of appointment is unsucessful	**Performance**
	CR UC008-01	The user needs to enter the appointlet in order to perform any operations related to appointments	**Performance**
	CR UC008-02	The system shall prompt confirmation before the user exits the appointlet	**Performance**
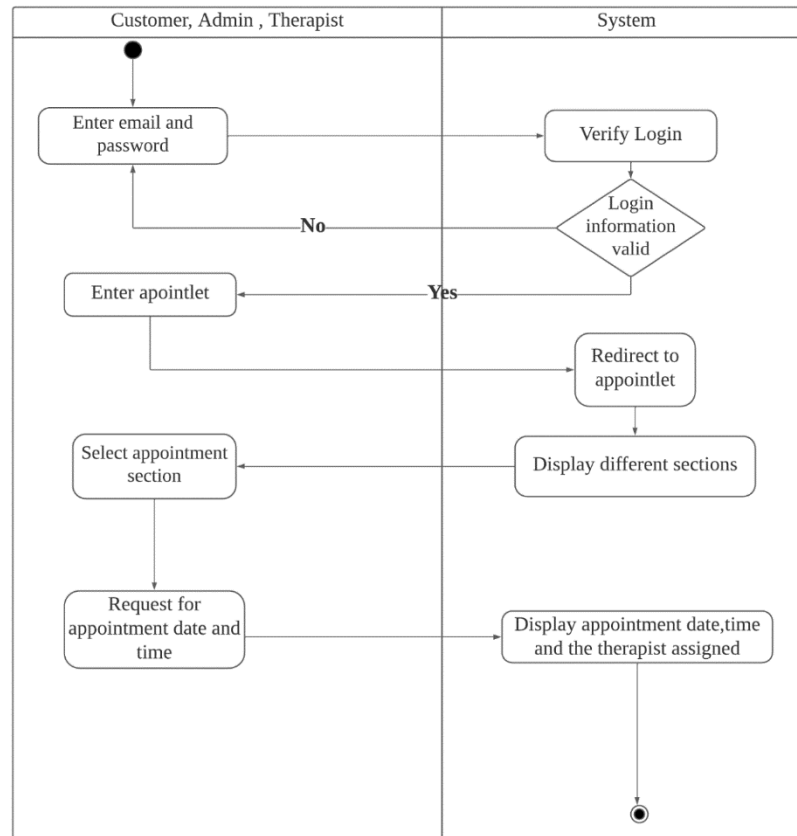
Figure : Activity Diagram for UC008 View Appointment

3.2.4 Module Customer Bank Data

The Customer Bank Data module is a module mainly to manage customer data, appointment and sales data which are stored in the centralized Customer Bank Data. The functional requirements that are available in this module are UC002: Fill in the feedback form, UC010: Manage customer data, UC011: Generate report, UC012: Manage customer feedback form, UC013: Generate customer feedback form and UC014: Manage sales data.

Figure 3.2: Customer Bank Data module/subsystem

3.2.4.1 UC002: Use Case Fill in the feedback form

Table 3.2.4.1: Use Case Specification for Fill in the feedback form

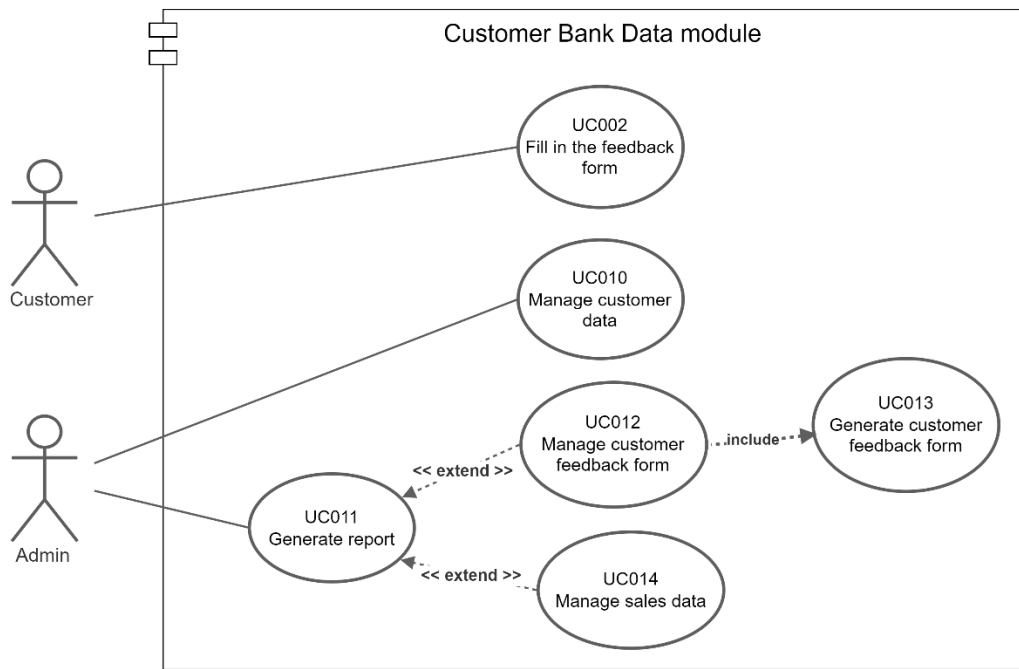| History Log:	1.0	Create initial use case		
	1.1	Fixed pre-conditions		
	1.2	Fixed normal flow		
	2.0	Added related requirements		
Version:	2.0			
Use Case ID:	UC-002			
Use Case Name:	Fill in the feedback form			
Created By:	Shabrina Salsabila Sakroni		**Last Updated By:**	Shabrina Salsabila Sakroni
Date Created:	8th June 2022		**Last Revision Date:**	23rd June 2022
Actors:	Customer			
Description:	Filling in the feedback form is a process that the customer does manually. Created and stored in a centralized Customer Bank Data.			
Pre-conditions:	1. Customer completed UC004. 2. Customer makes payment as UC005			
Normal Flow:	1. Use case starts. 2. The system displays the feedback form to the customer created in UC013. 3. The customer fills in the feedback form manually (AF1). 4. The customer submits the feedback form. 5. The feedback form is stored in the system's centralized Customer Bank Data (EF1). 6. Use case ends			
Alternative Flow:	**AF1. Cancel operation** 1.1 The customer requests to cancel the operation. 1.2 The system directs the customer back to the homepage. 1.3 The use case ends.			

|			
Exception:	**EF1.** System failures to update centralized Customer Bank Data 1.1 The system displays an error message on the screen. 1.2 NF3 is executed again.		
Post-conditions:	Customer feedback is successfully stored in the system		
Related Requirement:	**ID**	**Requirement**	**Priority**
	FR UC-003-01	The system shall be able to displays feedback form to the customer	**Basic**
	FR UC-003-02	The customer shall be able to fill out the feedback form manually	**Basic**
	FR UC-003-03	The system shall be able to create feedback forms in a centralized Customer Bank Data.	**Performance**
	FR UC-003-04	The system shall be able to store the results of the customer feedback form in a centralized Customer Bank Data.	**Performance**
	FR UC-003-05	The customer shall be able to request to cancel the operation.	**Basic**
	FR UC-003-06	The system shall be able to redirect the customer back to the home page.	**Performance**
	QR UC-003-01	The system shall be able to display an error message on the screen if there is a failure in the centralized Customer Bank Data.	**Performance**
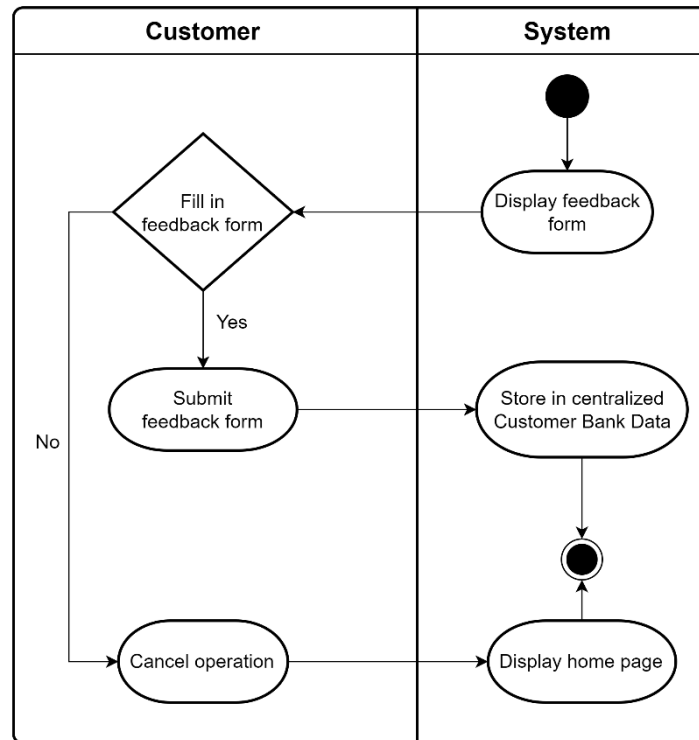
Figure 3.4: Activity Diagram of UC002 Fill in the feedback form

3.2.4.2 UC010: Use Case Manage customer data

Table 3.2.4.4: Use Case Specification for Manage customer data

History Log:	1.0	Create initial use case		
	1.1	Fixed pre-conditions		
	1.2	Fixed normal flow		
	2.0	Added related requirements		
Version:	2.0			
Use Case ID:	UC010			
Use Case Name:	Manage customer data			
Created By:	Eunice Lim Xian Ni	**Last Updated By:**	Eunice Lim Xian Ni	
Date Created:	8th June 2022	**Last Revision Date:**	22nd June 2022	
Actors:				Admin
Description:	Manage the customer personal information including full name, age, gender and address.			

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Pre-conditions:	1. Admin successfully logged into the account.
	2. UC003 is performed by customer.
Normal Flow:	1. The use case starts when the customer has carried out UC003.
	2. When there is no response for more than 2 days from the customer, customers' full name, age, gender and address are saved in centralized Customer Bank Data.
	3. The system displays all the customer information.
	4. Admin can choose the action to perform operation (AF1, AF2, AF3, AF4).
	5. Use case ends.
Alternative Flow:	**AF1. Edit customer data**
	1.1 Admin chooses the customer data to edit.
	1.2 The system displays the edit user form.
	1.3 Admin updates the customer information.
	1.4 Admin selects "confirm" and the system updates the customer information.
	1.5 The system passes the validation (EF1).
	1.6 The system successfully updates customer information (EF2).
	AF2. Delete customer data
	2.1 Admin chooses which customer to delete based on customer name.
	2.2 Admin deletes the selected customer name.
	2.3 Admin selects "confirm" and the system deletes the customer information.
	2.4 The system passes the validation (EF1).
	2.4 The system successfully deletes the customer data (EF2).
	AF3. Sort customer data
	3.1 Admin chooses to sort data.
	3.2 The system displays the sorted data.

	AF4. Cancel operation	
	4.1 Admin requests cancel operation.	
	4.2 System directs user back to homepage.	
Exception:	**EF1. Validation failed**	
	1.1 The system displays error message on the form.	
	1.2 NF4 is executed again.	
	EF2. System Failure to Update Database	
	2.1 The system displays error message on the screen.	
	2.2 NF4 is executed again.	
Post-conditions:	Customer data are stored in the centralized Customer Bank Data.	

| Related Requirement:	ID	Requirement	Priority
	FR UC010-01	The system shall be able to display the list of customer data stored in the centralized Customer Bank Data.	**Basic**
	FR UC010-02	The system shall be able to store customer's data if customer does not respond to inquiry for 2 days.	**Basic**
	QR UC010-01	The system shall be able to display error message when the system fail to update the system database.	**Performance**
	CR UC010-01	The system shall prompt confirmation for customer data editing and deletion before it updates the centralized Customer Bank Data.	**Performance**
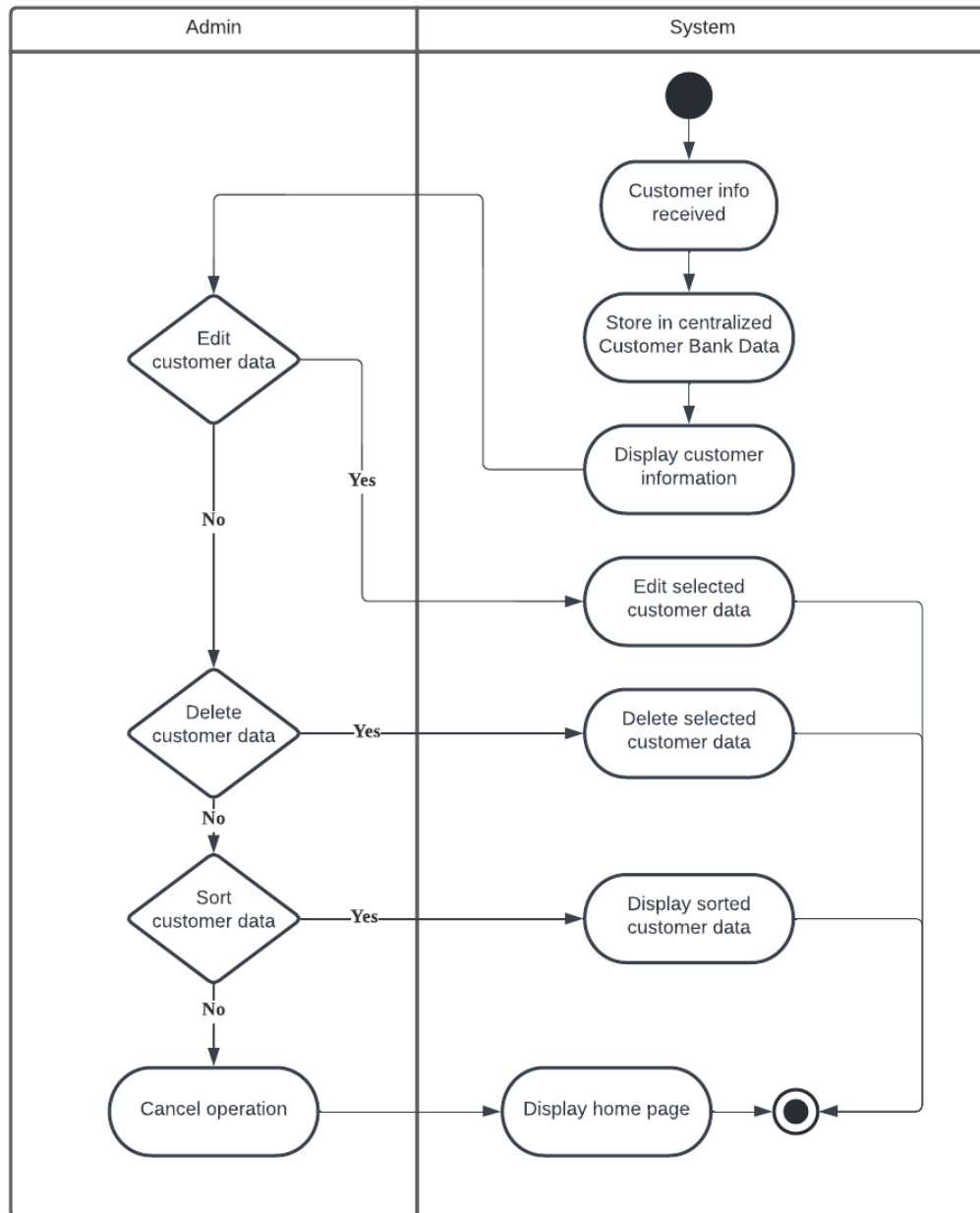
Figure 2.10: Activity Diagram for UC010 Manage Customer Data

3.2.4.3 UC011: Use Case Generate report

Table 3.2.4.5: Use Case Specification for Generate report

History Log:	1.0	Create initial use case
		Fixed pre-conditions
		Fixed normal flow

	1.1 1.2 2.0	Added related requirements	
Version:	2.0		
Use Case ID:	UC011		
Use Case Name:	Generate Report		
Created By:	Nafis Ahmed	**Last Updated By:**	Nafis Ahmed
Date Created:	8th June, 2022	**Last Revision Date:**	21st June, 2022
Actors:	Admin		
Description:	This use case is used by the system admin to generate report related to monthly sales and customer feedback.		
Pre-conditions:	Admin logged in to the system, the customer needs to complete payment and fill in the feedback form.		
Normal Flow:	1. The system stores customer data in the centralized customer bank data if the customer does not reply within 2 days. 2. The admin access to the centralized customer bank data in order to collect the necessary information related to monthly sales data and customer feedback. 3. The admin chooses the action to perform (AF1, AF 2) . 4. Use case ends.		

Alternative Flow:	**1. View statistical data** 1.1 The admin chooses the type of statistical data related to the monthly sales and customer feedback that he wants to see which includes pie chart, histogram. 1.2 MindCare system displays the statistical data. **2. Generate the report file** 2.1 The admin specifies the name for the report. 2.2 The admin specifies columns and rows to include in the report. 2.3 The admin specifies how the report is delivered. 2.4 The admin specifies the pages to be included in the report. 2.5 The admin requests to generate the report. 2.6 The system generates the report in pdf format. 2.7 The admin specifies the location to save the report. 2.8 The system saves the report in a desired location. 2.9 Marketing campaign analysis is generated.
Exception:	**1. Report Generation Failed** 1.1 The system displays an error message 1.2 The MindCare system admin failed to generate the report. 1.3 There is not enough data to generate the statistical data and to make the statistical diagrams. 1.4 The report is a null report which does not contain any necessary information.
Post-conditions:	MindCare System admin successful to generate monthly report followed by generation of marketing campaign analysis automatically.

Related Requirement:	**ID**	**Requirement**	**Priority**
	FR UC011-01	The system shall be able to create a report.	**Basic**
	FR UC011-02	The system shall be able to display the different statistical data.	**Basic**

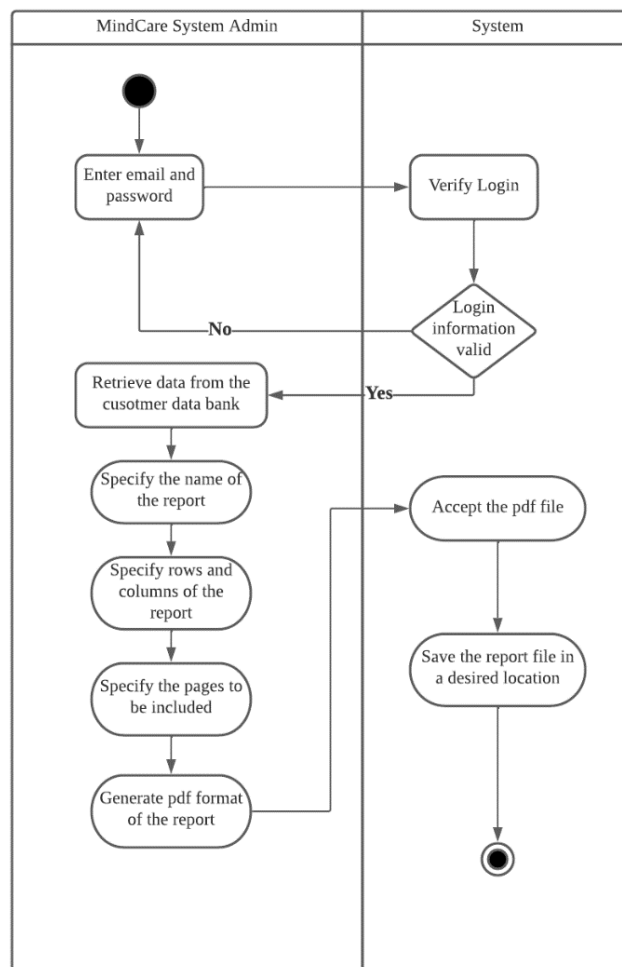|	QR UC011-01	The system shall be able to display an error message if the system fails to generate the report.	**Performance**
	CR UC011-01	The system shall be able to print the report once it has been generated and successfully saved into the system database.	**Performance**

Figure : Activity Diagram for UC011 Generate Report

3.2.4.4 UC012: Use Case Manage customer feedback form

Table 3.2.4.6: Use Case Specification for Manage customer feedback form

History Log:	1.0	Create initial use case	
	1.1	Fixed pre-conditions	
	1.2	Fixed normal flow	
	2.0	Added related requirements	
Version:	2.0		
Use Case ID:	UC012		
Use Case Name:	Manage Customer feedback form		
Created By:	Nafis Ahmed	**Last Updated By:**	Nafis Ahmed
Date Created:	8th June, 2022	**Last Revision Date:**	21st June, 2022
Actors:	Admin		
Description:	Manage customer feedback by perform sorting, update and delete the customer feedback.		
Pre-conditions:	1. Admin successfully logged into the system admin account. 2. UC002 is performed by the customer.		
Normal Flow:	1. The use case starts when the customer feedback is received and stored in the centralized Customer Bank Data. 2. Feedback ID is generated for each customer feedback. 3. Admin chooses to perform the operation (AF1, AF2, AF3, AF4). 4. Use case ends.		

Alternative Flow:	**AF1. Edit customer feedback**
	1.1 Admin chooses to edit the customer feedback.
	1.2 The system displays the edit customer feedback.
	1.3 Admin updates the customer feedback.
	1.4 Admin selects "confirm" and the system updates the customer feedback information.
	1.5 The system passes the validation (EF1).
	1.6 The system successfully updates customer feedback information (EF2).
	AF2. Delete customer feedback
	2.1 Admin chooses which customer to delete based on customer feedback ID.
	2.2 Admin selects "confirm" and the system deletes the customer information.
	2.3 The system passes the validation (EF1).
	2.4 The system successfully deletes the customer feedback (EF2).
	AF3. Sort customer feedback
	3.1 Admin chooses to sort customer feedback based on ratings or feedback ID.
	3.2 The system displays the customer feedback in ascending order of ratings or feedback ID.
	AF4. Cancel operation
	4.1 Admin requests cancel operation.
	4.2 System directs user back to homepage.
Exception:	**EF1. Validation failed**
	1.1 The system displays error message on the form.
	1.2 NF3 is executed again.

|			
	EF2. System Failure to Update Database 2.1 The system displays error message on the screen. 2.2 NF3 is executed again.		
Post-conditions:	Customer feedbacks are stored in the centralized Customer Bank Data.		
Related Requirement:	**ID**	**Requirement**	**Priority**
	FR UC-012-01	The system shall be able to display the list of customer feedback forms in the centralized Customer Bank Data	**Basic**
	FR UC-012-02	The system shall be able to validate the login info	**Basic**
	QR UC-012-01	The system shall be able to display error messages when the validation fails	**Performance**
	CR UC-012-01	The system shall prompt confirmation for customer feedback deletion before deleting those	**Performance**
	CR UC-012-02	The system shall prompt confirmation for cancellation of operation before cancelling an operation by the admin	**Performance**
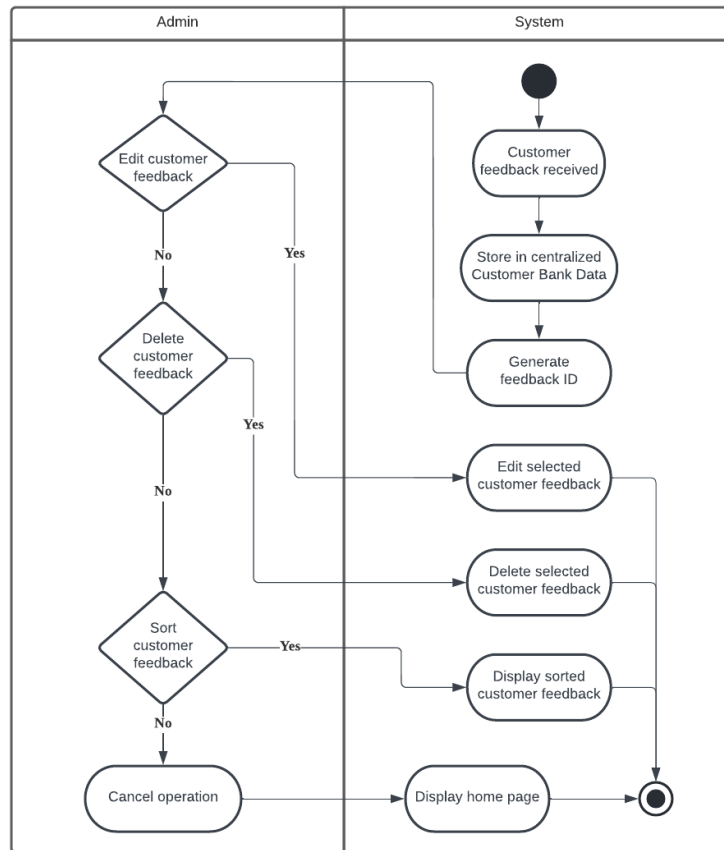
Figure : Activity Diagram for UC012 Manage Customer Feedback Form

3.2.4.5 UC013: Use Case Generate customer feedback form

Table 3.2.4.7: Use Case Specification for Generate customer feedback form

History Log:	1.0	Create initial use case		
	1.1	Fixed pre-conditions		
	1.2	Fixed normal flow		
	2.0	Added related requirements		
Version:	2.0			
Use Case ID:	UC013			
Use Case Name:	Generate customer feedback form			
Created By:	Eunice Lim Xian Ni		**Last Updated By:**	Eunice Lim Xian Ni

Date Created:	8th June 2022		Last Revision Date:	22nd June 2022
Actors:				Admin
Description:	Generate the customer feedback form by editing and viewing the feedback form.			
Pre-conditions:	Admin successfully logged into the system admin account.			
Normal Flow:	1. The use case starts when admin choose the action to perform operation (AF1, AF2). 2. Use case ends.			
Alternative Flow:	**AF1. Generate feedback form** 1.1 The system displays the generate feedback form. 1.2 Admin chooses to edit the feedback form. 1.3 The system displays the edit feedback form. 1.4 Admin edits the feedback form. 1.5 The system passes the validation (EF1). 1.6 The system successfully updates feedback form (EF2). **AF2. View feedback form** 2.1 Admin chooses to view feedback form. 2.2 The system displays the feedback form.			
Exception:	**EF1. Validation failed** 1.1 The system displays error message on the form. 1.2 NF1 is executed again. **EF2. System Failure to Update Database** 2.1 The system displays error message on the screen. 2.2 NF1 is executed again.			
Post-conditions:	Feedback form successfully generated.			

Related Requirement:	ID	Requirement	Priority
	FR UC013-01	The system shall be able to display the generated feedback room.	**Basic**

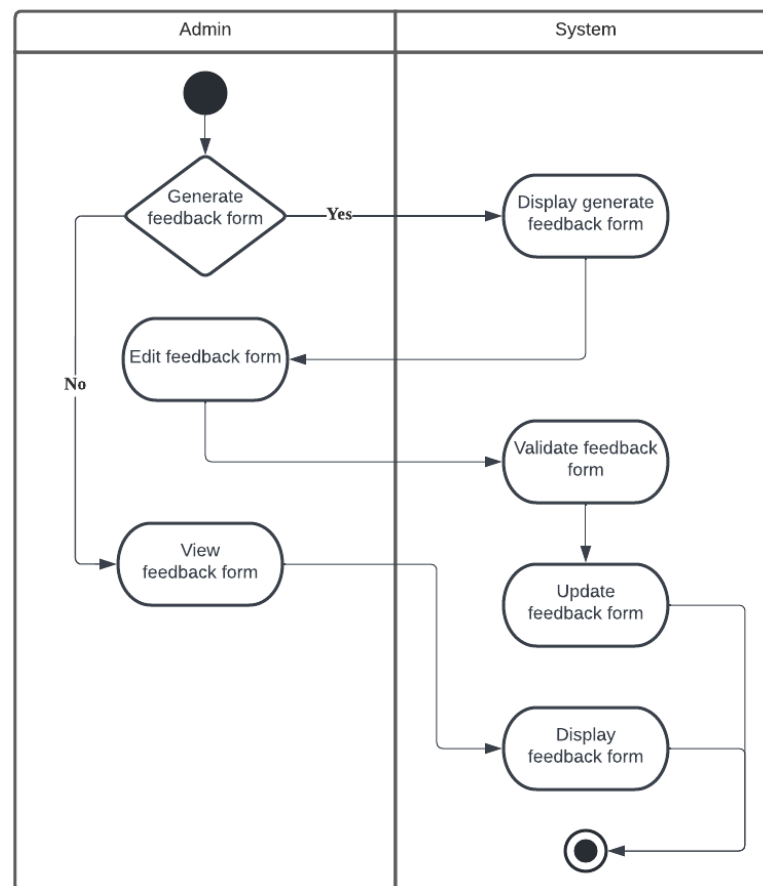|	FR UC013-02	The system shall be able to edit the feedback form.	**Basic**
	QR UC013-01	The system shall be able to display error message if the system failed to update.	**Performance**
	CR UC103-01	The system shall prompt status when a new feedback form is generated.	**Performance**

Figure 2.13: Activity Diagram for UC013 Generate Customer Feedback Form

3.2.4.6 UC014: Use Case Manage sales data

Table 3.2.4.8: Use Case Specification for Manage sales data

History Log:	1.0	Create initial use case		
	1.1	Fixed pre-conditions		
	1.2	Fixed normal flow		
	2.0	Added related requirements		
Version:	2.0			
Use Case ID:	UC014			
Use Case Name:	Manage sales data			
Created By:	Eunice Lim Xian Ni		**Last Updated By:**	Eunice Lim Xian Ni
Date Created:	8th June 2022		**Last Revision Date:**	23rd June 2022
Actors:				Admin
Description:	Manage the sales data which obtained from appointment and payment details.			
Pre-conditions:	1. Admin successfully logged into the system admin account. 2. UC004 and UC005 have performed by customer.			
Normal Flow:	1. The use case starts when customers have booked an appointment and make payment to the MindCare system. 2. The appointment and payment details are stored in the centralized Customer Bank Data. 3. Receipt ID is generated for each appointment and payment details. Admin chooses to perform the operation (AF1, AF2, AF3).			

Alternative Flow:	**AF1. Edit sales data** 1.1 Admin chooses to edit sales data. 1.2 The system displays the edit sales data. 1.3 Admin updates the sales data. 1.4 The system passes the validation (EF1). 1.5 The system successfully updates the sales data (EF2). **AF2. Delete sales data** 2.1 Admin chooses which sales data to delete based on sales date or receipt ID. 2.2 Admin selects "confirm" and the system deletes the sales data. 2.3 The system passes the validation (EF1). 2.4 The system successfully deletes the sales data (EF2). **AF3. Cancel operation** 3.1 Admin requests cancel operation. 3.2 System directs user back to homepage.
Exception:	**EF1. Validation failed** 1.1 The system displays error message on the form. 1.2 NF4 is executed again. **EF2. System Failure to Update Centralized Customer Bank Data** 2.1 The system displays error message on the screen. 2.2 NF4 is executed again.
Post-conditions:	Sales data collected from MindCare appointment and the payment details are successfully stored in centralized Customer Bank Data.

Related Requirement:	**ID**	**Requirement**	**Priority**
	FR UC014-01	The system shall be able to display the list of sales data stored in the centralized Customer Bank Data.	**Basic**

|	FR UC014-02	The system shall be able to store customer's data if customer does not respond to inquiry for 2 days.	Basic
	QR UC014-01	The system shall be able to display error message when the system fail to update the centralized Customer Bank Data..	Performance
	CR UC014-01	The system shall prompt confirmation for sales data editing and deletion before it updates the centralized Customer Bank Data.	Performance
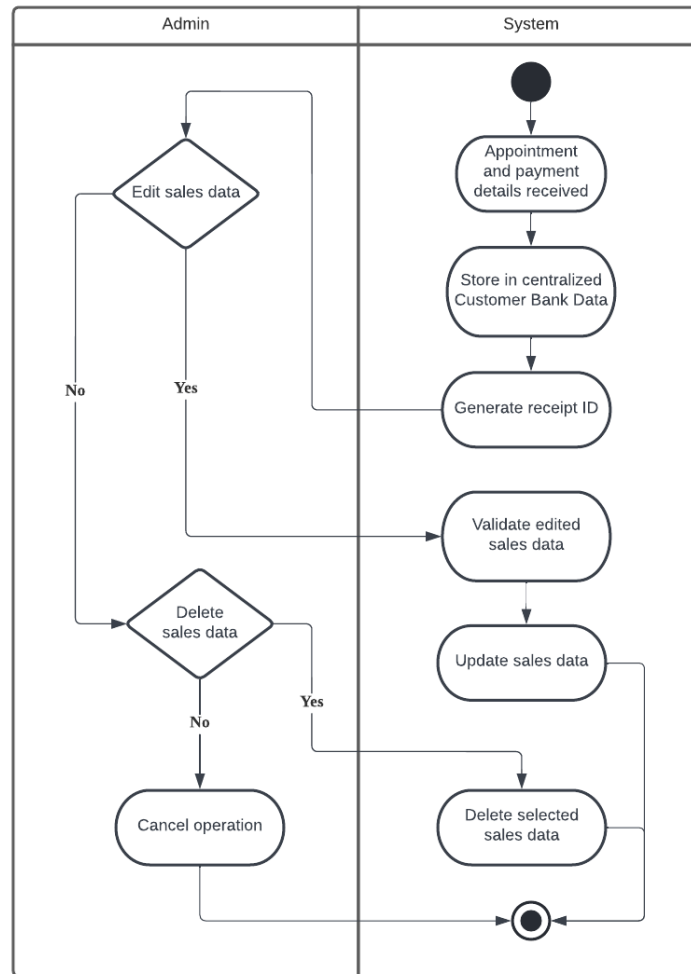
Figure 2.14: Activity Diagram for UC014 Manage Sales Data

3.3 Performance Requirements

- **Inquiry Received Module:** After the customer submits the inquiry, the live chatbot shall reply no longer 3 seconds.

- **Customer Consultation Module:** If the customer doest not reply to the copywriting message within 2 days, the system shall store the inquries in the centralized Customer Bank Data.

- **Appointment Setup Module:** If the selected appointment is unavailable in the system, the system shall return to appointment selection page to allow customer to choose again.

- **Customer Bank Data Module:** Changes in the centralized Customer Bank Data should be updated instantly.

3.4 Design Constraints

- **Style Guidelines**

  the requirements That user interface will be based on a webpage. Clear graphical images, efficient navigation, simplicity of access, learnability, and an easier identification procedure will all be provided by the system. This system's design must be consistent with the MindCare Center's identity, which includes themes, logos, and other elements. This would be to keep all on the same page and to ensure that any future material reflects the MindCare Center's identity.

- **Performance expectations**

  The system will be instrumental in providing performance levels in every situation. It will meet the users' expectations in terms of efficacy, execution time, and accuracy.

- **Programming language**

  Our main programming languages for the system are HTML, JavaScript, CSS, and PHP.

- **External and Internal Feedback**

  Users must be able to provide feedback about the system. This will assist us in identifying their complaints and improving the system so that we can always meet their needs or ideas.

- **Safety**

  Personal information will be securely saved in the database, and the system will be equipped with adequate data security mechanisms.

3.5 Software System Attributes

The MindCare system is well-structured and comprehensive. Users are provided with tutorials and directions on how to use the system for users and can be learned easily. The MindCare System has a high level of security, to access the system, users must have the appropriate username and password. MindCare systems can be used from different hardware like pc, tab, or laptops. This system's user interface (UI/UX) is concentrated on a software display that seems to be basic, easy to understand, and shows pictures. Users will have experience when

using the application. As an outcome, when users use the program, they will have an experience. Since this MindCare System concentrates on the registration of consultations and therapy, it must be easily interpreted by everyone. User convenience is the main priority of this system with the aim of helping simplify their work and save time. Moreover, the system must be designed in a maintainable manner.it will be easy to incorporate new requirements in the individual model such as application submission and judging process.

3.6 Other Requirements

- **Ambiguous**

  The system will load in a reasonable amount of time.

- **Portability**

  The MindCare System program is a web-based system that requires a web server and browser to run. Laptops (Windows) and smartphones are both supported (android or iOS).

- **Reusability**

  software components can be reused on other problems to reduce time, cost, and human resources. Such as Login system, and Appointment registration.