

**Online Marketplace for
Caretakers**

by
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Submitted in partial fulfilment of the requirements for the degree of

**Bachelor of Science
(Honours)in Computer
Science**

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Declaration

I hereby declare that all the work done in this Final Year Project is of my independent effort. I also certify that I have never submitted the idea and product of this Final Year Project for academic or employment credits.

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Chapter 1. Introduction

1.1 Project Background

Since the aging population in Hong Kong is on the rise, the demand for private nursing care is also in great demand because many children are working outside and cannot find time to take care of the elderly at home. But the need for care services to take care of family members, and timely matchmaking is hard.

In 2014, the Hong Kong Housing Society commissioned the Centre for Urban Studies and Planning of the University of Hong Kong to conduct a survey on children's wish to live with their elderly parents. 55% of the respondents aged 50 to 59 wanted to live with their adult children, and 95% of the children were willing to live in the same building or in a nearby area with their parents to facilitate mutual care.

According to the Census and Statistics Department, as of 2016, there were about 150,000 single elderly people and about 100,000 double elderly people living in Hong Kong. Among the elderly population, one third of them are in poverty and need government support. According to unofficial data, most family members hire foreign domestic helpers and caregivers to take care of them, even if they are financially well-off.

In order to hire a private caregiver, some people may choose to hire a private caregiver through an agency, but not all private care centers are open 24 hours a day. People who live in the city are too busy. Going to a private care facility after work may mean that the private care facility is closed. So private care facilities that are not open 24 hours a day are too inconvenient for people. Or some people want to hire the right caregiver through an online marketplace for caregivers. So this program can help them take advantage of technology to solve their problems.

1.2 Problem / Improvement Areas

1.2.1 Current Environment

People who may need to hire a caregiver to care for a parent or child or even a pet in their home may face some difficulties. They may not feel comfortable going to a caregiver agency in person because of the spread of the new coronavirus. Or they may find the commission charged by the caregiver agency too expensive. Some of them may be looking for a caregiver for the first time. The downside of headhunting is that the fees are relatively high, typically between 20% and 60% of the senior person's annual salary. If a senior caregiver earns \$84,000 a year, the headhunter will charge as little as \$168 million or as much as \$504 million for their services. This is not a small amount for the general public.

1.2.2 Current System

For the time being, the use of the Internet caregiver pool for selecting caregivers provides a larger amount of information and a wide range of options to choose from. Due to the advanced network, caregivers seeking employment are organically categorized according to their professional qualifications and all users are able to match their numbers and seek the caregiver they need. A new form of media recruitment has arisen along with the trend of increasing popularity of the network. Recruitment information can be placed regularly and directionally, and can be managed after release, and its cost is relatively inexpensive and can theoretically cover the whole world. By publishing the recruitment information on the well-known talent network can be fast and massive to receive information from job seekers, while the format resume and format mail provided by each website can reduce the difficulty of resume screening and speed up the processing of resumes. This form is especially practical for caregivers, basically "find a job, one click to get it done".

Because of the above factors, one idea is to provide a system for people to allow users to hire caretakers to take care of their families, children, and even pets. The system also allows anyone to register as a caretaker and take jobs to earn extra money.

1.3 Proposed System

This proposed application is called "CareHK", which is a domestic care matchmaking System. The meaning of the application is combined with "caretakers" and "online marketplace", suitable for the public to purchase Caregiver Services.

Online marketplaces have been disrupting the service industry for quite some time. Recently, a new marketplace model has joined the bandwagon and is working quite well in many countries. We're talking about the care industry. Sites like Sittercity, Urbansitter, HomeHero, and Care.com are the most commonly cited examples of leading caregiving services marketplaces. These platforms connect nannies and professional caregivers with people looking for a variety of services such as baby care, pet care, elder care, and more. Caregiving services are highly valued and placed on a high pedestal in our society. However, finding good caregivers for pets, babies or seniors has always been a daunting task for people. This is where the online marketplace for caregivers comes into play.

In the past, online marketplaces have offered different types of talent and sometimes clients have different needs for services.

<p>https://www.sittercity.com/</p> <p>Child care that nurtures imagination</p> <p>Find the right sitter or nanny for your family</p> <p>FIND CHILD CARE I'M A SITTER</p>	<p>https://www.urbansitter.com/</p> <p>Tried, true and trusted caregivers</p> <p>250,000 reviews and counting—that's why families trust UrbanSitter to find a babysitter, nanny, tutor, pet sitter, or senior care companion.</p> <p>Find Care Apply to Jobs</p>
<p>https://www.homehero.co.uk/</p> <p>Property managers</p> <p>Book a demo today to learn how HomeHero can help you to get the most out of your property portfolio.</p> <p>First name _____ Last name _____ Email address _____ Phone number _____ Properties managed _____ Country _____</p> <p><input type="checkbox"/> I agree to receive more information about HomeHero as per the HomeHero Privacy Policy</p> <p>Submit</p>	<p>https://www.care.com/</p> <p>Let's get started. Choose an option.</p> <p>I need a caregiver Start your free search for care in your area. Find care</p> <p>I want a care job Create a profile and search for jobs. Find jobs</p>

As a result, the platforms usually divide users into two categories: clients seeking professional talent and service providers offering professional services. Service providers are required to submit genuine personal data and relevant professional qualifications in order to find jobs and clients on the platform; clients seeking professional talent must register an account with their personal data in order to access the platform's features.

The image shows two side-by-side sign-up forms from different online marketplaces. The left form is for 'Sitters' and the right form is for 'Try Care.com today!'. Both forms include fields for name, email, password, address, and phone number. They also ask for birth date and self-identification, and both require agreeing to terms and privacy policies. The right form includes dropdown menus for job type and source, and a note about age requirements.

Sitters, create your account

Looking for care? [Sign up as a parent](#) →
Already have an account? [Log in](#)

First name Last name

Email address

Password

Permanent address Zip

10-digit mobile number

I consent to receive text messages. We won't display this to other members. Enter numbers only.

Birth date Month Day Year

I consider myself a...
Don't worry — you can always make changes once you're registered!

Choose one

I agree to the [Terms of Use](#).
For details on collection and use of your information, see our [Privacy Policy](#).

SIGN UP

Try Care.com today!

What would you like to do?
 Hire a caregiver Apply to jobs

Individual Babysitter

Email

Password

Verify password

How did you hear about us?

You must be 18 years or older to use Care.com. By clicking "Submit," you agree to our [Terms of Use](#) and [Privacy Policy](#).

Join now

However, I have found that the problem with today's online marketplaces is that people registering for jobs do not need to prove their professional qualifications, they just need to enter their email, phone number, name and password to register.

It is important that these platforms ensure that the job seekers are professionally qualified so that they can ensure the quality of their services and that their clients are not deceived by unknown people. It also adds to the credibility of the site.

1.4 Development Methodology

What is Agile Development & Reasons for using Agile Development

Includes face-to-face communication. And it is extreme programming – emphasizes customer Agile Development, which is a group of programming-centric methodologies that focus on streamlining the SDLC satisfaction and teamwork.

Agile development eliminates much of the modelling and documentation. There are reasons we will use Agile development to develop the system are shown below.

Realistic Customer Expectations

Agile development is a development method that can be speculated and explored, the plan at multiple levels and become more detailed closer to scheduling. It can regular adaptation to changing circumstances. Clients are allowed to express their expectation in each iteration, changes in requirements can be handled by agile development. The developers and the customer collaborate to define the requirements and to maintain them throughout the project. Hence, the expectations of the client can be met.

Develop a system with a short time schedule

It is a short time schedule to provide timely solutions to business problems. Fixed schedule of a few weeks, new features can be delivered quickly and frequently, with a high level of predictability. It is easy to process and re-prioritize the overall product backlog, the modification can be done for the next iteration.

Reliable system

The project development team can focus on high-quality development, testing, and collaboration by breaking down the project into manageable units. Moreover, quality will be improved by finding and fixing defects quickly and identifying mismatched expectation in advance. Iteration work helps improve the reliability of the system.

The benefits of the development methodology that we use (Agile Development)

- Manage change more effectively
- Improve customer engagement
- Focus on the highest priority first
- Increase productivity
- Feedback from the product owner
- Highly collaborative environment
- Visibility
- Accuracy
- Main features
- Agree to a clear definition
- Improve transparency

Manage change more effectively

By creating smaller iterations, the team can focus on providing value without having to make all the requirements up front. At the end of each iteration, the team will review the backlog of functions and re-determine where time should be spent in the next Sprint.

Improve customer engagement

Agile requires customers to participate heavily in the development process. The development team will seek customers to prioritize work for the next sprint and review work products during the review meeting. This continuous interaction reduces the confusion between customer needs and what the developer will provide.

Focus on the highest priority first

In a software development environment, you have to make many decisions, and it is difficult to keep all the decisions. Your to-do list will become your final priority, and the to-do list will be publicly displayed to everyone.

Increase productivity

Agile development can make better use of your resources so that they can start using them faster and remain productive at all times. As work is broken down into iterations, there is always a milestone and deadline. Developers always focus on refactoring and moving forward. They will not be idle, waiting for work in the discovery and design phase.

Feedback from the user

Break down your work into sprints, and user can provide feedback before, during, and after each task. This cooperation provides frequent opportunities to ensure that the team can achieve the established business goals.

Highly collaborative environment

Agile development values individual, interaction and customer collaboration. All team members went all out. The success of this project depends on the understanding and optimization of everyone's subject knowledge.

Visibility

Agile development allows you to see and get familiar with the product from start to finish. While watching the growth of the application, you can provide feedback as you progress.

Accuracy

After the sprint, the team will know their speed. This allows for better planning. In future sprints, this will serve as a guide for the tasks they will complete.

Main features

Agile development allows us to prioritize and focus on the projects that have the greatest impact on the business, thereby providing value faster.

Agree to a clear definition

Will the words "ready" and "done" cause confusion for your IT team? In the agile world, you can set parameters for these definitions. "Done" may mean that it has been fully tested, or it may mean that the customer is ready for testing. A clear definition gives developers more responsibility, and everyone agrees with the goal.

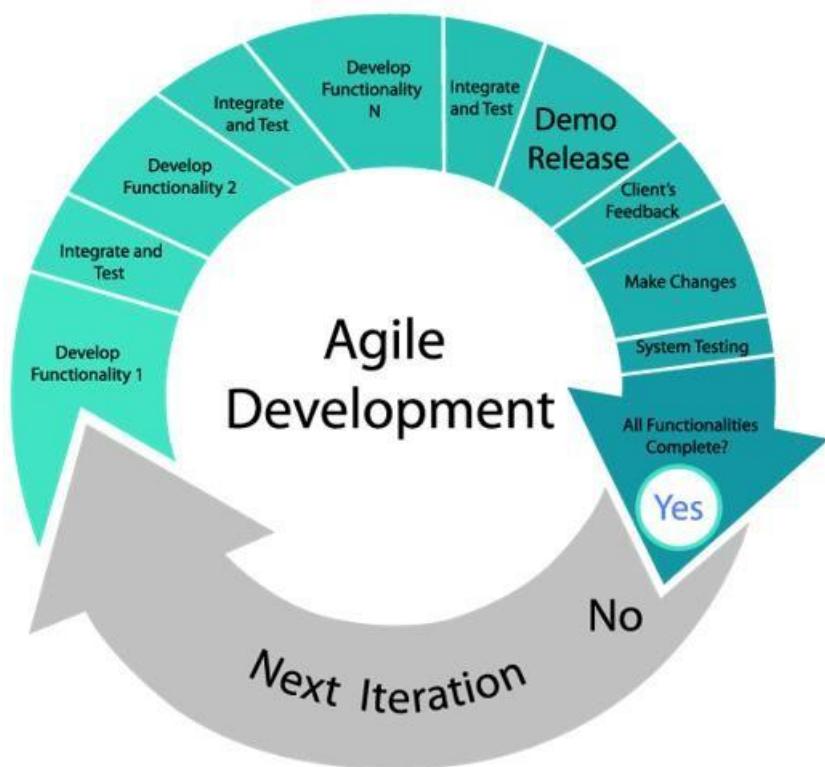
Improve transparency

Agility is highly transparent. Everyone from the stakeholders to the development team knows what to do, what not to do, and who is making the decision. When the entire team understands the overall situation, the project tends to move forward faster.

There are several benefits to adopting agile methods for software development. Getting started requires some work before finally reaping the benefits of a more successful project.

Usefulness in Developing Systems in our project

With unclear user requirements	Excellent
With unfamiliar technology	Poor
That are complex	Poor
That are reliable	Good
With short time schedule	Excellent
With schedule visibility	Good



Chapter 2. Project Plan

2.1 Project Background

The project proposed a system, "Online Marketplace for Caretakers". It is a two-sided marketplace system developed on a web-based. The need for care services to take care of family members at home is a trend now. Web trustworthy marketplace for caretakers is the main objective of this project. This system allows users to hire caretakers on an online marketplace. It allows users to hire caretakers to take care of their families, children, and even pets. The system also allows anyone to register as a caretaker and take jobs to earn extra money. This real-time online marketplace reduces marketing costs compared to other sales channels. The unbiased reviews of your products and services may give new customers the confidence to buy. We believe this system will be very popular with our customers because it works 24/7, time constraints and different international trading hours are eliminated.

The project was developed under Agile Development. By following this cycle, the project underwent a planning phase, a design phase, a development phase, a test phase, a deployment phase, a review phase, and a launch phase. The entire development process was described through comprehensive documentation. Test results are also included. The results of the project are summarized in a discussion and conclusion.

2.2 Resource Implications

2.2.1 Hardware requirements

- Computer specification

Component	Recommended system requirements	Minimum system requirements
Processor	Intel Core i5-4590/AMD FX 8350 equivalent or better	Intel Core i5-4590/AMD FX 8350 equivalent or better
GPU	NVIDIA GeForce GTX 1050, AMD Radeon RX 480 equivalent or better	NVIDIA GeForce GTX 970, AMD Radeon R9 290 equivalent or better
Power Supply	600w	400w
Memory	4 GB RAM or more	4 GB RAM or more
Video output	HDMI 1.4, DisplayPort 1.2 or newer	HDMI 1.4, DisplayPort 1.2 or newer
USB port	1x USB 2.0 or newer	1x USB 2.0 or newer
Operating system	Windows 8.1 or later, Windows 10	Windows 8 or later, Windows 10

- Hardware and software specification

	Standard Client	Standard Web Server	Standard Application Server	Standard Database Server
Operating System	• Windows • Mozilla	• Linux	• Linux	• Linux
Special Software	• Real Audio • Adobe Acrobat Reader	• Apache	• Java	• Oracle
Hardware	• 250-GB disk drive • Intel®-Core™ i3-2100 dual core processor • 19-inch LCD Monitor	• 500-GB disk drive • Dual-core Xeon	• 160-GB disk drive • Quad-core Xeon	• 1-TB disk drive • RAID
Network	• Always-on Broadband, preferred • Dial-up at 56 Kbps, possible with some performance loss	• Dual 100 Mbps Ethernet	• Dual 100 Mbps Ethernet	• Quad core Xeon • Dual 100 Mbps Ethernet

2.2.2 Software requirements

Recommended system requirements	Purpose
Window 11	System running platform
Visual Studio Code	System development
myPHP	A MySQL extension to PHP for database communication
WAMP	A software stack for Windows including Apache, MySQL, and PHP
PHP	Server-side scripting language for web development
jQuery	JavaScript library for simplifying HTML DOM manipulation and event handling
HTML	Markup language for creating web pages and applications
MySQL	Open-source relational database management system
Bootstrap5	A open-source front-end CSS framework for building responsive and mobile-first web applications.
PHPMailer	A email-sending library for PHP.
Google Chrome	Web application browsing
Microsoft Word 2010	Documentation
Microsoft PowerPoint 2010	Presentation

2.2.3 Hardware requirements

- Standard computer
- Disk drive
- Monitor
- Keyboard
- Mouse

2.3 Development and Operating Costs

2.3.1 Development Costs

	Year 1	Year 2	Year 3	Year 4	Year 5
Hardware					
Personal computer	HK\$7,280.00	HK\$0.00	HK\$0.00	HK\$0.00	HK\$0.00
Sub-total:	HK\$7,280.00	HK\$0.00	HK\$0.00	HK\$0.00	HK\$0.00
Software					
Microsoft Windows 11 Pro	HK\$1,199.00	HK\$0.00	HK\$0.00	HK\$0.00	HK\$0.00
Visual Studio Code	HK\$0.00	HK\$0.00	HK\$0.00	HK\$0.00	HK\$0.00
Microsoft Office	HK\$768.00	HK\$768.00	HK\$768.00	HK\$768.00	HK\$768.00
Node.js	HK\$0.00	HK\$0.00	HK\$0.00	HK\$0.00	HK\$0.00
Google Chrome	HK\$0.00	HK\$0.00	HK\$0.00	HK\$0.00	HK\$0.00
Vue.js	HK\$0.00	HK\$0.00	HK\$0.00	HK\$0.00	HK\$0.00
Vue CLI	HK\$0.00	HK\$0.00	HK\$0.00	HK\$0.00	HK\$0.00
Axios	HK\$0.00	HK\$0.00	HK\$0.00	HK\$0.00	HK\$0.00
Vue Router	HK\$0.00	HK\$0.00	HK\$0.00	HK\$0.00	HK\$0.00
Sails.js	HK\$0.00	HK\$0.00	HK\$0.00	HK\$0.00	HK\$0.00
Firebase (50GB)	HK\$250.00	HK\$250.00	HK\$250.00	HK\$250.00	HK\$250.00
Sub-total:	HK\$2,217.00	HK\$1,018.00	HK\$1,018.00	HK\$1,018.00	HK\$1,018.00
Total:	HK\$9,497.00	HK\$1,018.00	HK\$1,018.00	HK\$1,018.00	HK\$1,018.00

2.3.2 Operating Costs

	Year 1	Year 2	Year 3	Year 4	Year 5
Maintenance for hardware and software	HK\$2,000.00	HK \$2,000.00	HK \$2,000.00	HK \$2,000.00	HK \$2,000.00
Electronic expense	HK \$500.00	HK \$500.00	HK \$500.00	HK \$500.00	HK \$500.00
Web programmer	HK \$180,000.00	HK \$180,000.00	HK \$180,000.00	HK \$180,000.00	HK \$180,000.00
Total:	HK \$182,500.00	HK\$182,500.00	HK\$182,500.00	HK \$182,500.00	HK \$182,500.00

2.3.3 Total Costs of Development & Operating

	Year 1	Year 2	Year 3	Year 4	Year 5
Development Costs	HK \$9497.00	HK \$1018.00	HK \$1018.00	HK \$1018.00	HK \$1018.00
Operating Costs	HK \$180,500.00	HK \$180,500.00	HK \$180,500.00	HK \$180,500.00	HK \$180,500.00
Total:	HK \$189,997.00	HK\$181,518.00	HK\$181,518.00	HK \$181,518.00	HK \$181,518.00

2.3.3 Total Costs

	Total in Every Year
Year 1	HK \$189,997.00
Year 2	HK\$181,518.00
Year 3	HK\$181,518.00
Year 4	HK\$181,518.00
Year 5	HK\$181,518.00
Total:	HK\$916,069.00

2.4 Tangible and Intangible Benefits

2.4.1 Tangible Benefits

Reduce management and operating costs

The system of Online Marketplace for Caretakers was developed through a web-based system, so people only need a cell phone and internet access to open an account in a few simple steps, and then they can be matched with the right personal care services and start a one-to-one conversation window, which is a convenient way to attract customers.

In addition, traditional retail stores are more expensive in terms of rent and operating costs, even more so if the store is located in a prime location, making it difficult for operators to break even in the early stages of business development. On the contrary, operating an online store does not need to consider the rent and labor cost of a physical store, and the actual operating cost can be as low as renting a server, and some online stores can even turn into automated operations. Our system is different from physical stores, we do not have to bear the expenses of renovation, shop rent, staff salaries and electricity, even if business is not satisfactory, you do not have to worry about not being able to make ends meet, especially for caretakers agencies like us. If you want to advertise our website, the cost is also very cheap, for example, Instagram, the daily promotion cost is only \$8 HKD.

Reduce the risk of coronavirus infection

Instead of people having to go to a brick-and-mortar caretakers agency, and it is replaced by an "Online Marketplace for Caretakers" where people can come into contact with each other in person at a brick-and-mortar location. This could reduce the chances of serious consequences, such as increased risk of COVID-19 outbreaks in the community.

High accessibility

The system of "Online Marketplace for Caretakers" is open to all the people in Hong Kong and even other countries. This potential market is too large for a single brick and mortar store or a large shopping mall to match. As long as our system has no competition in Hong Kong, it will attract customers and, if we run it properly, the

online store can bring in thousands of customers every day, significantly increasing our revenue.

2.4.2 Intangible Benefits

The website will provide users with an online care marketplace to help them purchase the right care services for them, and they can open and browse our site anytime, anywhere, which is very convenient for users who don't want to leave home. Also, merchants can spend less time in the real store, which saves them time. In addition, the website is much more convenient for users than a physical store because they do not have to waste a lot of time comparing prices or reputation with multiple intermediary companies of different caregivers.

For intangible benefits, if the system is widely used and has a large user base, we will be able to capture actual user data through data analysis of user preferences and habits (e.g., users prefer to find local caregivers, there is a high demand for caregivers who specialize in caring for the elderly).

This data is valuable so that we can understand where the highest churn rates are. Also, the users on the platform and the parts of the platform where they spend the most time. This data can make development easier, make the application user-oriented, and make the platform accessible.

2.5 Cost-benefits Analysis

5-year costs and savings projections are as below:

	Year1	Year2	Year3	Year4	Year5	Total
Costs						
Non-recurrent Expenditure						
Hardware	\$7,280	\$0	\$0	\$0	\$0	\$7,280
Software	\$2,217	\$1,018	\$1,018	\$1,018	\$1,018	\$6,289
Implementation service	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$25,000
Training cost	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$25,000
Site preparation	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$50,000
Contingency	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$5,000
Communication lines	\$0	\$0	\$0	\$0	\$0	\$0
Sub-total:	\$30,497	\$22,018	\$22,018	\$22,018	\$22,018	\$118,569
Non-recurrent Staff						
Sub-total:	\$0	\$0	\$0	\$0	\$0	\$0
Total non-recurrent cost	\$30,497	\$22,018	\$22,018	\$22,018	\$22,018	\$118,569
Recurrent Expenditure						
Hardware and software maintenance	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$10,000
Electronic expense	\$500	\$500	\$500	\$500	\$500	\$2,500
Sub-total:	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$12,500
Recurrent Staff						
	\$180,000	\$180,000	\$180,000	\$180,000	\$180,000	\$900,000
Total recurrent cost:	\$182,500	\$182,500	\$182,500	\$182,500	\$182,500	\$912,500
Total cost:	\$212,997	\$204,518	\$204,518	\$204,518	\$204,518	\$1,031,069

	Year1	Year2	Year3	Year4	Year5	Total
Savings						
Non-recurrent						
Cost avoidance	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$5,000
Sub-total:	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$5,000
Recurrent						
Reliable saving	\$0	\$180,000	\$190,000	\$200,000	\$210,000	\$780,000
Notional saving	\$0	\$30,000	\$60,000	\$90,000	\$120,000	\$300,000
Cost avoidance	\$0	\$0	\$0	\$0	\$0	\$0
Sub-total:	\$0	\$210,000	\$250,000	\$290,000	\$330,000	\$1,080,000
Non-recurrent Staff						
Sub-total:	\$0	\$0	\$0	\$0	\$0	\$0
Total saving:	\$1,000	\$211,000	\$251,000	\$291,000	\$331,000	\$1,085,000
Net saving	\$-211,997	\$6,482	\$46,482	\$86,482	\$126,482	\$53,931
Net cumulative saving	\$-211,997	\$-205,515	\$-159,033	\$-72,551	\$53,931	

2.5.1 Return on Investment (ROI)

ROI

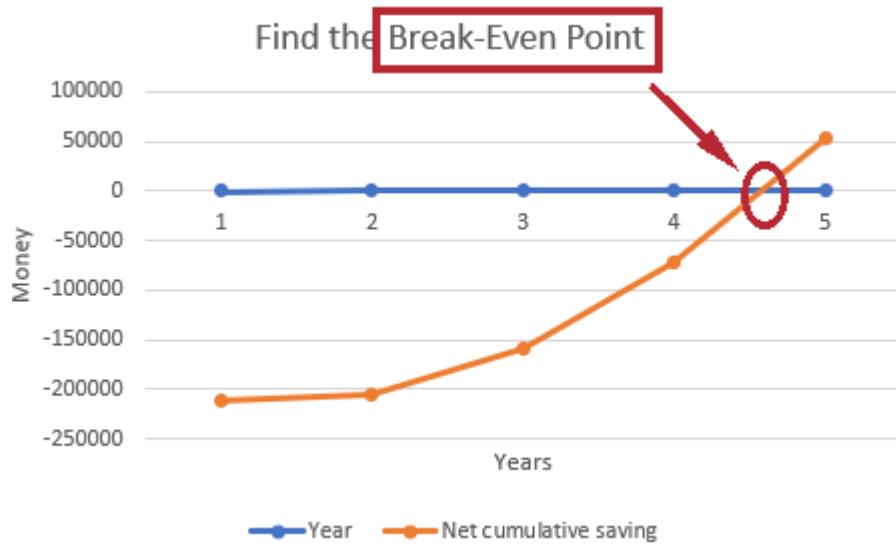
$$= (\text{Total Benefits} - \text{Total costs}) / \text{Total Costs}$$

$$= (1,085,000 - 1,031,069) / 1,031,069$$

$$= 0.052 \text{ (corr. To 3 sig. fig.)}$$

This indicated that the proposed healthcare management system will have 5.2% money return after five years.

2.5.2 Break-Even Point



2.5.3 Payback Period

Referring to the break-even point chart for the proposed Caregiver Online Marketplace system, the net cash flow for the next five years is plotted as an orange line. At the beginning of the first 4.5 years, the net cash flow will be negative. Net cash flow is expected to increase slowly and steadily. The break-even point is found to be around 4.5 years. This means that from year 4.5 onwards, there will be a positive net cash flow and losses will have been earned back.

2.6 Development Schedule

2.6.1 Scheduled Works

Activity Number	Phrase	Activities	Start Date	End Date	Duration(Days)
1	Studying	Research	11/5/2022	1/9/2022	114
2		Communicate with NGO	1/8/2022	15/4/2023	258
3	Analysis	Identify exist problems and improvements	1/9/2022	4/9/2022	4
4		Initial system analysis	5/9/2022	10/9/2022	6
5		Schedule workflow	11/9/2022	13/9/2022	2
6	System Design	Design system initial User Interface prototype	14/9/2022	25/9/2022	11
7		Design system architecture	26/9/2022	30/9/2022	4
8		Design system specification	1/10/2022	5/10/2022	4
9		Design database	6/10/2022	15/10/2022	9
10		Review design	16/10/2022	25/10/2022	9
11	Implementation	UI coding	26/10/2022	1/12/2022	36
12		Program coding	16/11/2022	30/12/2022	44
13		Conduct testing	15/12/2022	30/12/2022	15
14		Debug	1/1/2023	5/1/2023	4
15	Documentation	Project statement	1/5/2022	1/6/2022	31
16		First progress	23/8/2022	23/9/2022	31
17		Second progress report	30/11/2022	30/12/2022	30
18		Final report	1/2/2023	1/3/2023	28
19		User guide	2/3/2023	31/3/2023	29
20		Poster	2/4/2023	10/4/2023	8
21	Presentation	Meet supervisor	1/9/2023	15/3/2023	8(times)
22		First presentation	4/1/2023	6/1/2023	2
23		Second presentation	13/4/2023	20/4/2023	7

Final Year Project

Company Name: Cankk
Project Lead: Fatih ÇELEBİ

Project Start Date: May 5, 2022		Project End Date: July 4, 2022													
Task	Assigned To	Progress	Start	End	May 9, 2022	May 16, 2022	May 23, 2022	May 30, 2022	Jun 6, 2022	Jun 13, 2022	Jun 20, 2022	Jun 27, 2022	Jul 4, 2022		
Studying		0%	May 9, 2022	May 16, 2022	May 23, 2022	May 30, 2022	Jun 6, 2022	Jun 13, 2022	Jun 20, 2022	Jun 27, 2022	Jul 4, 2022				
Research		100%	5/1/22	5/1/22											
Communicate with NGO		0%	8/1/22	4/3/23											
Analysis		0%	May 9, 2022	May 16, 2022	May 23, 2022	May 30, 2022	Jun 6, 2022	Jun 13, 2022	Jun 20, 2022	Jun 27, 2022	Jul 4, 2022				
Identify exist problems and improvements		100%	9/1/22	9/6/22											
Initial system analysis		100%	9/5/22	9/6/22											
Schedule workflow		0%	9/1/22	9/3/22											
System Design		0%	May 9, 2022	May 16, 2022	May 23, 2022	May 30, 2022	Jun 6, 2022	Jun 13, 2022	Jun 20, 2022	Jun 27, 2022	Jul 4, 2022				
Design system initial User Interface prototype		5%	9/4/22	9/2/22											
Design system architecture		0%	9/5/22	9/6/22											
Design system specification		0%	10/1/22	10/6/22											
Design database		0%	10/6/22	10/3/22											
Review design		0%	10/6/22	10/2/22											
Implementation		0%	May 9, 2022	May 16, 2022	May 23, 2022	May 30, 2022	Jun 6, 2022	Jun 13, 2022	Jun 20, 2022	Jun 27, 2022	Jul 4, 2022				
UI coding		0%	10/6/22	10/2/22											
Program coding		0%	11/6/22	12/6/22											
Conduct testing		0%	12/1/22	12/6/22											
Debug		0%	10/23	15/21											
Documentation		0%	May 9, 2022	May 16, 2022	May 23, 2022	May 30, 2022	Jun 6, 2022	Jun 13, 2022	Jun 20, 2022	Jun 27, 2022	Jul 4, 2022				
Project statement		100%	5/1/22	6/1/22											
First progress		60%	8/2/22	9/2/22											
Second progress report		0%	11/9/22	12/9/22											
Final report		0%	2/25/23	3/1/23											
User guide		0%	3/2/23	3/5/23											
Poster		0%	4/2/23	4/10/23											
Analysis		0%	May 9, 2022	May 16, 2022	May 23, 2022	May 30, 2022	Jun 6, 2022	Jun 13, 2022	Jun 20, 2022	Jun 27, 2022	Jul 4, 2022				
Meet supervisor		100%	9/1/23	3/1/23											
First presentation		0%	14/23	16/23											
Second presentation		0%	4/3/23	4/20/23											

Oct 13, 2022		Oct 10, 2022		Oct 17, 2022		Oct 24, 2022		Oct 31, 2022		Nov 7, 2022		Nov 14, 2022		Nov 21, 2022		Nov 28, 2022		Dec 5, 2022		Dec 12, 2022		Dec 19, 2022	
S	M	T	W	T	F	S	S	S	M	T	W	F	S	S	S	M	T	W	F	S	S	S	
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	
13	14	15	16	17	18	19	20	21	22	23	24	14	15	16	17	18	19	20	21	22	23	24	

2.7 System Recommendation

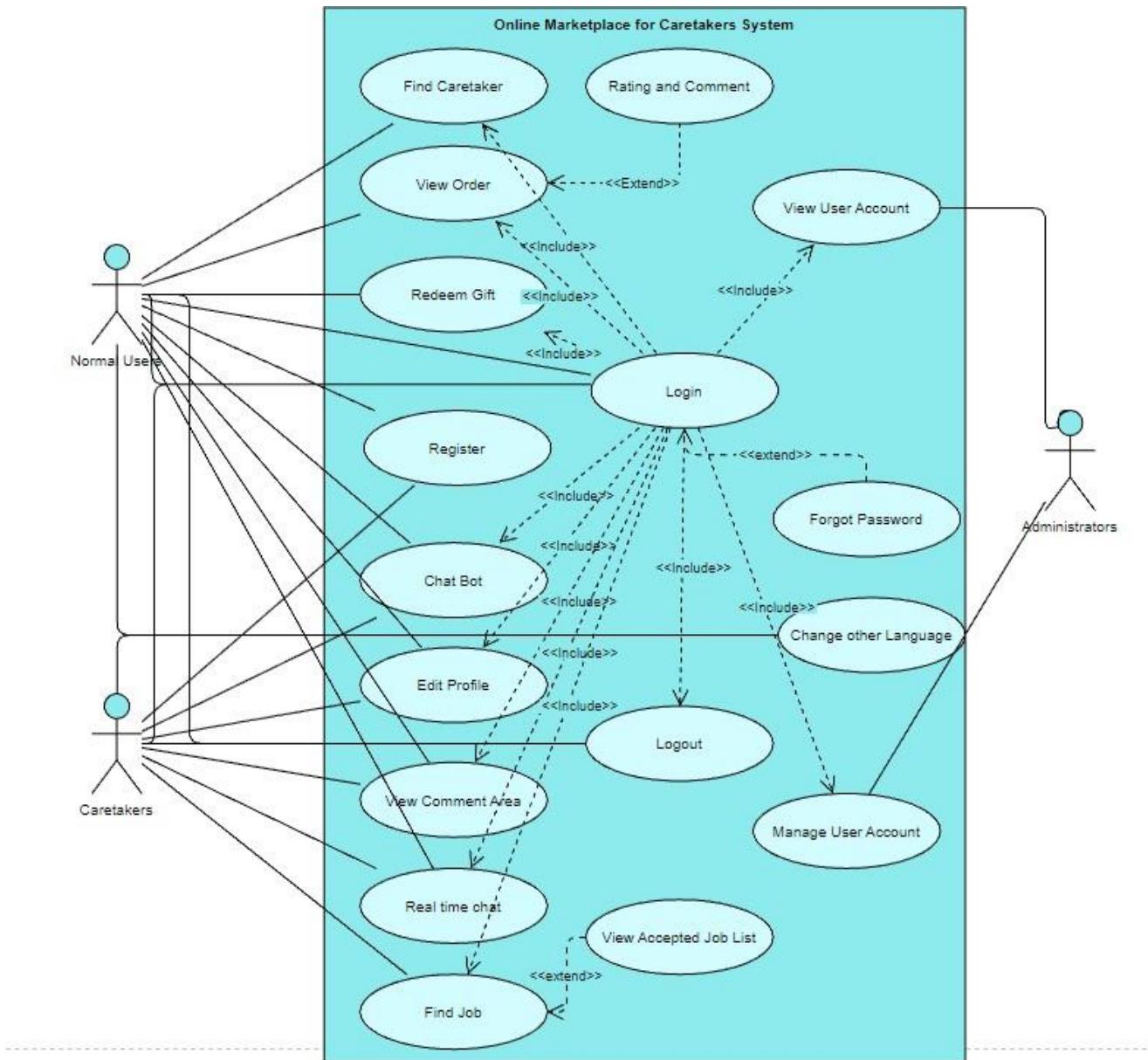
The current process does not have a way or a website platform for people to find a caregiver to take care of their pets, babies or the elderly, which means that if people want to find a caregiver they have to visit a caregiver agency's physical location, which is inconvenient for working people who get off work late or customers who rarely leave the house. The proposed Online Marketplace for Caretakers will allow users to find the right caregiver for them through their browser. With a wide variety of caregiver applicants in the system, users will be able to find quality caregivers more efficiently, thus enhancing the ease of finding caregivers.

After considering the resource implications and development plan of the proposed caregiver online marketplace system, we found that in addition to some fixed expenses such as maintenance costs, software expenses also became a stumbling block for us to develop the system because if we use Firebase as the database of our system, only 1 GB of cloud storage space is free for users every day. We do not have how to fund subsidies when developing the site, so if the storage space of our data exceeds 1GB in the open process, we may switch to a traditional SQL database or switch to MongoDB which provides 1TB of storage space for free every day.

For the development part, there is still uncertainty about the functional requirements of our online market system for caregivers, because considering the authenticity of the caregivers' personal information, we still need to find ways to ensure that our platform can protect every user and avoid fraud. In addition, since there is no local Online Marketplace for Caretakers in Hong Kong, which means we have no competitors or developers who have never developed a system before, to ensure functional integrity and creativity, our system will not only have the basic features, but also find our potential users and know what they actually need. To ensure the integrity and creativity of our system, we will not only have the basic features, but also seek out our potential users and know what they actually need, so I will gather suggestions from seniors living alone who are interested in hiring a private caregiver, thus reducing the shortcomings of the Online Marketplace for Caretakers system.

Chapter 3. System Analysis

3.1.1 Use Case Model (Use Case Diagram & Description)



3.1.2 List of Use Cases

Use Case ID	Use Case Name	Primary Actor
UC001	Register	Normal Users, Caretakers
UC002	Logout	Normal Users, Caretakers, Administrators
UC003	Chat Bot	Normal Users
UC004	View User Account	Administrators
UC005	Edit Profile	Normal Users, Caretakers
UC006	Real Time Chat	Normal Users, Caretakers
UC007	Redeem Gift	Normal Users
UC008	View Comment Area	Normal Users, Caretakers
UC009	Find Caretaker	Normal Users
UC010	Switch other Language	Normal Users, Caretakers, Administrators
UC011	Forgot Password	Normal Users, Caretakers
UC012	Login	Normal Users, Caretakers, Administrators
UC013	Manage User Account	Administrators
UC014	Rating and Comment	Normal Users
UC015	View Order	Normal Users
UC016	View Accepted Job List	Caretakers
UC017	Find Job	Caretakers

3.1.3 Use Case Description

Use Case Element	Description
Use Case Number	UC001
Application	Register window, Database
Use Case Name	Register
Use Case Description	The main function is to give Normal Users to register a new account
Primary Actor	Users (Normal Users, Caretakers)
Precondition	Normal Users, Caretakers must browse system “Login Window” interface
Trigger	/
Basic Flow	/
Alternate Flows	There are not acceptable when the user input the Chinese type of password

Use Case Element	Description
Use Case Number	UC002
Application	Database
Use Case Name	Logout
Use Case Description	Just a normal log out function. They need to login again in login page if they logged out.
Primary Actor	Normal Users, Caretakers, Administrator
Precondition	Login the account
Trigger	Click the log out button
Basic Flow	Allow user to log out their account
Alternate Flows	No network that can't log out

Use Case Element	Description
Use Case Number	UC003
Application	Home Page
Use Case Name	Chat Bot
Use Case Description	When users feel the need for help while using the system, they can rely on the chat bot, which will automatically respond to messages and answer users' questions.
Primary Actor	Normal Users
Precondition	/
Trigger	Click the help button
Basic Flow	To solve the technical problems of users in using the system
Alternate Flows	Only can see the help button in home page

Use Case Element	Description
Use Case Number	UC004
Application	Admin Dashboard, Database
Use Case Name	View User Account
Use Case Description	The main function is to let the administrators, staff to check the personal information of the person who made the appointment.
Primary Actor	Administrators
Precondition	Login, Enter View User Account interface
Trigger	When the administrators, wants to check the personal information of the user.
Basic Flow	Administrators, staff can via view user account interface to check personal information details
Alternate Flows	Under normal circumstances, ordinary users will not be able to view the real information details of other users.

Use Case Element	Description
Use Case Number	UC005
Application	Login window, Database
Use Case Name	Edit Profile
Use Case Description	The main function is to give Normal Users, Caretakers to edit account information.
Primary Actor	Normal Users, Caretakers
Precondition	Normal Users, Caretakers must browse system “Edit account information” interface
Trigger	When the Normal User or Caretaker need to modify account information in the system
Basic Flow	Normal Users or Caretakers login through the edit account information system to modify personal information
Alternate Flows	When a Normal User or Caretaker modifies account information, some of the account information, such as the username, will not be the same as for other users.

Use Case Element	Description
Use Case Number	UC006
Application	Logged window, Database
Use Case Name	Real Time Chat
Use Case Description	Provide a chat function that allows registered users to communicate with their matched caregivers and discuss job descriptions, tasks, salaries, etc. This is the core function of the whole system, when the user is matched with a suitable caregiver, a one-to-one conversation can be started.
Primary Actor	Normal Users, Caretakers
Precondition	Normal Users, Caretakers must have a registered account and also the identity verification has been performed
Trigger	When the Normal User matched Caretaker
Basic Flow	Normal Users or Caretakers login through the matching system to caretakers
Alternate Flows	When the Normal User or Caretaker have not login yet.

Use Case Element	Description
Use Case Number	UC007
Application	Login window, Database
Use Case Name	Redeem Gift
Use Case Description	Normal user can use our system to make reservations to accumulate points and then redeem suitable gifts via websites. The Normal User can Redeem a free-gift in the site by show the gift code
Primary Actor	Normal Users
Precondition	Login
Trigger	When normal user have accumulated sufficient points in the appointment system
Basic Flow	Users redeem their points for gifts and deduct their points after redeeming the gifts.
Alternate Flows	Not enough points to redeem free gifts

Use Case Element	Description
Use Case Number	UC008
Application	Login window, Database
Use Case Name	View Comment Area
Use Case Description	The main function is to allow users to make comments. Comments can include caretakers' quality and the system will take these comments for improvement.
Primary Actor	Normal Users, Caretakers
Precondition	Login, Enter Comment Area interface
Trigger	When the user has any comments on caretakers' quality
Basic Flow	All users will be able to write reviews normally
Alternate Flows	Comments with too many words may not be allowed

Use Case Element	Description
Use Case Number	UC009
Application	Login window, Database
Use Case Name	Find Caretaker
Use Case Description	Allow registered users to find a caregiver with the right conditions
Primary Actor	Normal Users
Precondition	Login
Trigger	Enter the conditions of the intended caregiver
Basic Flow	This feature is available when the user logs in, and is followed by a one-to-one conversation.
Alternate Flows	The screening criteria are too harsh and no relevant caregivers are matched

Use Case Element	Description
Use Case Number	UC010
Application	Any Webpages
Use Case Name	Switch other Language
Use Case Description	Available in different languages for easy reading by different people
Primary Actor	Normal Users, Caretakers, Administrators
Precondition	click the languages version icon
Trigger	When the user understands only part of one language
Basic Flow	Users can change the language version via the Change Language function
Alternate Flows	Translations may not be available in some languages

Use Case Element	Description
Use Case Number	UC011
Application	Login window, Forgot Password and Database
Use Case Name	Forgot Password
Use Case Description	The main function is to give Normal Users to reset the account password
Primary Actor	Normal Users
Precondition	Normal Users must browse system “Login Window” interface
Trigger	When a Normal Users want to reset account password
Basic Flow	Normal Users via Forgot Password interface to reset password.
Alternate Flows	Normal Users may not be able to reset the account password because they have forgotten their information, so they need to contact administrators.

Use Case Element	Description
Use Case Number	UC012
Application	Login window, Database
Use Case Name	Login
Use Case Description	The main function is to give Normal Users, Caretakers, Administrators to login the system
Primary Actor	Normal Users, Caretakers, Administrators
Precondition	Normal Users, Caretakers, Administrators must browse system “Login Window” interface
Trigger	When a Normal Users, Caretakers, Administrators register an account in the system
Basic Flow	Normal Users, Caretakers, Administrators login through the account registration system to use the complete system
Alternate Flows	Normal Users, Caretakers, Administrators may not be able to enter the system because they have forgotten their passwords, so they need use the password recovery function to reacquire the passwords

Use Case Element	Description
Use Case Number	UC013
Application	Login window, Database
Use Case Name	Manage User Account
Use Case Description	Its main function is to allow the administrator to check the user's personal information for errors and to have permission to change the user's information.
Primary Actor	Administrators
Precondition	Login, Enter Manage User Account interface
Trigger	When the administrators wants to check the personal information of the person
Basic Flow	Administrators can via view user account interface to check personal information details
Alternate Flows	Admin not be able to find the personal information of unregistered users

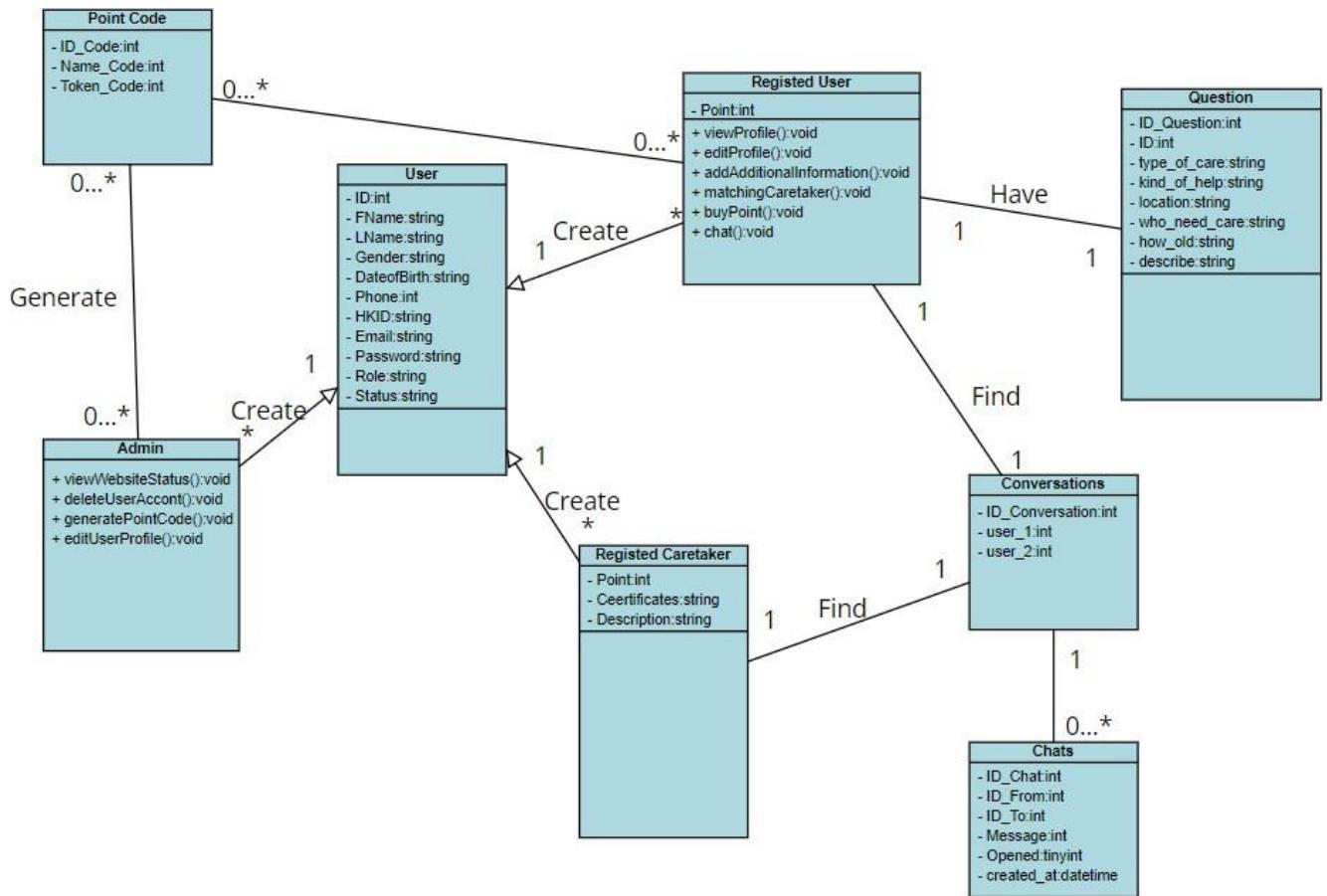
Use Case Element	Description
Use Case Number	UC014
Application	Login window, Database
Use Case Name	Rating and Comment
Use Case Description	This use case allows users to rate and comment on the services provided by caretakers. Users can leave a rating score and a comment to express their satisfaction or dissatisfaction with the service.
Primary Actor	Normal User
Precondition	The user must be logged in and have previously used the services of a caretaker.
Trigger	The user selects the caretaker they want to rate and comment on.
Basic Flow	<p>The user selects the caretaker they want to rate and comment on from their list of past services.</p> <p>The user is directed to the rating and comment page.</p> <p>The user selects a rating score from 1-100, with 100 being the highest.</p> <p>The user enters a comment in the comment box, describing their experience with the caretaker's service.</p> <p>The user clicks on the submit button.</p> <p>The website saves the rating and comment and updates the caretaker's profile with the new rating and comment.</p>
Alternate Flows	<p>If the user has not used any caretaker's services before, they cannot access the rating and comment page.</p> <p>If the user forgets to enter a rating score or comment, the website displays an error message and prompts the user to complete the required fields.</p> <p>If the user encounters an error during the submission process, such as a network issue, the website displays an error message and prompts the user to try again later.</p>

Use Case Element	Description
Use Case Number	UC015
Application	Login window, Database
Use Case Name	View Order
Use Case Description	This use case allows users to view the details of their orders for caretaker services, including the service description, status and caretaker name.
Primary Actor	Normal User
Precondition	The user must be logged in and have previously placed an order for caretaker services.
Trigger	The user selects the "View Order" option from their account dashboard.
Basic Flow	<p>The user selects the "View Order" option from their account dashboard.</p> <p>The website displays a list of the user's orders, including the service description, status and caretaker's information.</p> <p>The user selects a specific order to view.</p> <p>The website displays the order details, including the caretaker's profile, service description.</p>
Alternate Flows	<p>If the user has not placed any orders for caretaker services, they cannot access the "View Order" page.</p> <p>If the user encounters an error while accessing the "View Order" page, such as a network issue, the website displays an error message and prompts the user to try again later.</p>

Use Case Element	Description
Use Case Number	UC016
Application	Login window, Database
Use Case Name	View Accepted Job List
Use Case Description	This use case allows caretakers to view a list of the jobs they have accepted through the website, including the job description, status, and customer's details.
Primary Actor	Caretaker
Precondition	The caretaker must be logged in and have previously accepted jobs through the website.
Trigger	The caretaker selects the "View Accepted Jobs" option from their account dashboard.
Basic Flow	<p>The caretaker selects the "View Accepted Jobs" option from their account dashboard.</p> <p>The website displays a list of the caretaker's accepted jobs, including the job description.</p> <p>The caretaker can select a specific job to view its details.</p> <p>The website displays the job details, including the client's information, job description.</p>
Alternate Flows	<p>If the caretaker has not accepted any jobs through the website, they cannot access the "View Accepted Jobs" page.</p> <p>If the caretaker encounters an error while accessing the "View Accepted Jobs" page, such as a network issue, the website displays an error message and prompts the caretaker to try again later.</p>

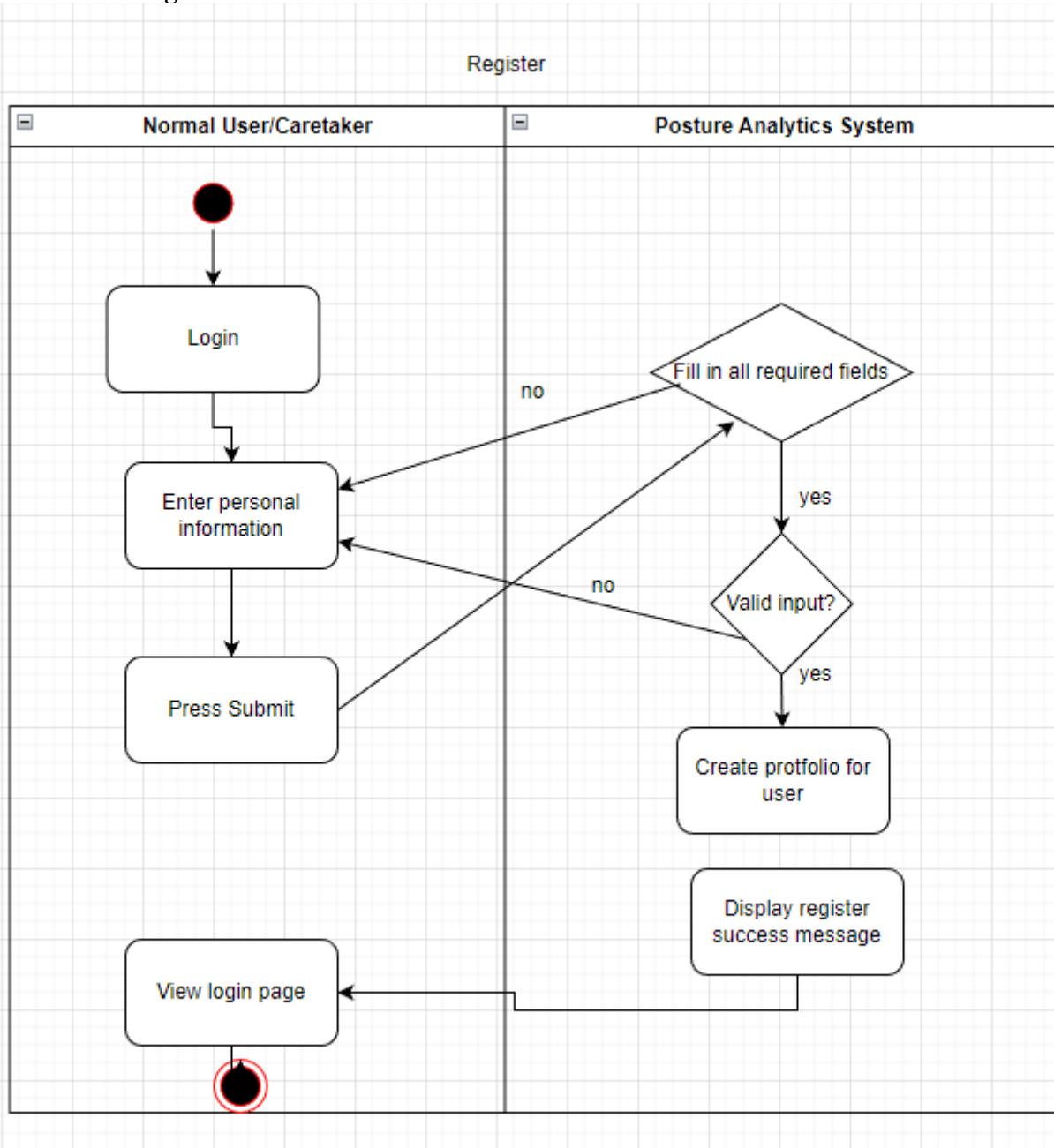
Use Case Element	Description
Use Case Number	UC017
Application	Login window, Database
Use Case Name	Find Job
Use Case Description	This use case allows users to search and browse for available jobs posted by clients on the website. Users can search for jobs based on the different jobs' requirements.
Primary Actor	Caretaker
Precondition	The user must be logged in and have completed their profile information.
Trigger	The user selects the "Find Jobs" option from their account dashboard.
Basic Flow	<p>The user selects the "Find Jobs" option from their account dashboard.</p> <p>The website displays a list of available jobs.</p> <p>The user can refine their search by selecting specific criteria, such as job type and location.</p> <p>The website displays a list of jobs that match the selected criteria.</p> <p>The user can select a specific job to view its details.</p> <p>The website displays the job details, including the client's information, job description.</p> <p>The user can choose to apply for the job by submitting an application through the website.</p>
Alternate Flows	<p>If there are no jobs currently available that match the user's criteria, the website displays a message indicating that there are no results.</p> <p>If the user encounters an error while accessing the "Find Jobs" page, such as a network issue, the website displays an error message and prompts the user to try again later.</p> <p>If the user chooses to apply for a job, the website prompts the user to confirm their application.</p>

3.2 Class Diagrams



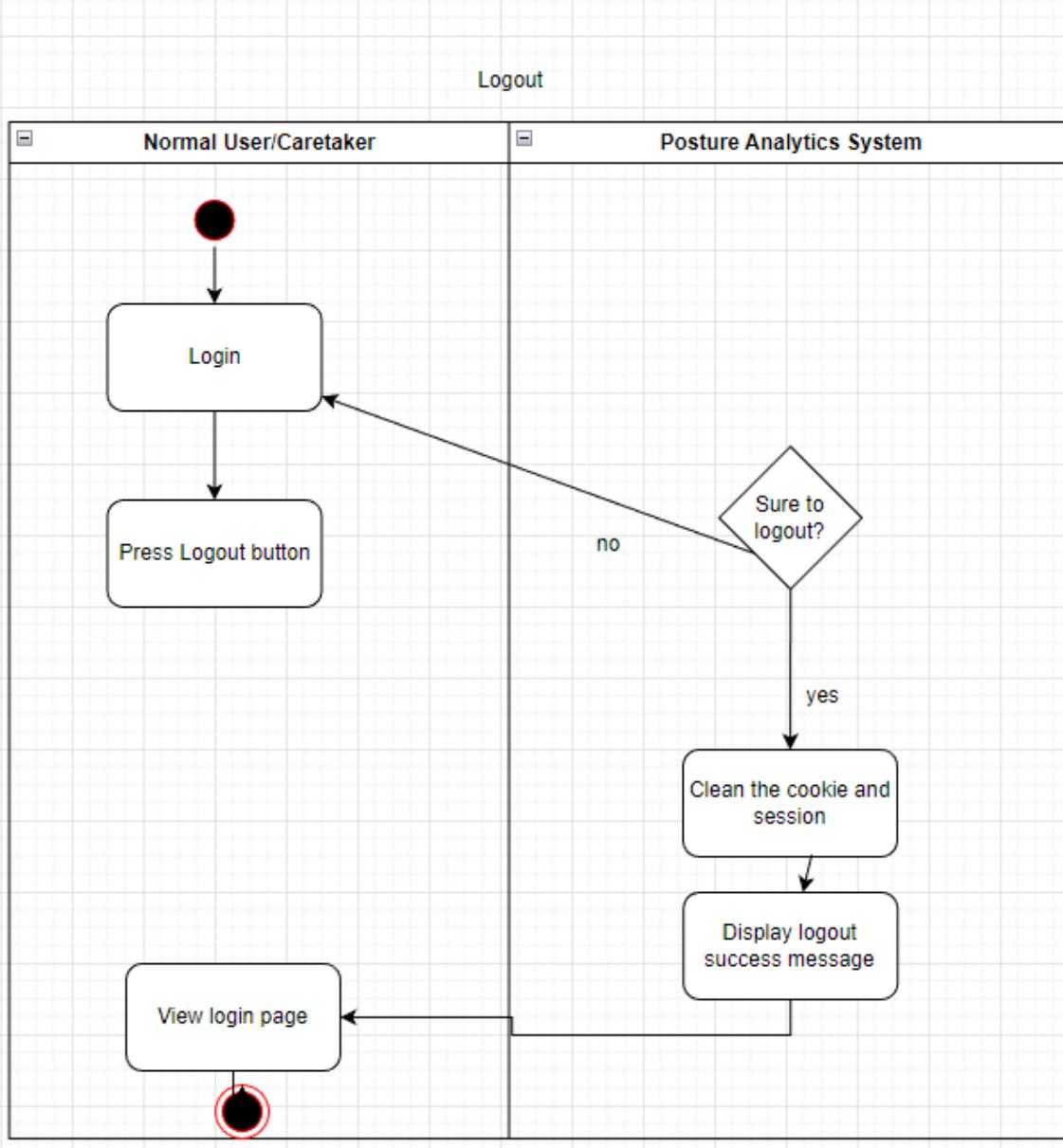
3.2 Activity Diagrams

3.2.1 Register



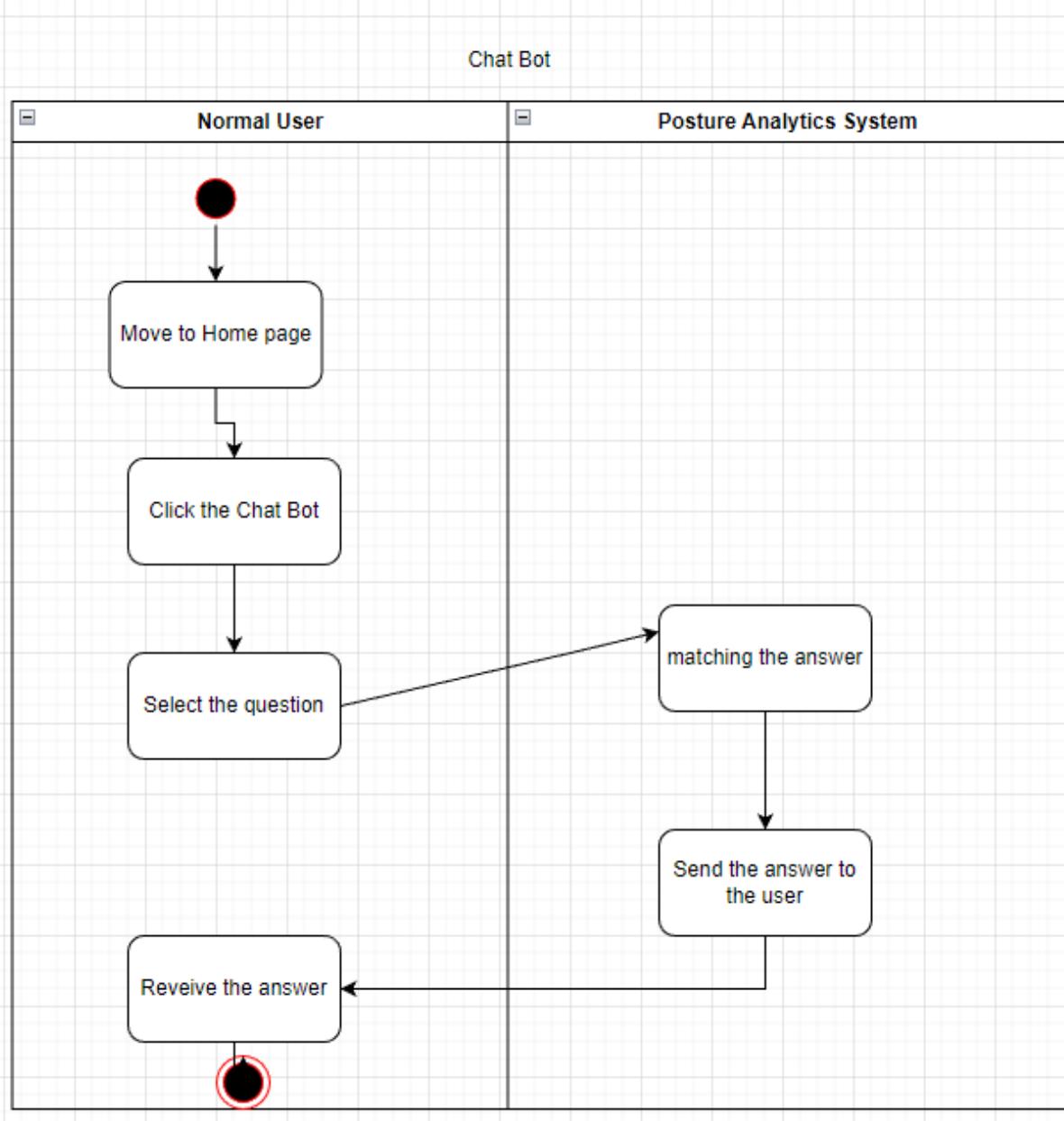
The purpose of system registration and logging is to verify the user who wants to access the system. During the registration process, the user must submit some personal information in order to grant access to the system. The system then saves this information, which becomes the basis for the user to log in to the system. A registered user is a person who uses a program or website and provides his/her credentials to effectively prove his/her identity. Generally speaking, anyone can become a registered user by providing some evidence in the form of email and password.

3.2.2 Logout



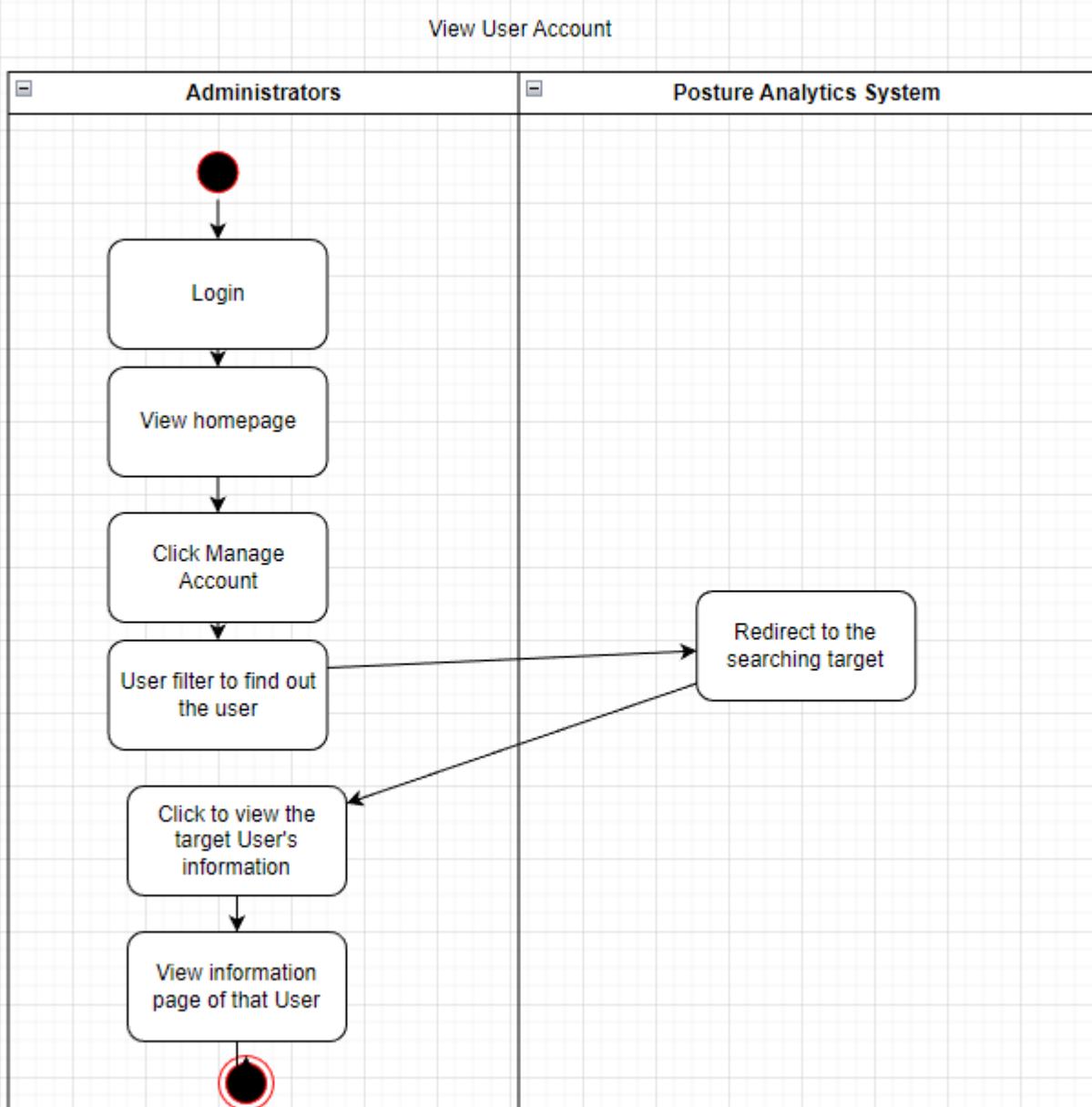
Logging out can be done from an active process, such as a user logging out of a currently operating or running system website account. After logging out, the user can log in again as the same or a different user.

3.2.3 Chat Bot



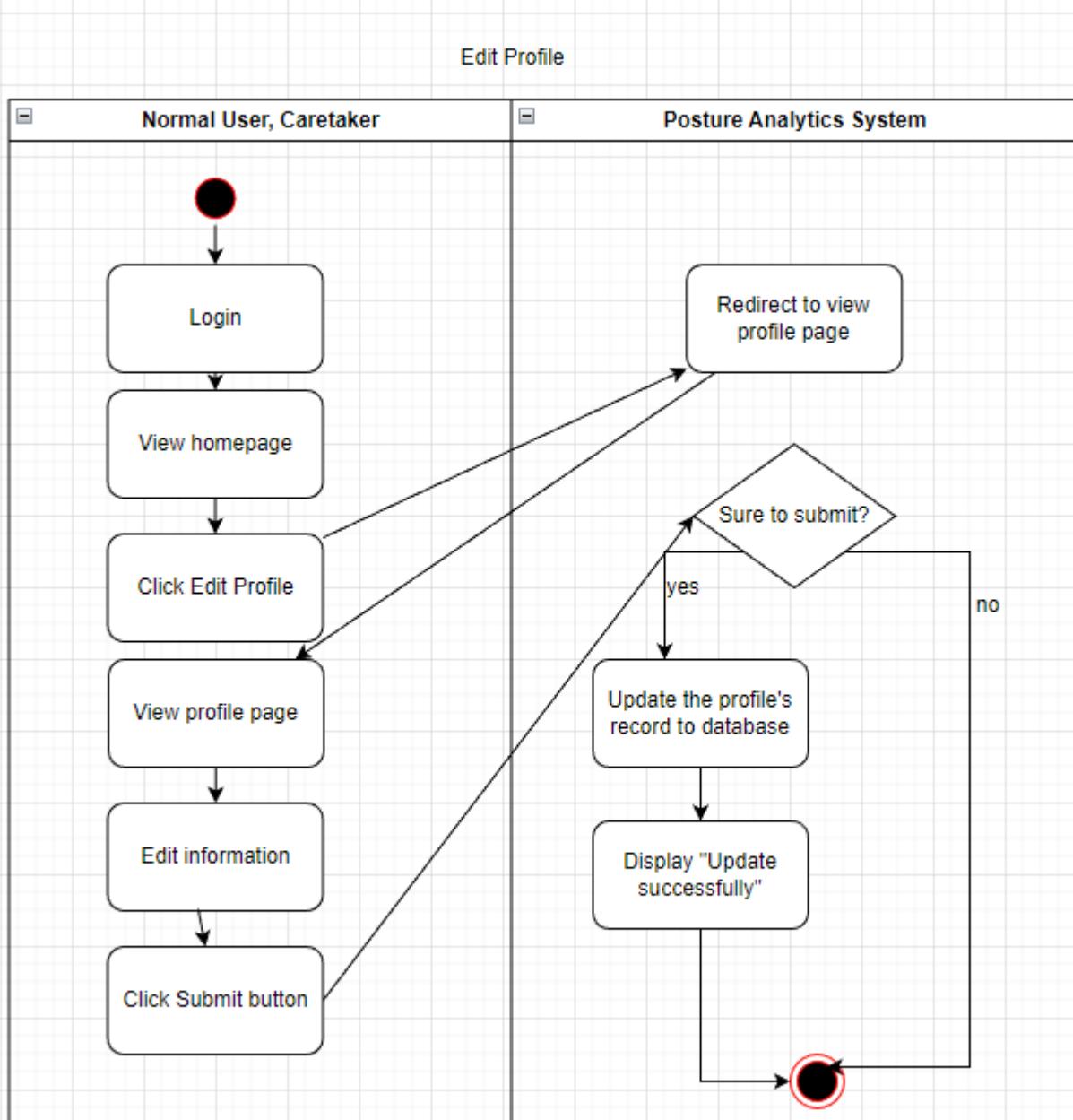
Customers don't always know where to find specific information. The chatbot can swiftly point them in the right direction so they can get what they need faster. With ChatBot, We store the answers in advance and it also helps customers to ask for help when they need human contact, which will automatically answer a third of the frequently asked questions.

3.2.4 View User Account



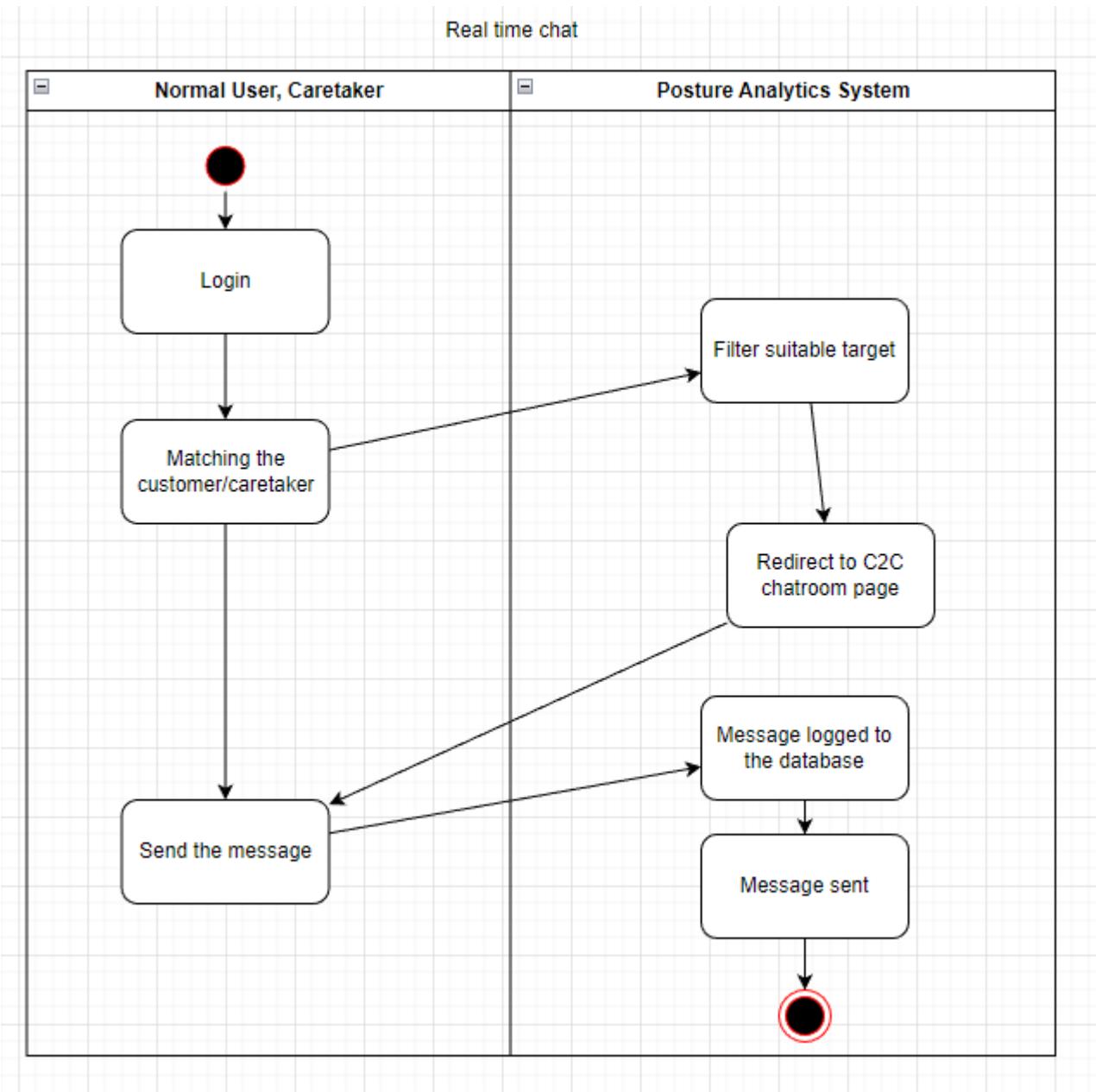
If an administrator wants to view a user's profile, he can access the desired user's by searching. The administrator can first go to the search user account management page. Then, search through the filters. If the search criteria are valid, the system will search in the database and display the user accounts that match the search criteria. The administrator can view the patient's profile by clicking on the user he/she wants to view or change.

3.2.5 Edit Profile



Users can change their profile information at any time and from anywhere. First, the user must go to the View Profile page. There will be an edit button there. If it is clicked, the user will be redirected to the edit page. Most of the information can be edited, except for the user's ID. The user can click the submit button after finishing editing. The system will check the data type of the information. The system will check the data type of the message. If all the messages are valid and match the data type, the information will be updated to the database and a success message will pop up.

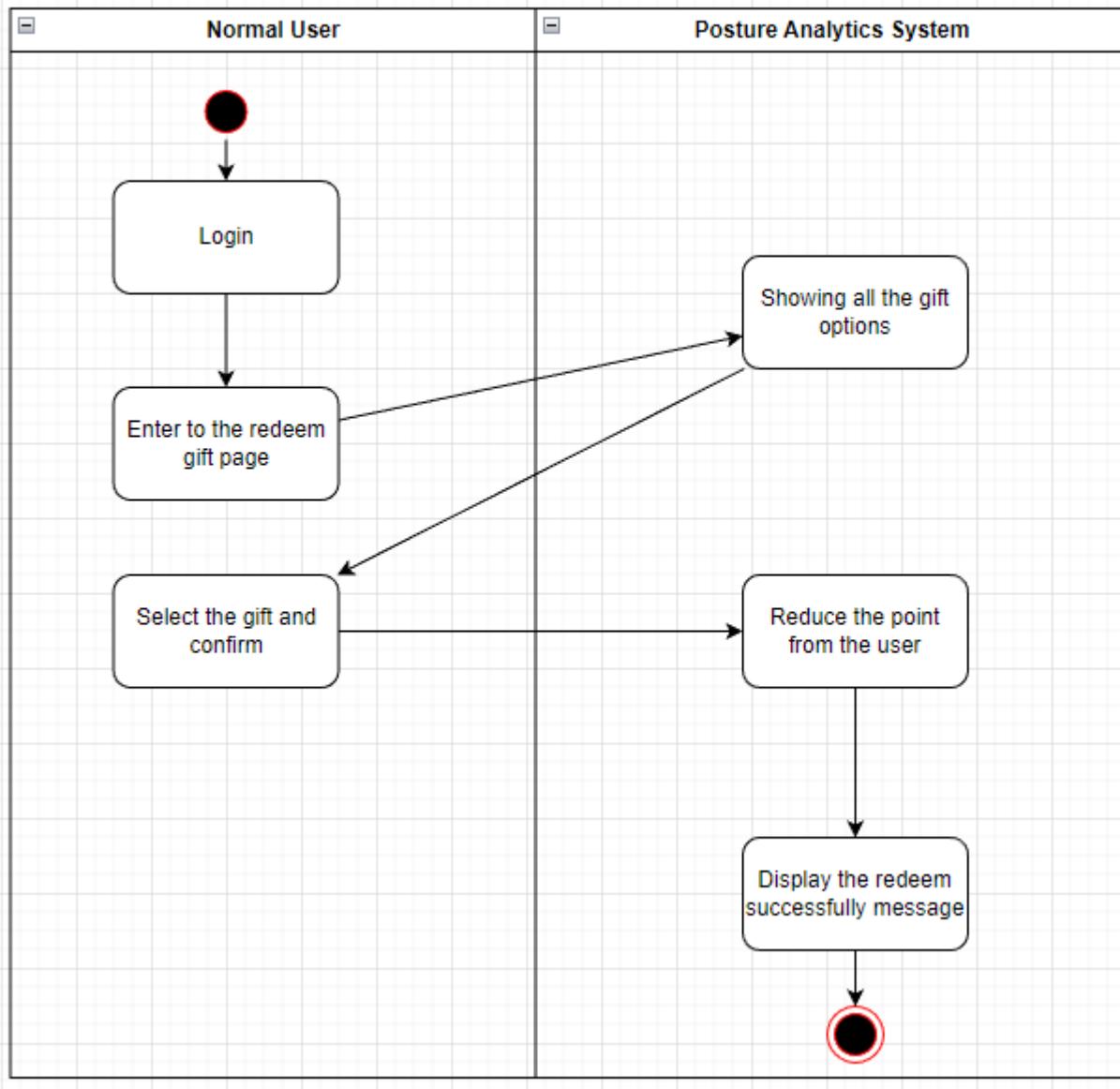
3.2.6 Real time chat



Once the user has logged in, if they wish to find a customer or carer, they will need to be matched with someone through the system and then they will be able to start a conversation and their information will be stored in the database for their records.

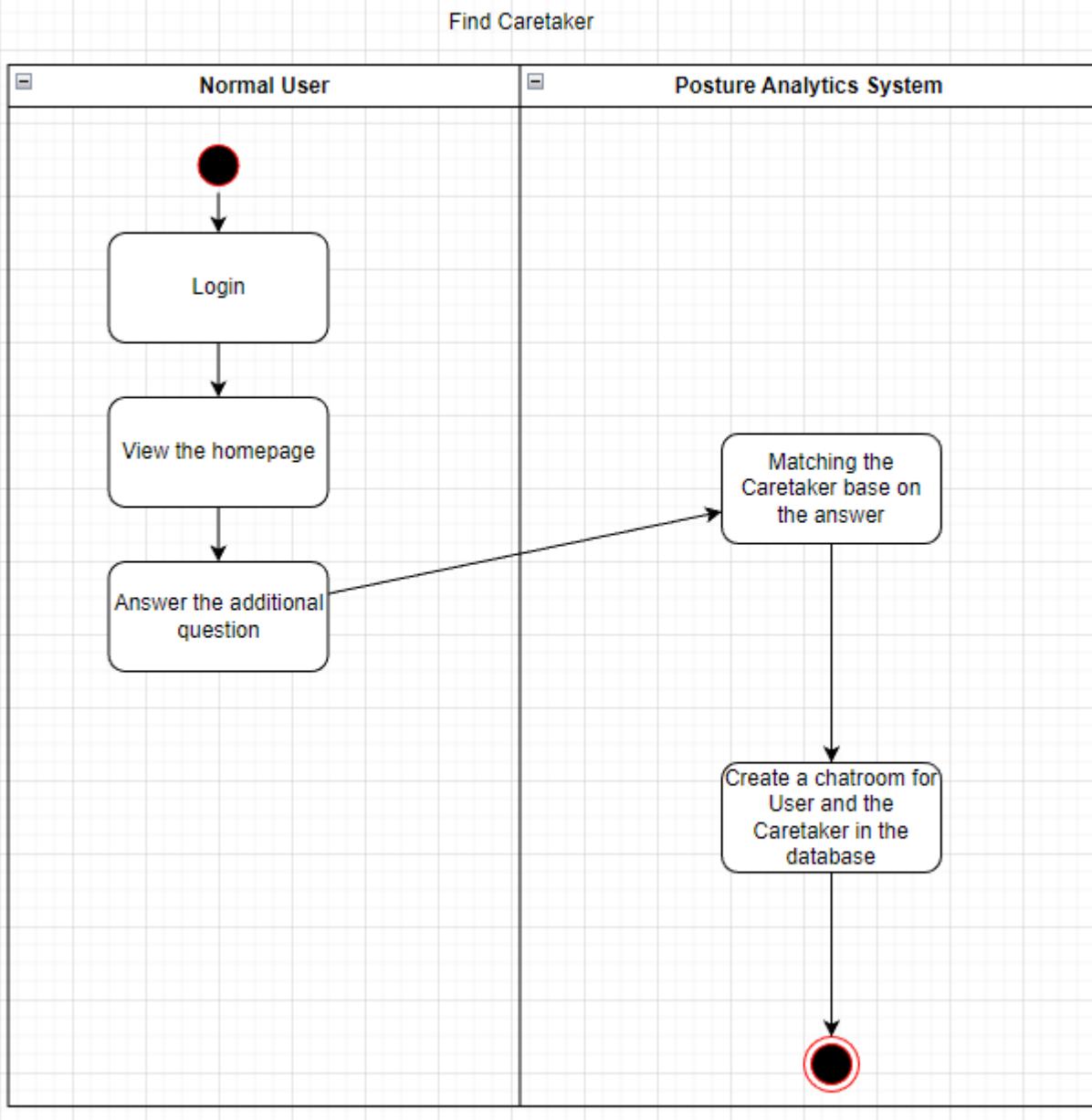
3.2.7 Redeem a free gift

Redeem a free gift



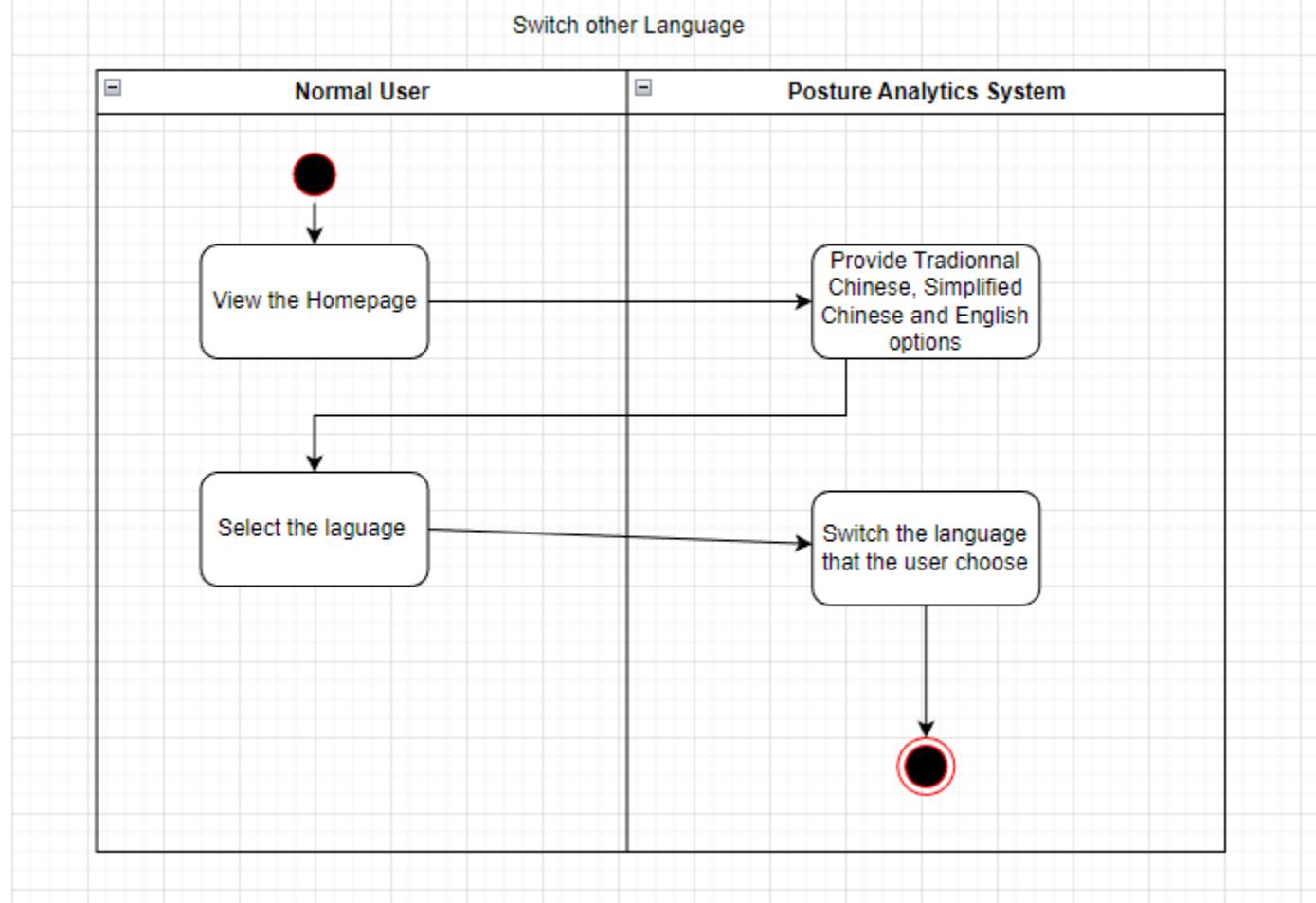
Once the user has enough points, they can redeem the gift through our souvenir redemption function. After logging in, the user will enter the gift redemption page, then the screen will show all the gifts to choose from.

3.2.8 Find Caretaker



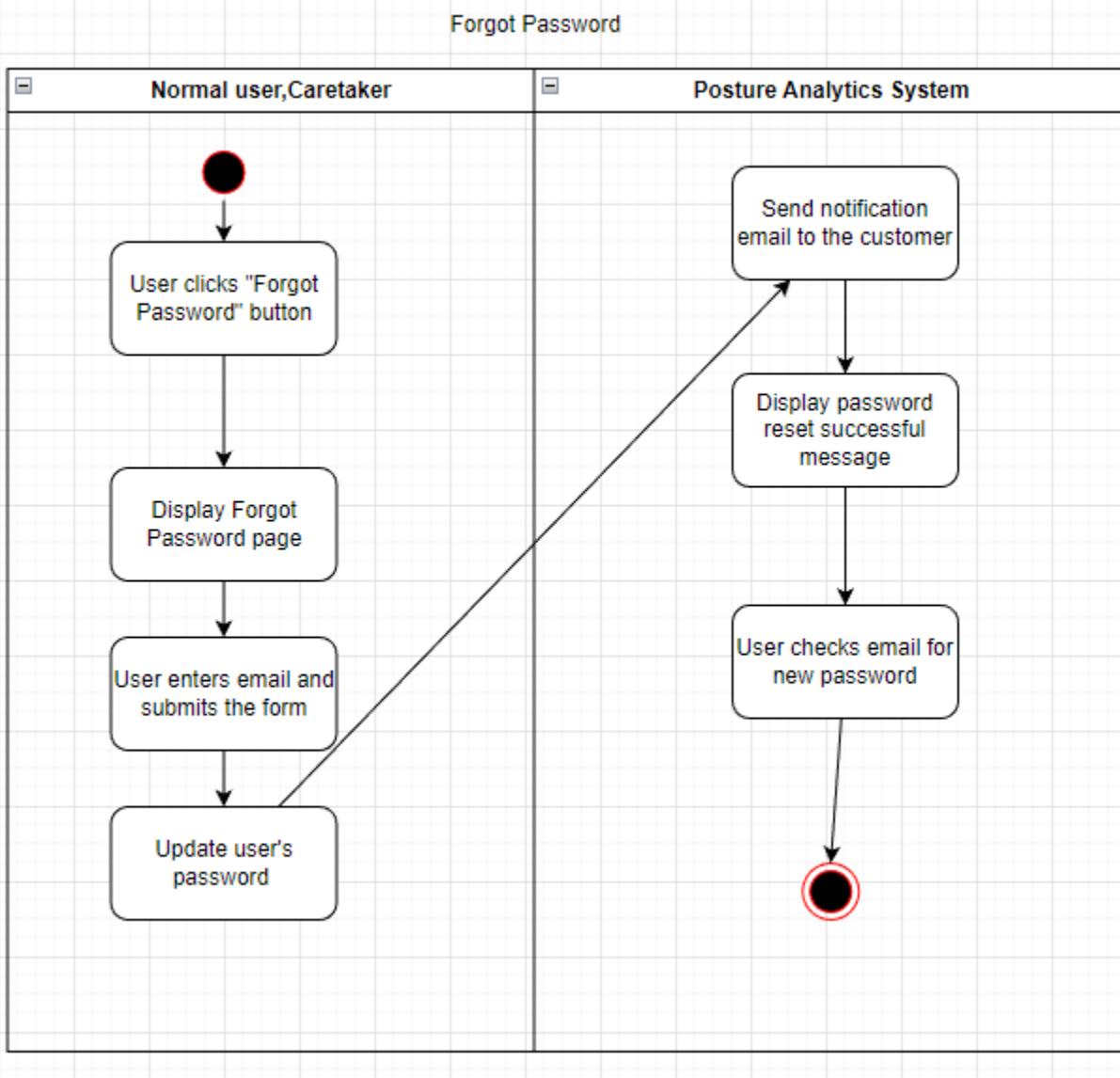
Once they have answered all the questions and submitted them, they will be matched with a suitable carer and a one-to-one conversation will be opened and their conversations will be recorded in a database.

3.2.9 Switch other language



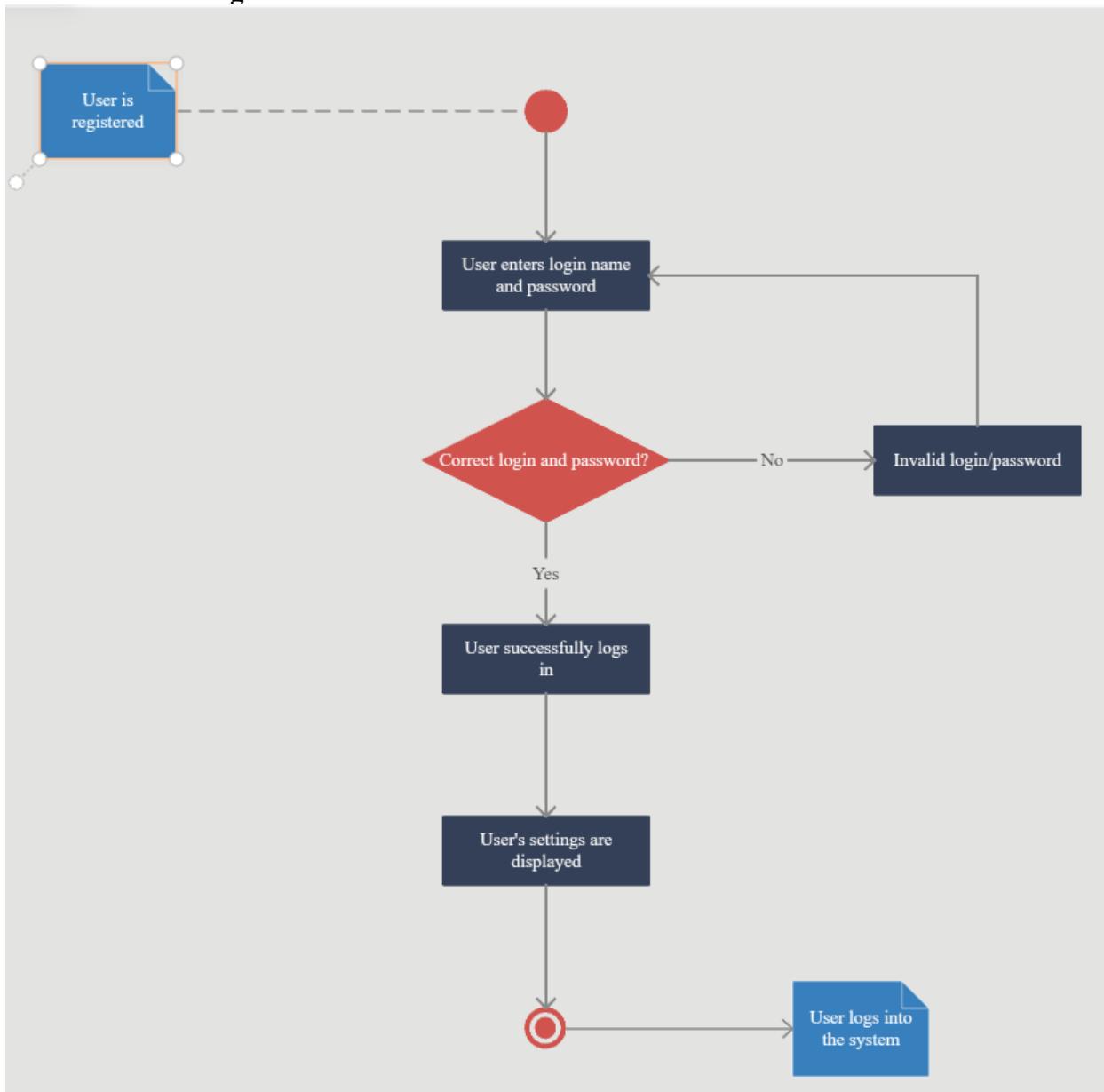
The language switcher allows my site visitors to switch between the languages I offer on my multilingual sites, so that the content can be read in the user's preferred language. On the main page, users can see a button to switch languages, including Traditional Chinese, Simplified Chinese and English, and the system will automatically navigate to the site in the language of their choice.

3.2.10 Forgot Password



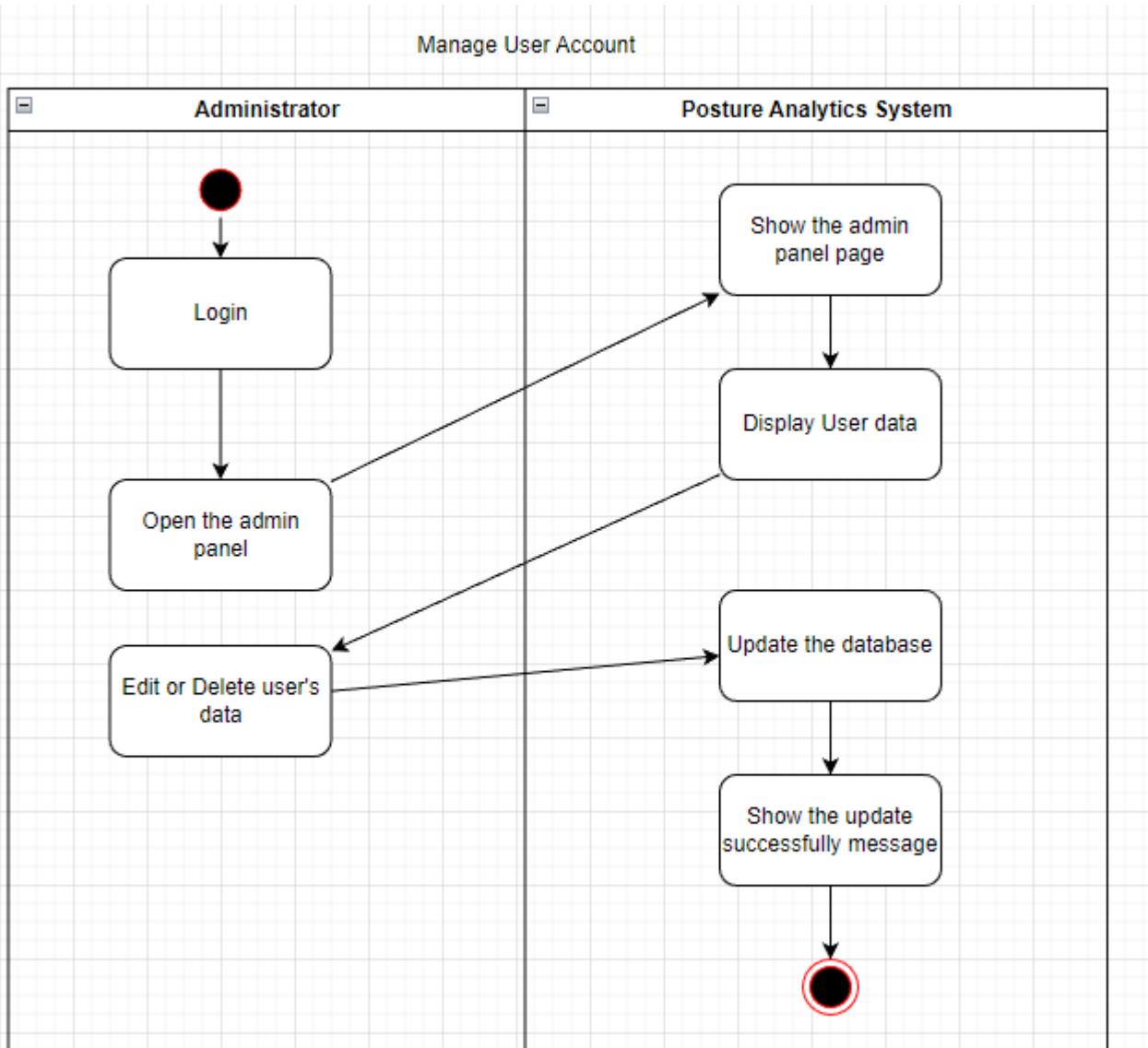
When a user forgets their password, they can click on the Forgot Password button in the login screen and the Forgot Password page will appear on the screen. Then the system will send a notification via email to the user's email inbox with a successful password change notification and the user can see the new random password in the email.

3.2.11 Login



The login process and conditions for caregivers, regular users and administrators are the same. To login to the system, they must enter their correct email and password. Then, the system will check if the Email and password provided are the same as the Email and password stored in the database. Does the password in the database match. If it is, the system will direct the user to the system home page. If not, the system will ask the user to provide the correct Email or password again. The user must be logged in to enjoy more features of the system. If you forget your password or do not have an account yet, the system interface will provide a hyperlink to "Forgot Password" and "User Registration".

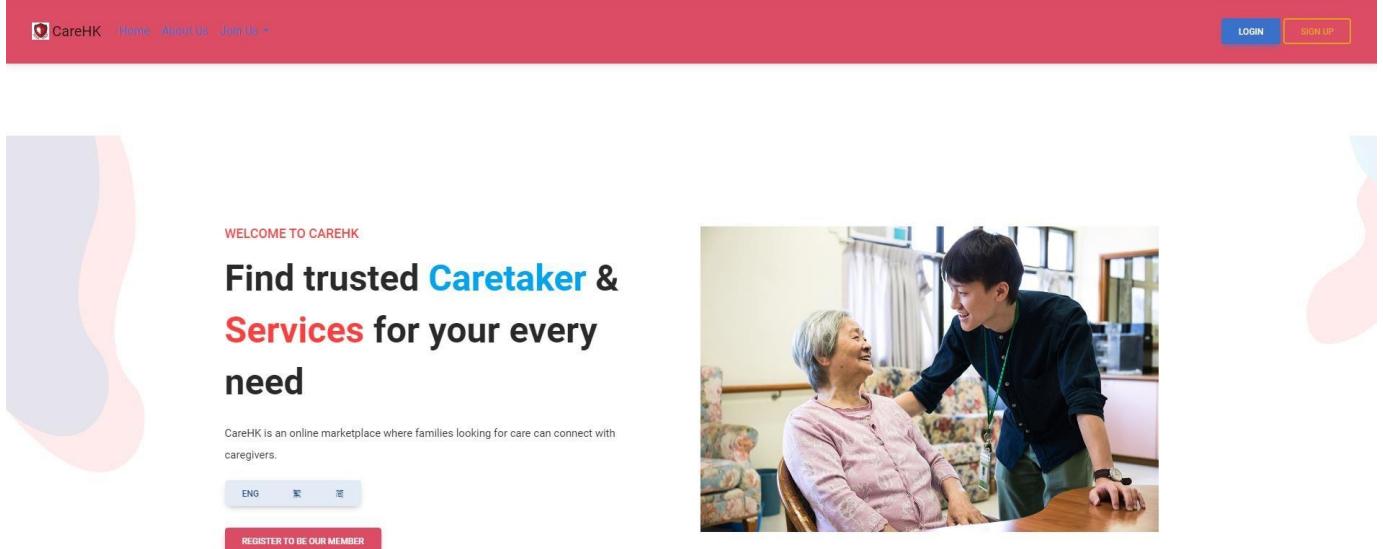
3.2.12 Mange User Account



To manage users, administrator has to move to the Admin Panel page. The system will retrieve all the users from the database and list it. The admin can select one user, the system will retrieve that user's information and show it. If the admin deletes the user, the system will destroy the user data and return a success message. A new user list will be shown.

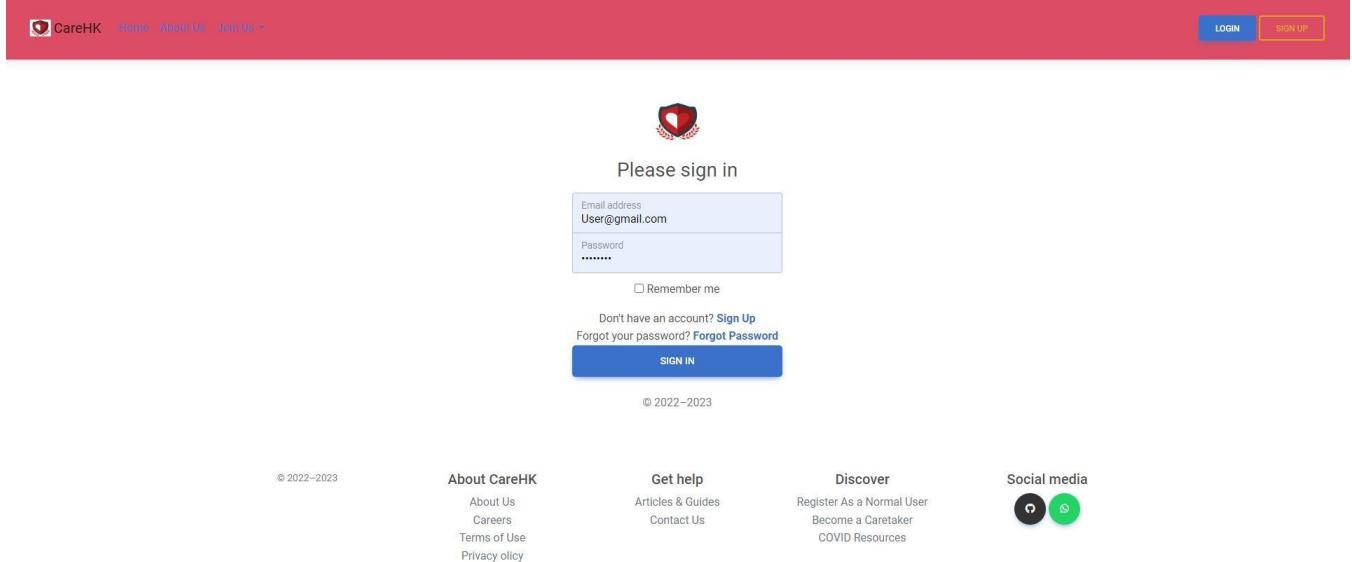
3.3 User Interface Prototype (diagrams & storyboards)

3.3.1 Home Page



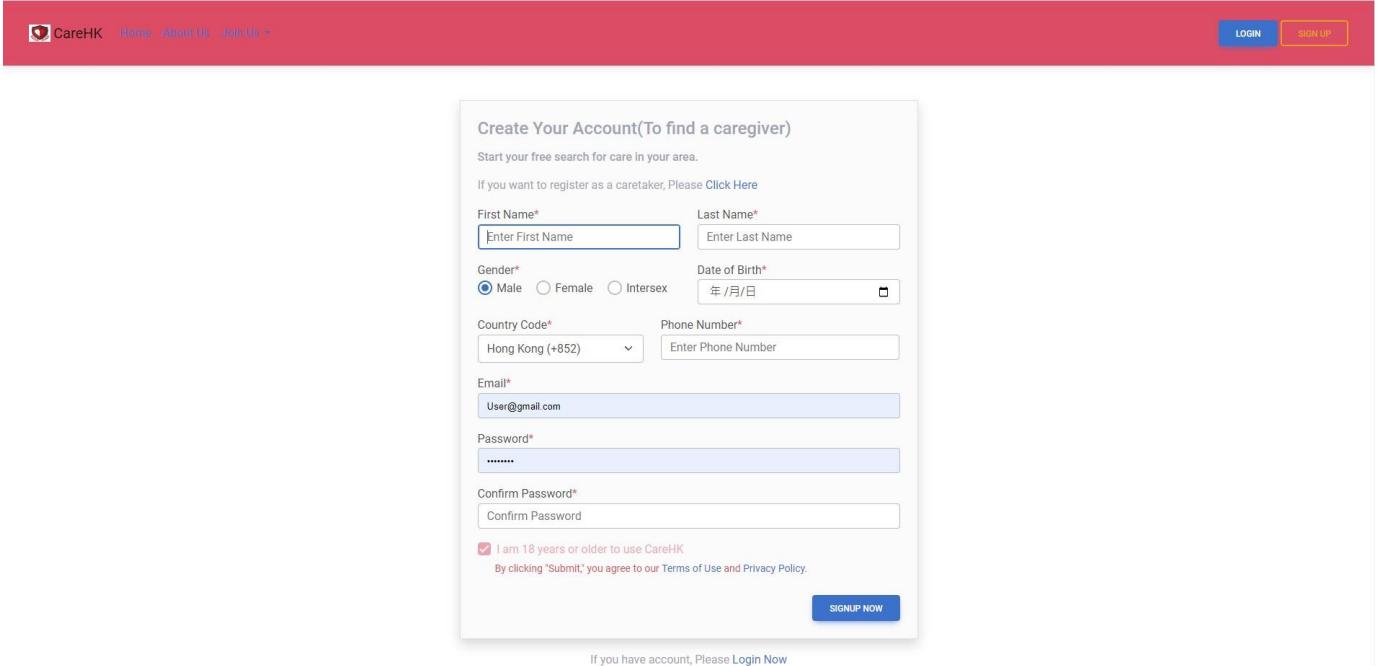
The screenshot shows the homepage of the CareHK website. At the top, there is a red header bar with the CareHK logo, navigation links for Home, About Us, and Join Us, and two buttons for LOGIN and SIGN UP. Below the header, there is a large image of a young man in a dark shirt interacting with an elderly woman in a pink sweater. To the left of the image, there is a text area with the heading "WELCOME TO CAREHK" and the subtext "Find trusted **Caretaker & Services** for your every need". Below this, there is a brief description of CareHK as an online marketplace for families looking for care to connect with caregivers. There are also language selection buttons for ENG, 繁體, and 簡體, and a "REGISTER TO BE OUR MEMBER" button.

3.3.2 Login Page



The screenshot shows the login page of the CareHK website. At the top, there is a red header bar with the CareHK logo, navigation links for Home, About Us, and Join Us, and two buttons for LOGIN and SIGN UP. The main content area features a logo of a shield with a heart in the center. Below the logo, there is a "Please sign in" prompt. A form is provided for entering an email address (User@gmail.com) and a password (*****). There is also a "Remember me" checkbox. Below the form, there are links for "Don't have an account? Sign Up" and "Forgot your password? Forgot Password". A blue "SIGN IN" button is centered below the form. At the bottom of the page, there is a copyright notice for © 2022–2023 and a footer section containing links for About CareHK, Get help, Discover, and Social media.

3.3.3 Register Page



CareHK Home About Us Join Us [Login](#) [Sign Up](#)

Create Your Account(To find a caregiver)

Start your free search for care in your area.

If you want to register as a caretaker, Please [Click Here](#)

First Name* Last Name*

Gender* Male Female Intersex Date of Birth*

Country Code* Phone Number*

Email*

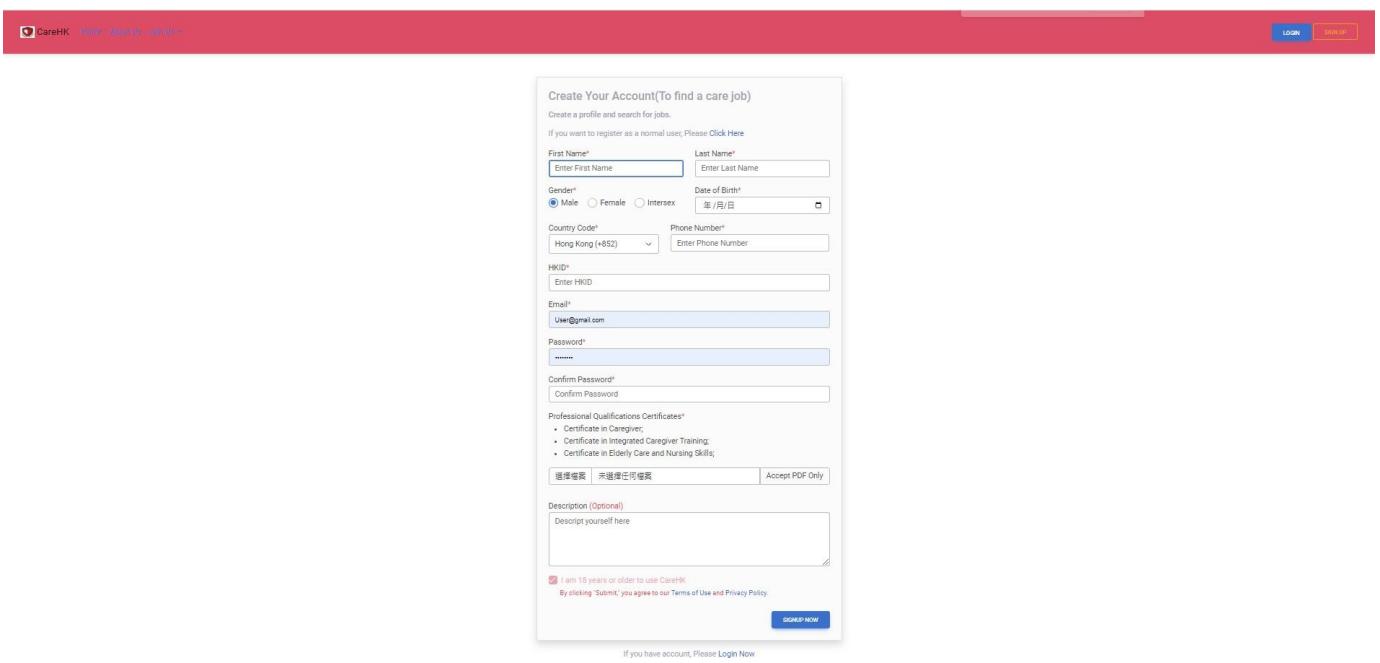
Password*

Confirm Password*

I am 18 years or older to use CareHK
By clicking "Submit," you agree to our [Terms of Use](#) and [Privacy Policy](#).

[SIGNUP NOW](#)

If you have account, Please [Login Now](#)



CareHK Home About Us Join Us [Login](#) [Sign Up](#)

Create Your Account(To find a care job)

Create a profile and search for jobs.

If you want to register as a normal user, Please [Click Here](#)

First Name* Last Name*

Gender* Male Female Intersex Date of Birth*

Country Code* Phone Number*

HKD*

Email*

Password*

Confirm Password*

Professional Qualifications Certificates*
 Certificate in Caregiver;
 Certificate in Integrated Caregiver Training;
 Certificate in Elderly Care and Nursing Skills;

選擇檔案 | 未選擇任何檔案 | Accept PDF Only

Description (Optional)

I am 18 years or older to use CareHK
By clicking "Submit," you agree to our [Terms of Use](#) and [Privacy Policy](#).

[SIGNUP NOW](#)

If you have account, Please [Login Now](#)

3.3.4 About Us Page

CareHK

Small word. Huge impact.

There are the numbers...

\$340 billion is spent annually on care.

10,000 people turn 65 every day.

80% of brain development occurs from the ages of zero-four. It's when quality childcare is absolutely critical.

50% of families in the USA live in a childcare desert.

There's the reality we all live with...

Care is a personal matter but a universal concern.

Care disproportionately impacts women so access to care promotes gender equality and stimulates economic growth.

3.3.5 Term of Use Page

Website standard terms and conditions

1. Introduction

These Website Standard Terms And Conditions (these "Terms" or these "Website Standard Terms And Conditions") contained herein on this webpage, shall govern your use of this website, including all pages within this website (collectively referred to herein below as this "Website"). These Terms apply in full force and effect to your use of this Website and by using this Website, you expressly accept all terms and conditions contained herein in full. You must not use this Website, if you have any objection to any of these Website Standard Terms And Conditions. This Website is not for use by any minors (defined as those who are not at least 18 years of age), and you must not use this Website if you a minor.

2. Intellectual Property Rights

Other than content you own, which you may have opted to include on this Website, under these Terms, and/or its licensors own all rights to the intellectual property and material contained in this Website, and all such rights are reserved.

You are granted a limited license only, subject to the restrictions provided in these Terms, for purposes of viewing the material contained on this Website.

3. Restrictions

You are expressly and emphatically restricted from all of the following:

- publishing any Website material in any media;
- selling, sublicensing and/or otherwise commercializing any Website material;
- publicly performing and/or showing any Website material;
- using this Website in any way that is, or may be, damaging to this Website;
- using this Website in any way that impacts user access to this Website;
- using this Website contrary to applicable laws and regulations, or in a way that causes, or may cause, harm to the Website, or to any person or business entity;
- engaging in any data mining, data harvesting, data extracting or any other similar activity in relation to this Website, or while using this Website;
- using this Website to engage in any advertising or marketing;

Certain areas of this Website are restricted from access by you and may further restrict access by you to any areas of this Website, at any time, in its sole and absolute discretion. Any user ID and password you may have for this Website are confidential and you must maintain confidentiality of such information.

4. Your Content

In these Website Standard Terms And Conditions, "Your Content" shall mean any audio, video, text, images or other material you choose to display on this Website. With respect to Your Content, by displaying it, you grant a non-exclusive worldwide irrevocable royalty-free sublicenseable licence to use, reproduce, adapt, publish, translate and distribute it in any and all media

3.3.6 Covid-19 Resources Page

CareHK Home About Us Join Us ▾

LOGIN SIGN UP

Coronavirus disease (COVID-19): Home care for families and caregivers New

Someone in my household tested positive for COVID-19. Is it safe to care for them at home?

Someone in my household tested positive for COVID-19. They have very mild symptoms, and our doctor says it is safe for me to care for them at home. What should I do to keep myself and others in the household healthy?

My child has tested positive for COVID-19. What should I do?

Our healthcare provider has recommended that I use a pulse oximeter as part of the care I am providing at home to a COVID-19 patient. What is a pulse oximeter and what does it do?

What should I do if the symptoms of the person with COVID-19 infection in my care seem to be getting worse?

If symptoms worsen, contact your healthcare provider immediately.

Some symptoms may be signals that more urgent medical care is needed. Depending on the age of the person in your care, their symptoms may look different. Adults may look dehydrated, have shortness of breath or chest pains. They may also complain of light-headedness. Children may suddenly appear confused or refuse to eat. Their face or lips may turn blue. Babies may be unable to breastfeed. These symptoms are warning signs that urgent care is needed.

How long does the person with COVID-19 infection need to stay in isolation?

Someone in my household has COVID-19. Do other people in the household need to isolate?

If I have been vaccinated against COVID-19, can I safely care for someone with COVID-19 infection without risk?

3.3.7 Home Page (After Login)

CareHK

CORE PAGES

- Home Page
- Find Care
- My Profile
- My Order
- Rating
- View Comment
- Redeem
- Buy the Point
- Forum

Your status: Online

Order status: Done

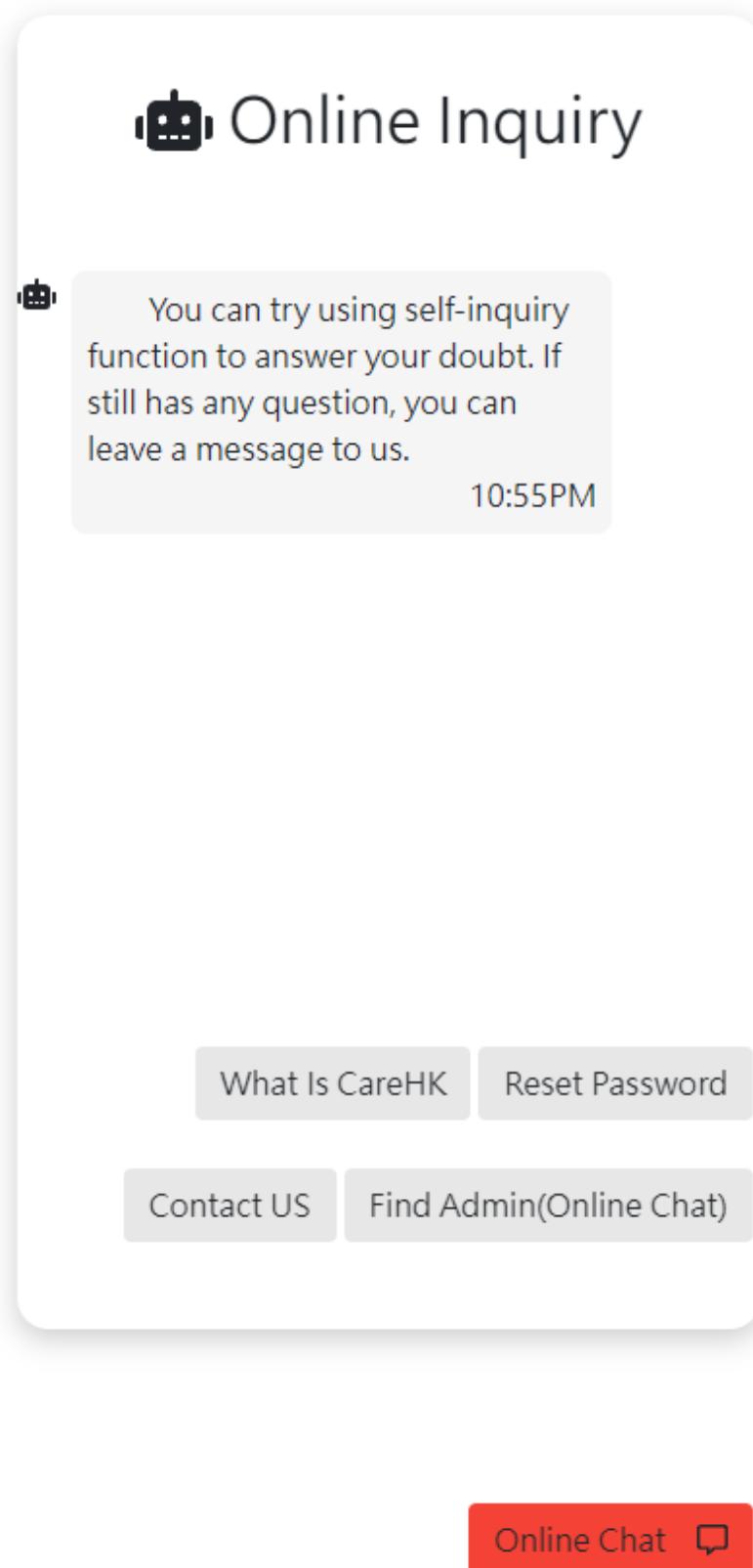
My Point: 5000

Copyright © CareHK 2022-2023

Logged in as:
MAK@gmail.com

Online Chat

3.3.8 Chat Bot



3.3.9 Find Caretaker Page

CareHK

CORE PAGES

- Home Page
- Find Care
- My Profile
- My Order
- Rating
- View Comment
- Redeem
- Buy the Point
- Forum

What type of care are you interested in?

In-home care 

Senior living community 

I am not sure yet 

Logged in as: MAK@gmail.com Copyright © CareHK 2022-2023

3.3.10 My Profile Page

CareHK

CORE PAGES

- Home Page
- Find Care
- My Profile
- My Order
- Rating
- View Comment
- Redeem
- Buy the Point
- Forum

ID	1
First Name	Kwan Ting
Last Name	MAK
Gender	intersex
Date of Birth	2002-01-01
Phone Number	85295479527
Hong Kong Identity Card	Y567145A
Email Address	MAK@gmail.com
Password	n6nQg3sR
Role	normal
My Point	5000

Save

Logged in as: MAK@gmail.com Copyright © CareHK 2022-2023

3.3.11 My Order Page

The screenshot shows the 'My Order' page from the CareHK website. On the left is a dark sidebar with a navigation menu. The main content area has a title 'My Order' and a table titled 'Order Record'. The table has columns: Your Order ID, Type of Care, Kind of Help, Location, Who need Care, How old, Describe, Caretaker, and Status. There is one entry: Your Order ID 22, Type of Care In-home care, Kind of Help Household tasks, Location Central and Western, Who need Care Myself, How old 30-100's, Describe NA, Caretaker Mr/Ms WAN, and Status Done. A dropdown for 'entries per page' is set to 10, and a search bar is at the top right. At the bottom, it says 'Showing 1 to 1 of 1 entries'.

3.3.12 Rating and Comment Page

The screenshot shows the 'Rating and Comment' page from the CareHK website. It features a large heading 'Rating and Comment' and a sub-instruction: 'You can provide ratings (1-100) and positive or negative comments. The reviews and suggestions received from you will greatly help to improve the quality of service.' Below this is a note: '**Click the button below to see what others have comment.**' followed by a blue 'View comments' button. The rest of the page is blank.

3.3.13 View Comment Page

CareHK

CORE PAGES

- Home Page
- Find Care
- My Profile
- My Order
- Rating
- View Comment
- Redeem
- Buy the Point
- Forum

Mr/Ms WAN Cheuk Lam

Reviewer: Mr/Ms MAK Kwan Ting (MAK@gmail.com)

Score: 87

Comment:

I just want to express my gratitude for the amazing care and attention that the caretaker has provided for my loved one. Their dedication and compassion have made a significant difference in our lives, and we are truly grateful for their hard work.

Mr/Ms WONG Yuen Lam

Mr/Ms CHEUNG King Hung

Reviewer: Mr/Ms LING Yui Hin (LING@gmail.com)

Score: 9

Comment:

You are not paying enough attention to me! You never listen to my needs and concerns. I am tired of feeling like I am invisible to you!

Mr/Ms HO Sau Yu

Mr/Ms CHAN Pok Hin Hinsen

Logged in as:
LIU@gmail.com

Copyright © CareHK 2022-2023
localhost/FinalYearProject/Layout/user_homepage.php

3.3.14 Redeem Gift Page

CareHK

CORE PAGES

- Home Page
- Find Care
- My Profile
- My Order
- Rating
- View Comment
- Redeem
- Buy the Point
- Forum

You Still have 5000 Point

PlantedWoodPaperRuledNote - 5pc Pack (5000Point)

Redeem gifts

Polycarbonate Ball Pen - Blue (2000Point)

Redeem gifts

WhitePorcelain Mug Cup (1000Point)

Redeem gifts

Logged in as:
LIU@gmail.com

Copyright © CareHK 2022-2023

3.3.15 Buy Point Page

The screenshot shows a dark-themed web application interface. On the left is a vertical sidebar menu titled 'CareHK' with a list of 'CORE PAGES': Home Page, Find Care, My Profile, My Order, Rating, View Comment, Redeem, Buy the Point, and Forum. Below the menu, it says 'Logged in as: LIU@gmail.com'. At the bottom of the sidebar is a copyright notice: 'Copyright © CareHK 2022-2023'. The main content area has a heading 'You Still have 5000 Point'. It features a text input field labeled 'Input your Point Code ...' and a blue 'Confirm' button. The overall design is clean and modern.

3.3.16 Forum Page

The screenshot shows a dark-themed web application interface. On the left is a vertical sidebar menu titled 'CareHK' with a list of 'CORE PAGES': Home Page, Find Care, My Profile, My Order, Rating, View Comment, Redeem, Buy the Point, and Forum. Below the menu, it says 'Logged in as: LIU@gmail.com'. At the bottom of the sidebar is a copyright notice: 'Copyright © CareHK 2022-2023'. The main content area has a section titled 'Community forum' containing fields for 'Write your name:' and 'Write your question:', both with placeholder text. A blue 'Send' button is located below the question field. To the right, there is a 'Recent questions' section. The layout is organized and user-friendly.

3.3.17 Jobs Market Page

CareHK

CORE PAGES

- Home Page
- Find Jobs
- My Profile
- My Jobs
- Chat

Job Market

Job List

Order ID	Type of Care	Kind of Help	Location	How old	Describe	Caretaker	Status	Actions
27	Senior living commun	Personal care	Tai Po	40's	Requires constant su	Matching	<button>Accept Order</button>	
28	Senior living commun	Everyday tasks	Tsuen Wan	30's	Requires constant su	Matching	<button>Accept Order</button>	
29	Senior living commun	Personal care	Southern	40's	Requires constant su	Matching	<button>Accept Order</button>	

Showing 1 to 3 of 3 entries

Logged in as: WAN@gmail.com

Copyright © CareHK 2022-2023

3.3.18 My Jobs Page

CareHK

CORE PAGES

- Home Page
- Find Jobs
- My Profile
- My Jobs
- Chat

You can find more orders in the market.

[Go to the order market](#)

All Orders Unfinished Orders Finished Orders



Order Number:22
Type of care :In-home care
Kind of help :Household tasks
Location :Central and Western
Age of target :30-100's
Describe :NA
Status :Done

[Client Info](#) 9 mins

Logged in as: WAN@gmail.com

3.3.19 Admin Panel Page

The dashboard displays the following statistics:

- Total user: 15
- Number of normal user: 8
- Number of caretaker: 5
- Number of administrator: 2

Below the statistics is a line chart titled "Number of visitors to CareHK" showing visitor count from March 1 to March 13. The chart shows an overall upward trend with some fluctuations.

On the right, there is a pie chart titled "The number of each user type" showing the distribution of User (blue), Caretaker (red), and Admin (green).

Footer information includes "Logged in as: CHEUK@gmail.com" and "localhost/FinalYearProject/Layout/admin_homepage.php".

3.3.20 User Management Page

The page title is "User Manangment". It features a table titled "Account DataTable" with the following columns: ID, Full Name, Phone, Email, Certificates, Description, Role, Status, and Actions (Edit and Delete buttons). There are 15 entries listed, showing details for users like MAK Kwan Ting, WAN Cheuk Lam, Admin, etc.

At the bottom, it says "Showing 1 to 10 of 15 entries" and has navigation links for pages 1, 2, and >.

Footer information includes "Logged in as: CHEUK@gmail.com" and "localhost/FinalYearProject/Layout/admin_homepage.php".

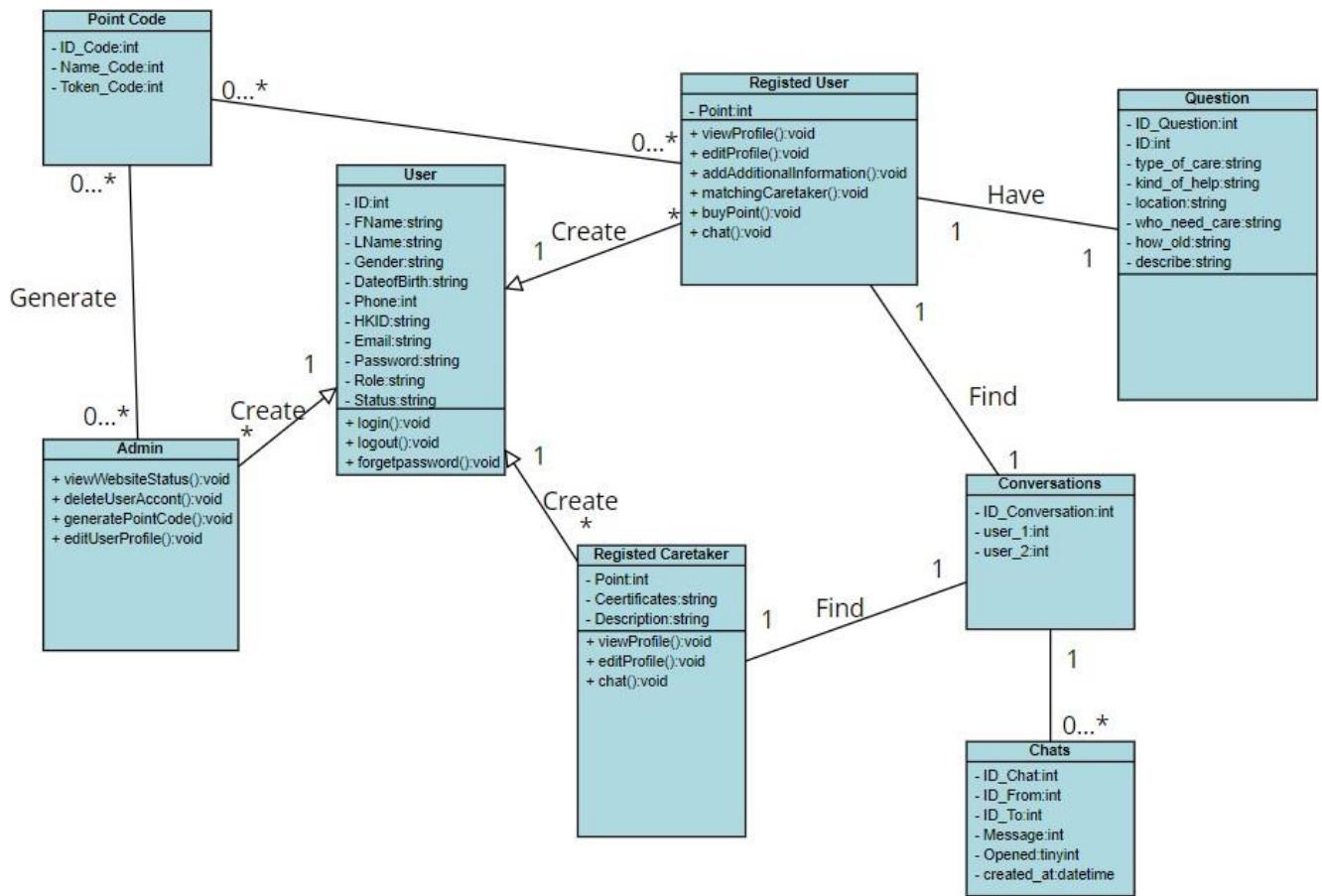
3.3.21 Code Management Page

The screenshot shows the Admin Panel interface with a dark theme. On the left, a sidebar lists 'CORE PAGES' with 'Dashboard' and 'Code Management' selected. The main content area is titled 'Code Managment' and contains a table titled 'Account DataTable'. The table has columns for 'ID Code', 'Name Code', 'Token', and 'Action'. It lists 8 entries from 1 to 16. Each entry includes a 'Delete' button. At the top of the table are four buttons: '+100Point Code' (blue), '+200Point Code' (grey), '+500Point Code' (green), and '+1000Point Code' (red). A dropdown for 'entries per page' is set to 10, and a search bar is at the top right. The footer of the page shows 'Showing 1 to 8 of 8 entries'.

ID Code	Name Code	Token	Action
1	100	100Point	Delete
13	100	rT6uwclG	Delete
2	200	200Point	Delete
14	200	646cIDey	Delete
3	500	500Point	Delete
15	500	fCSff5Hs	Delete
4	1000	1000Point	Delete
16	1000	aSL8Thys	Delete

Chapter 4. System Design

4.1 Class Diagrams & Descriptions

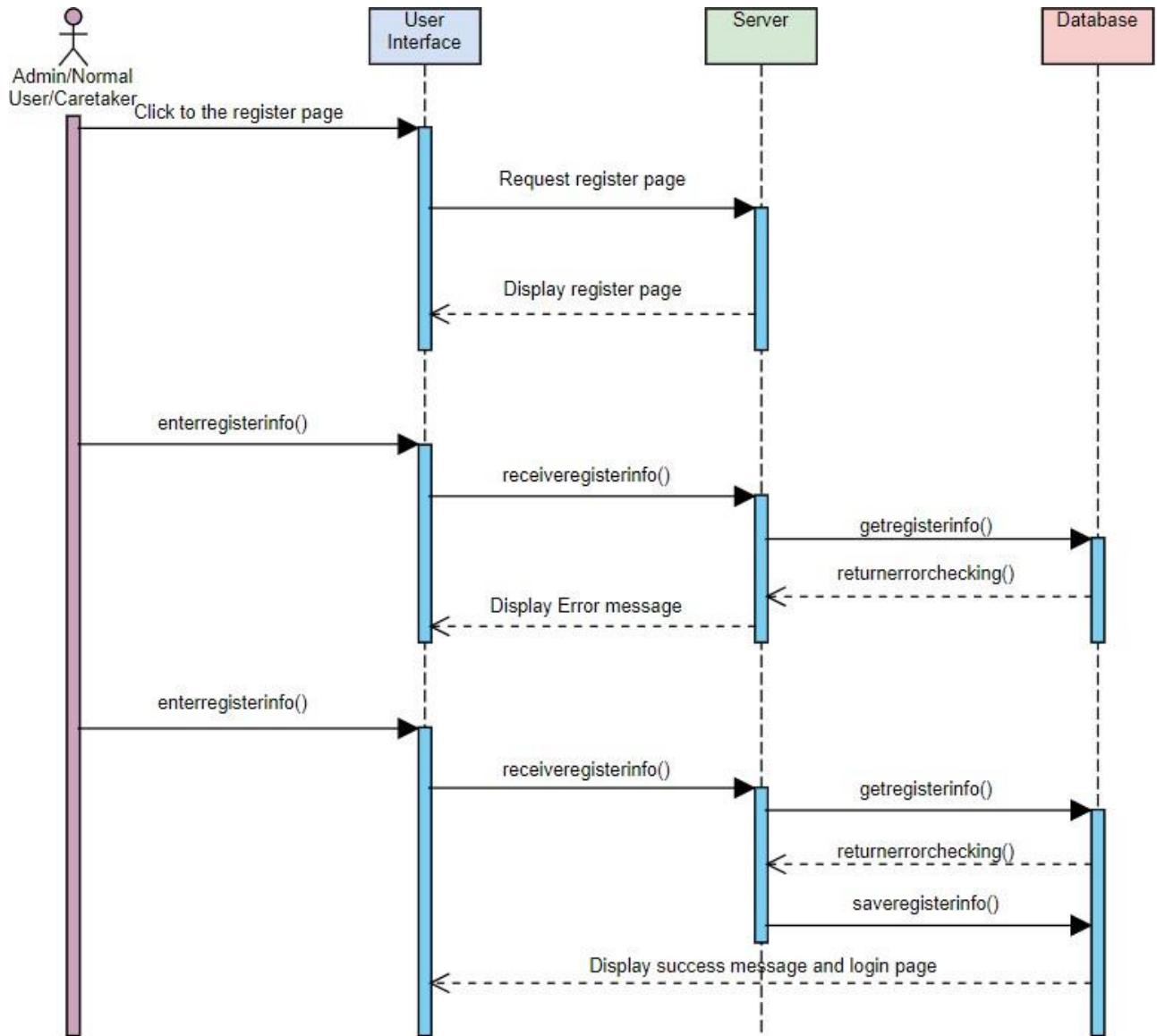


Class Name	Description
User	<p>The User class has 11 attributes, namely ID, FName, LName, Gender, DateofBirth, Phone, HKID, Email, Password, Role, Status.</p> <p>The User class contains caregivers, normal users and administrators who are allowed to enter basic personal information to register as users, and they can enjoy basic functions such as login and logout, and when they forget their passwords they can also choose to press the forgotten password and reset the new password.</p>
Registered User	<p>The attributes of Registered User class include points, which will be deducted each time they are paired with a caregiver for charging purposes.</p> <p>The attributes of Registered User class include the purpose of finding suitable caregivers, and they can view their personal information after registering their account, and change their personal information if needed. They are required to answer additional questions before they are matched with a caregiver to facilitate the matching process. They can purchase points to pay for the match, and when they are done, they will have a one-on-one conversation with the caregiver.</p>
Registered Caretaker	<p>The attributes of the Registered Caretaker class include points, Certificates, and Description.</p> <p>The main purpose of the Registered Caretaker class is to find employers in need and provide services. So they can enjoy one-to-one conversations with the matched users. They can also view their profile and make changes at any time and from anywhere.</p>
Admin	<p>The purpose of the Admin class is to manage user accounts and perform data checks for newly registered caregivers. Administrators can also view live data and status of the site in the post-login performance version. Administrators can also view the personal information of all users and have the right to change and delete it.</p>
Point Code	<p>Point Code class attributes are ID_Code, Name_Code, and Token_Code.</p> <p>The Point Code class is a code consisting of numbers, letters and symbols, which are randomly generated and can be used by users for recharge and payment.</p> <p>Before redeeming any gifts, users need to check their points balance. This can be done by logging into their account and navigating to the points section.</p> <p>After browsing the available gifts, users can choose the gift they want to redeem. They can click on the gift to view more details such as the description and image. They can also check the points required to redeem the gift and make sure they have enough points to do so.</p> <p>If the user has enough points to cover the cost of the gift, they can select "pay with points" as the payment method. If they do not have enough points, It will have alert some message. Once the checkout process is</p>

	completed, the gift will be processed and shipped to the address provided by the user.
Question	<p>The attributes of the question class are ID_Question,, ID, type_of_care, kind_of_help, location, who_need_care, how_old, and descriube.</p> <p>The purpose of the question is to collect the requirements of the general users for finding a caregiver through a questionnaire, which is helpful when matching suitable caregivers and screening them in the future.</p>
Conversations	<p>The attributes of the Conversations class are ID_Conversation, user_1, and user_2.</p> <p>The conversation class mainly creates a conversation ID for the two paired ho users to assist the Chats Class.</p>
Chat	<p>The properties of the Chats class include ID_Chat, ID_From, ID_To, Message, Opened, created_at.</p> <p>The purpose of the Chats class is to record the sender and receiver of each message, the content of the message and the date and time the message was sent.</p>

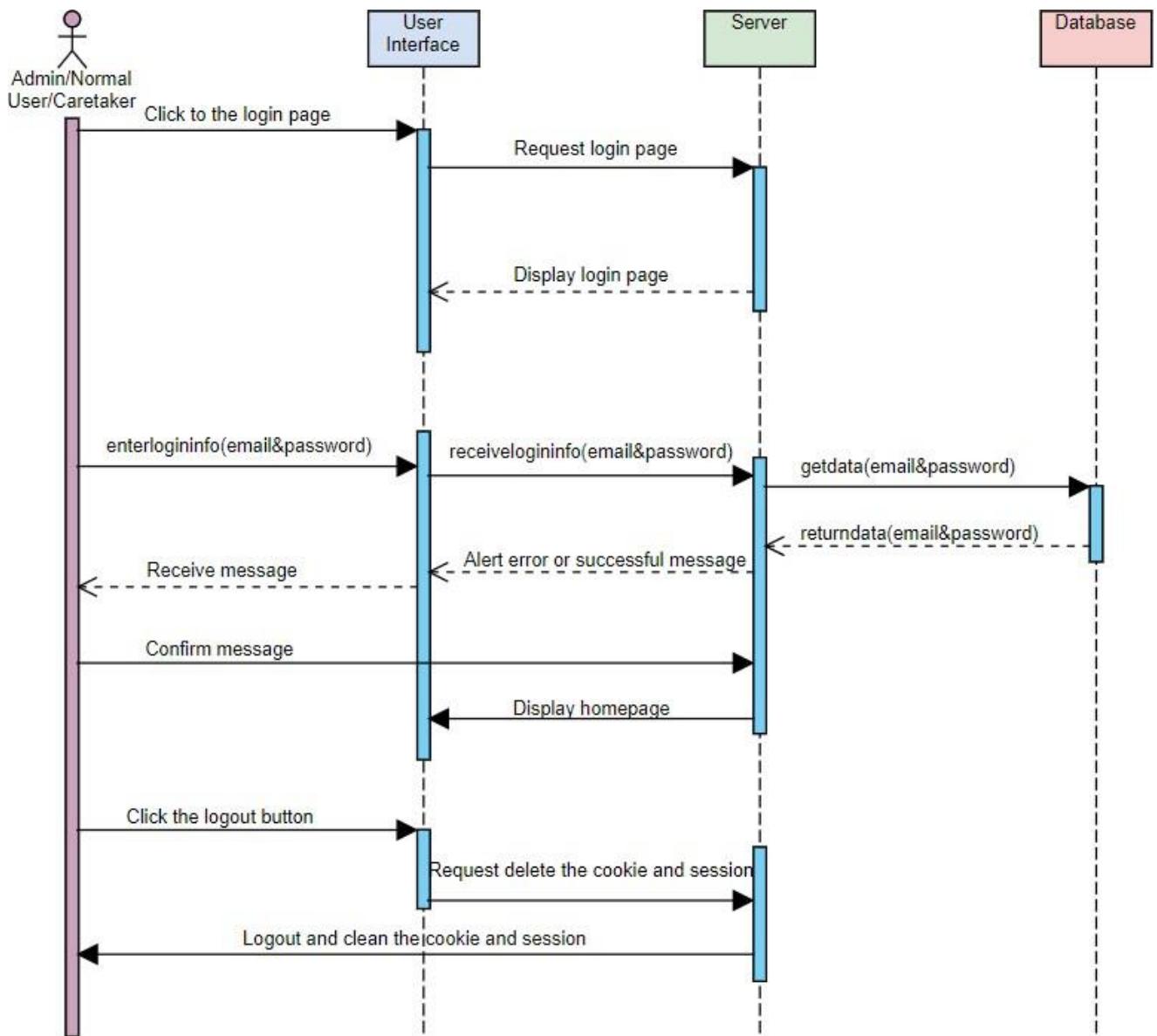
4.2 Sequence Diagrams

4.2.1 Register



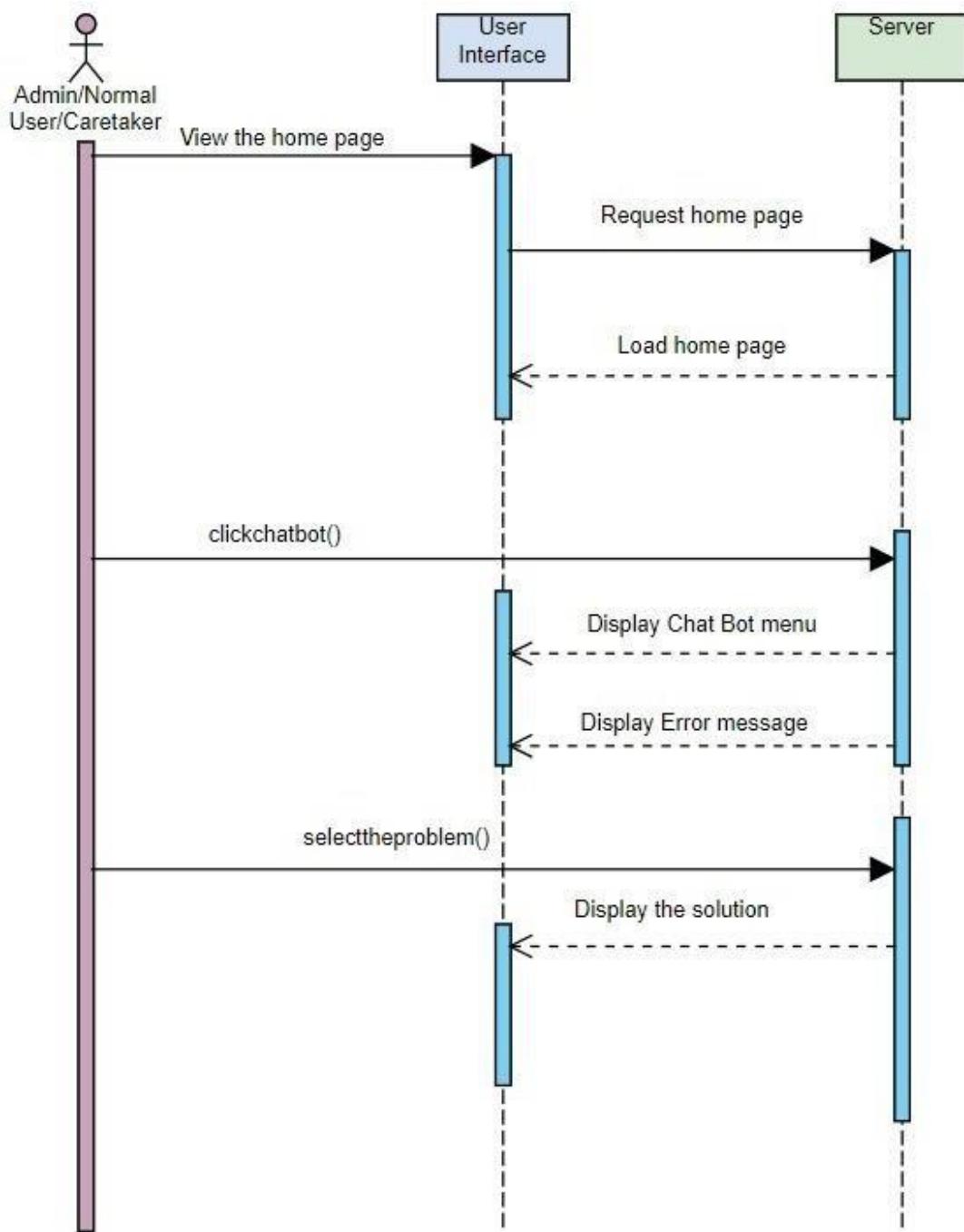
Users who have not yet registered fill out a personal information form. They click on the registration page, and then request the registration page from the server and display the registration page. When the server receives the personal information, it will send the relevant information to the database to see if there are users who have duplicated the information. If there is no duplicate data, the personal data will be saved to the database and the user's interface will show the information of successful registration and pop-up login.

4.2.2 Logout



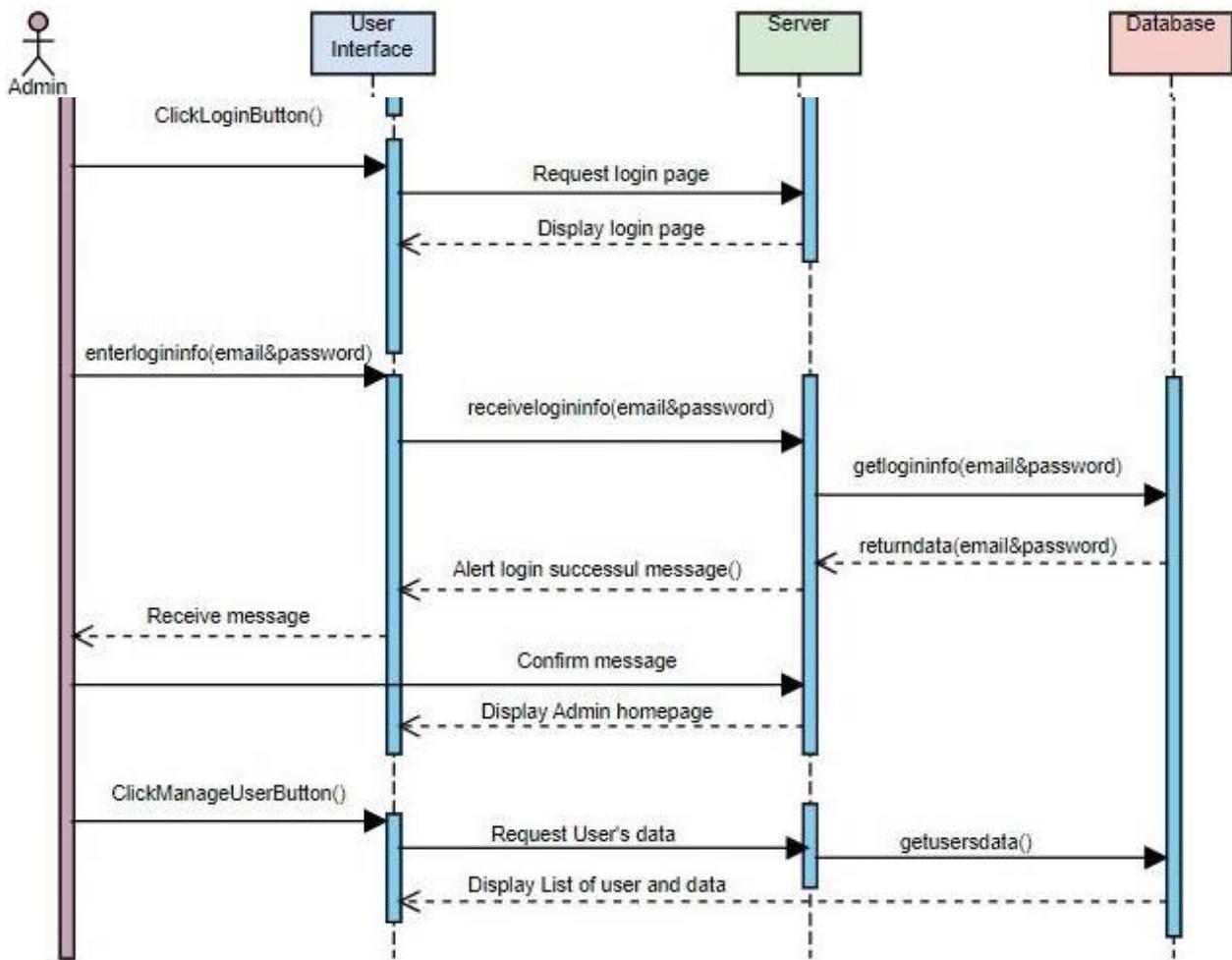
Logged-in users log out of the site. They click on the login page, then request the login page from the server, and display the login interface on the user's interface, and ask the user to enter their email and password, when the server receives the user's email and password, it will check the database to see if the email password is correct, if it is wrong, it will pop up an error message and return to the login interface, if it is successful, it will display the login If it is successful, it will show the message of success, and after the user confirms the message, it will show the home page of the normal user, at this time, click the logout button again, the server will receive the instruction of clearing the cookie and session, and execute it.

4.2.3 Chat Bot



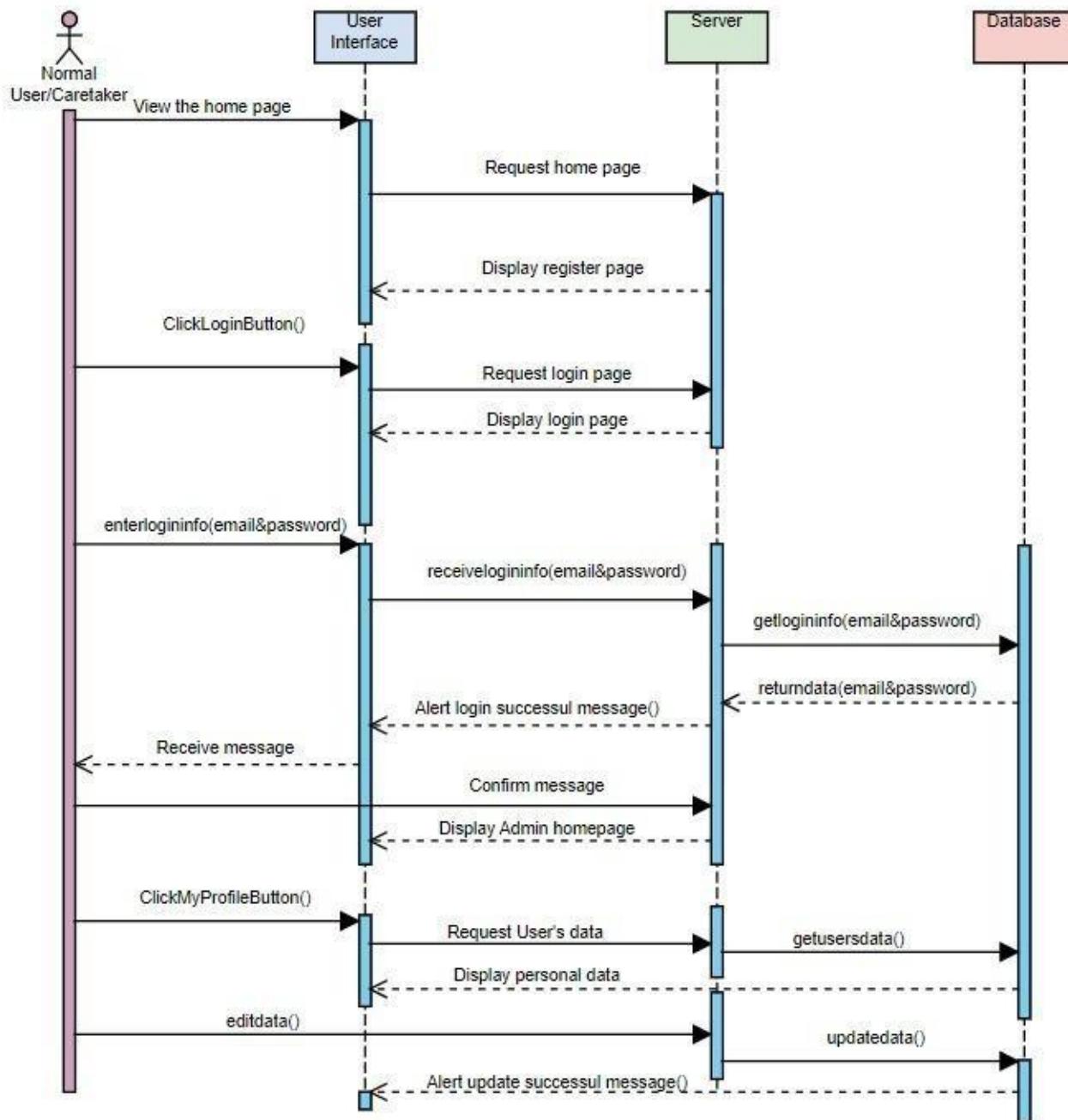
Using an autoresponder chatbot. When entering our website, the server will ask for the main page to be loaded and displayed in the user interface. There is a chatbot button in the bottom right corner of my homepage. When the user clicks it, the server will display the chatbot menu with some pre-defined questions for the user to choose from, and then the user will automatically reply with the solution.

4.2.4 View User Account



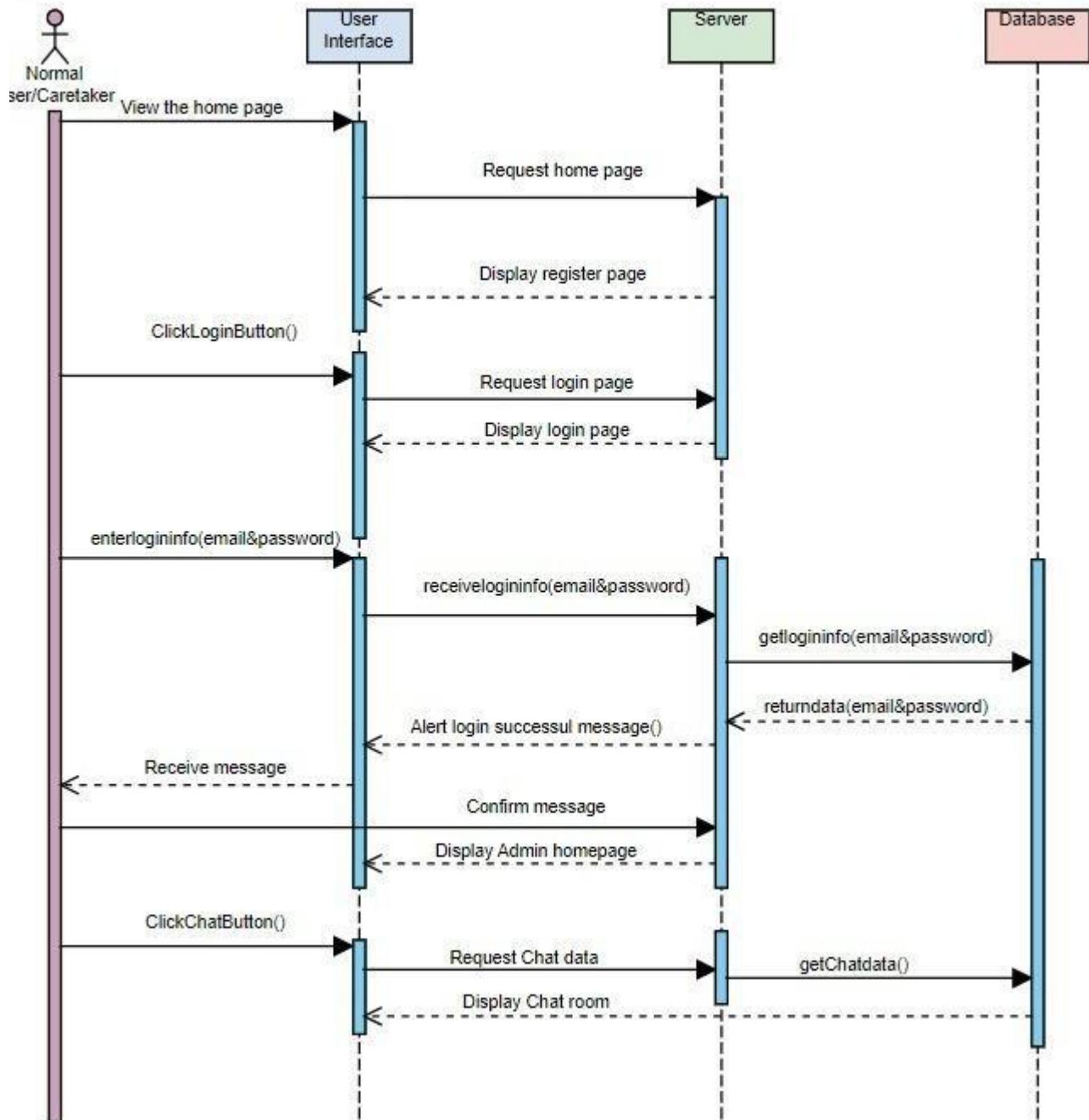
The administrator views the user's account. After the administrator presses the login button, the server will request the login page and display the login page on the interface. After the administrator enters their email and password the server will send the data to the database to check if the email and password are correct. After the administrator confirms the login message prompt, the server will display the main page where the administrator needs to place a button to manage user accounts, and then the server will request all user details and display them in a list.

4.2.5 Edit Profile



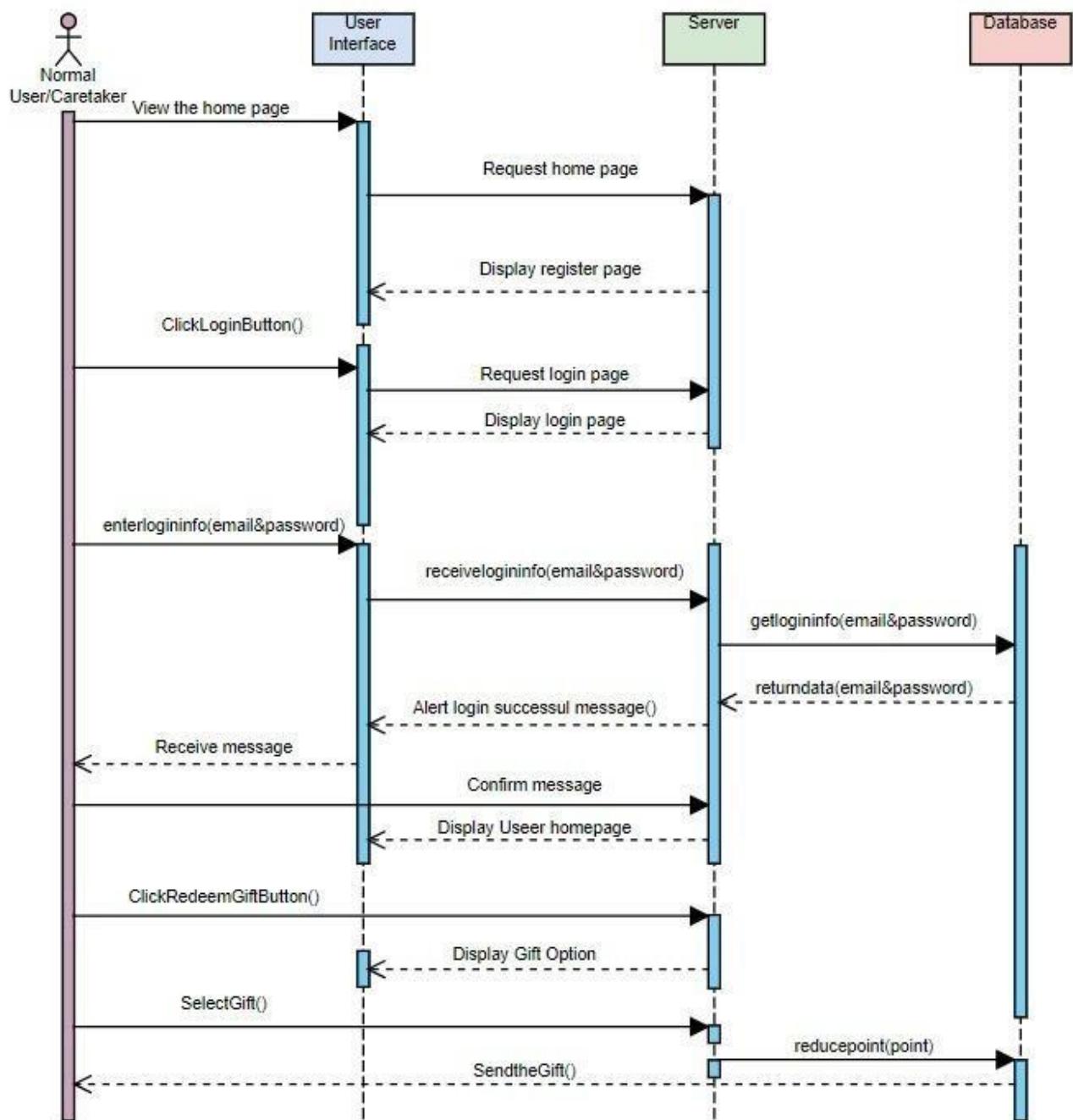
The user changes the personal information of the account. When the user browses the home page, the server will ask the interface to load the page, the user presses the login button and the server will display the login screen, the user needs to enter the email and password at this time, when the server receives this information it will send it to the database and check if the information is correct, when the email or password is wrong it will display an error message, on the contrary, if the information is correct it will display If the information is correct, a successful login message will be displayed. The user can edit their personal information anytime and anywhere, and the database will update their information immediately after they finish editing, and a message will pop up that the update was successful.

4.2.6 Real Time Chat



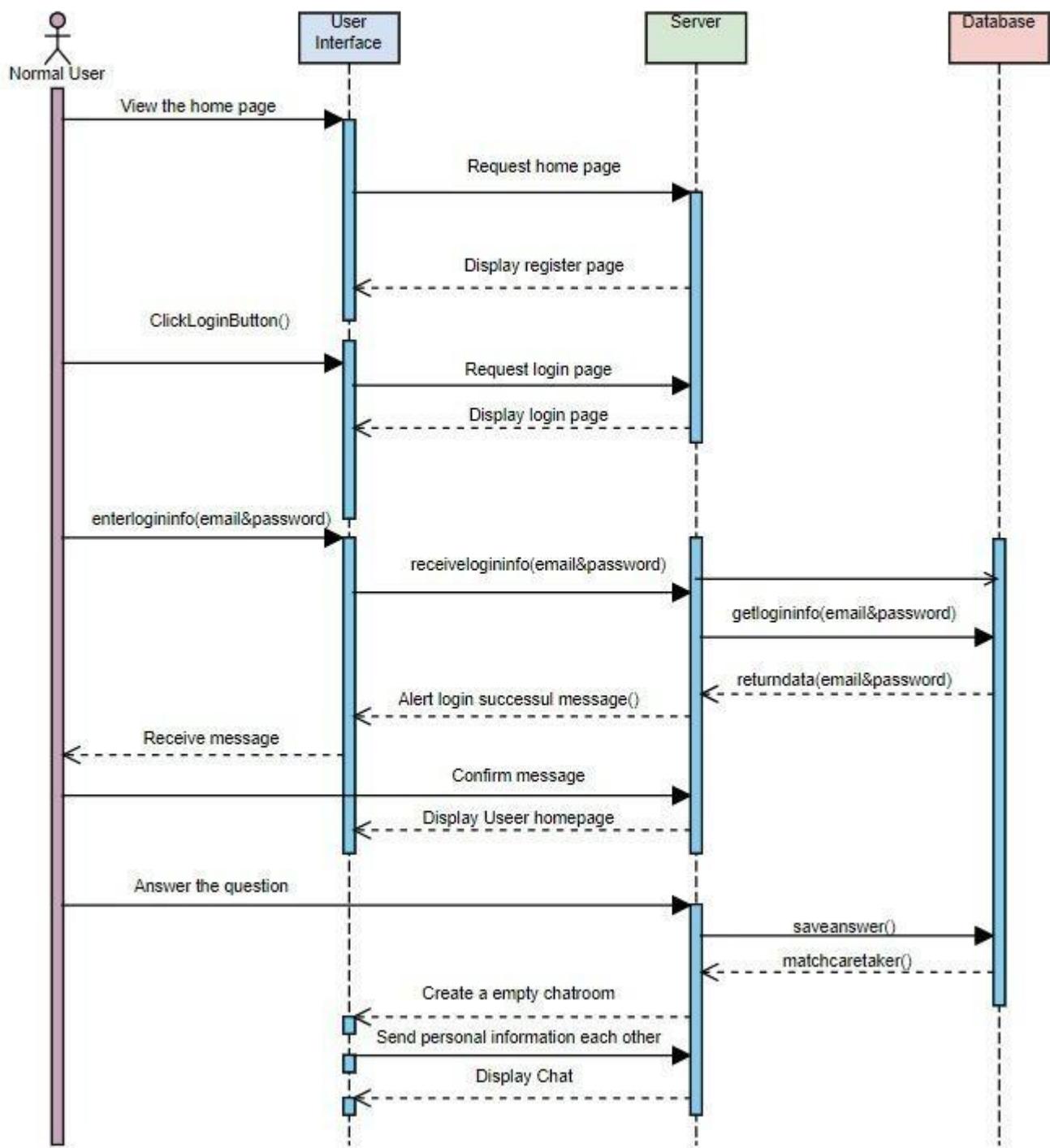
User Live Chat function. When the user browses the home page, the server will ask the interface to load the page, the user presses the login button and the server will display the login screen, the user needs to enter email and password at this time, when the server receives this information, it will send it to the database and check if the information is correct, when the email or password is wrong, it will display an error message, on the contrary, if the information is correct, it will display If the information is correct, a successful login message will be displayed. After the user has successfully logged in, the server will search for past chats from the database and display the chat room when the user presses the chat button.

4.2.7 Redeem a Free Gift



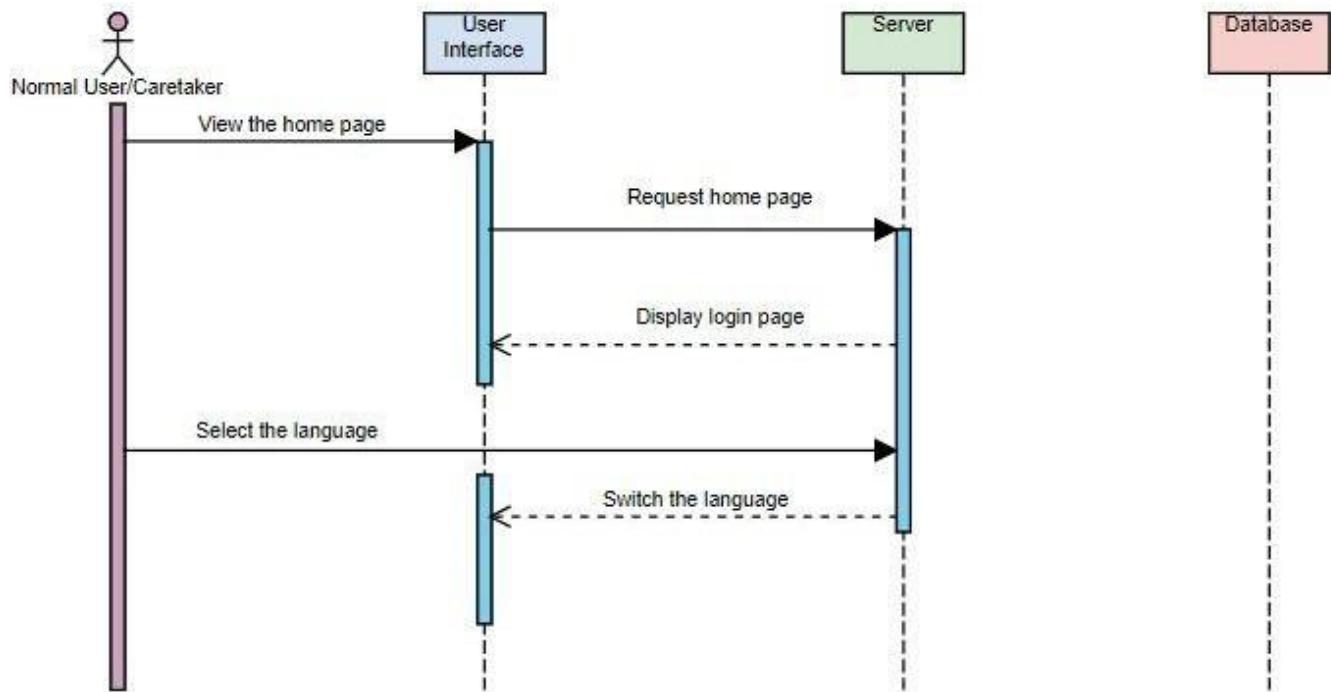
The user redeems the gift. When users browse the home page, the server will ask the interface to load the page, users press the login button and the server will display the login interface, users need to enter their email and password at this time, when the server receives this information, it will send it to the database and check if the information is correct, when the email or password is wrong, it will display an error message, on the contrary, if the information is correct, it will display If the information is correct, a successful login message will be displayed. After the user has successfully logged in, I click the Redeem Gift button and the server will display various gifts for the user to choose from. Once the user selects the gift they want, the database will automatically deduct the user's relative points and send the gift out.

4.2.8 Find Caretaker



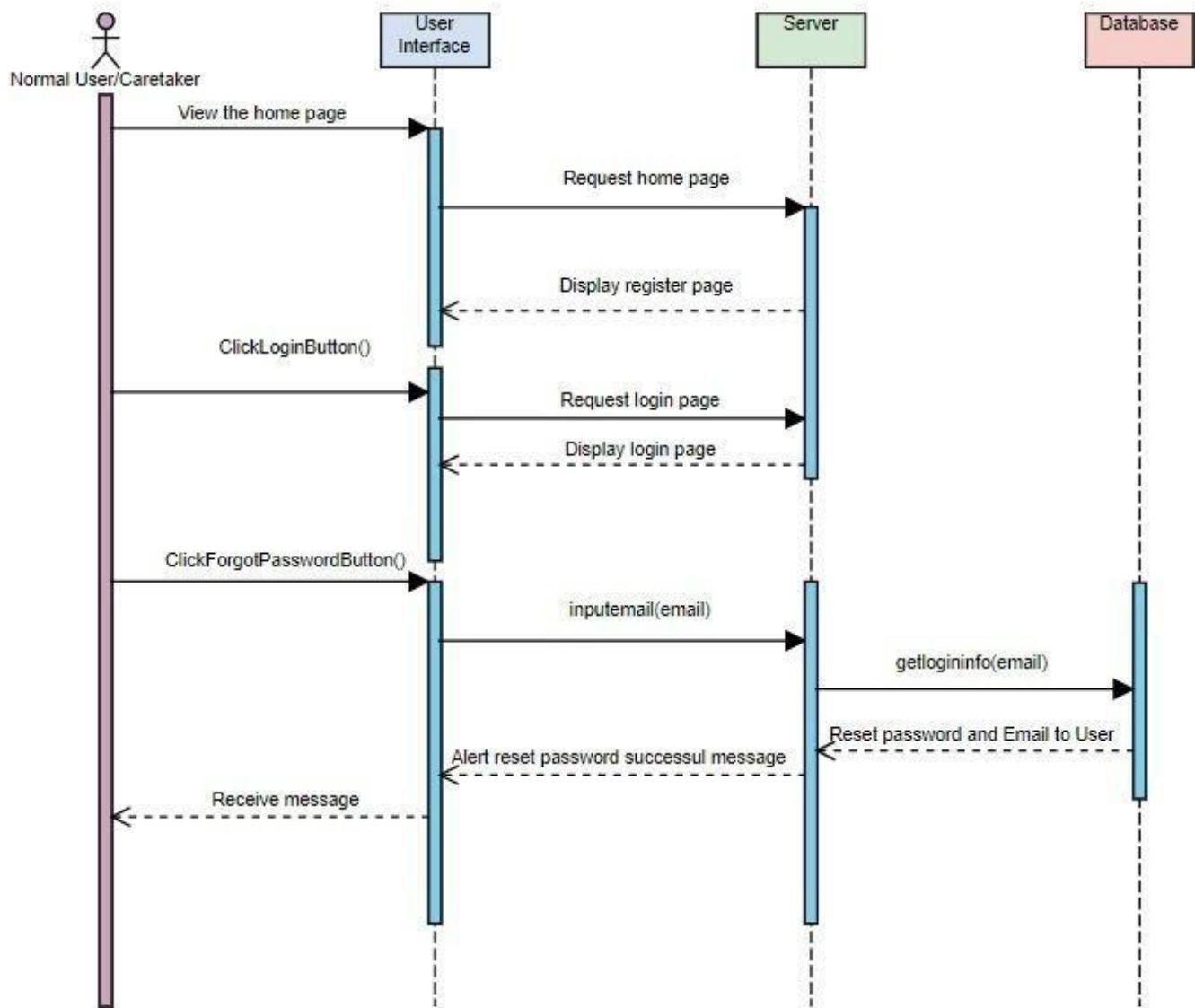
Normal users are looking for caregivers. When the user browses the home page, the server will ask the interface to load the page, the user presses the login button and the server will display the login screen, the user needs to enter email and password at this time, when the server receives this information, it will send it to the database and check if the information is correct, when the email or password is wrong, it will display an error message, on the contrary, if the information is correct, it will display If the information is correct, a successful login message will be displayed. After the user has successfully logged in, the system will automatically ask the user about five questions to help them find a suitable caregiver, and after they have answered these questions, the answers will be saved to the database and I will automatically match a suitable caregiver and open a chat room for one-on-one conversations between the user and the caregiver.

4.2.9 Switch Other Language



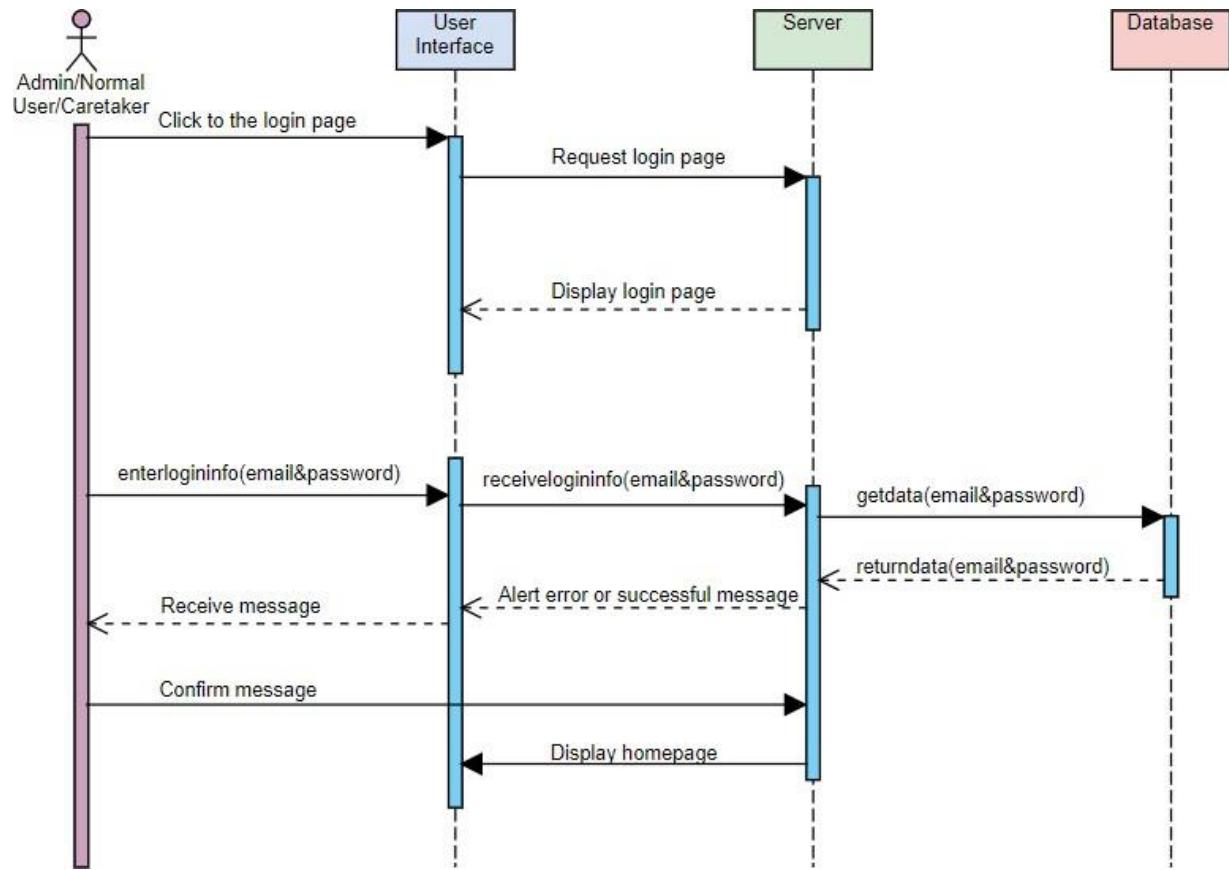
Switch language function. While the user is on the home page, the server will display the information on the home page and then the user can click on the change language function to select the language they want to change and then the server will go to the interface for that language.

4.2.10 Forgot Password



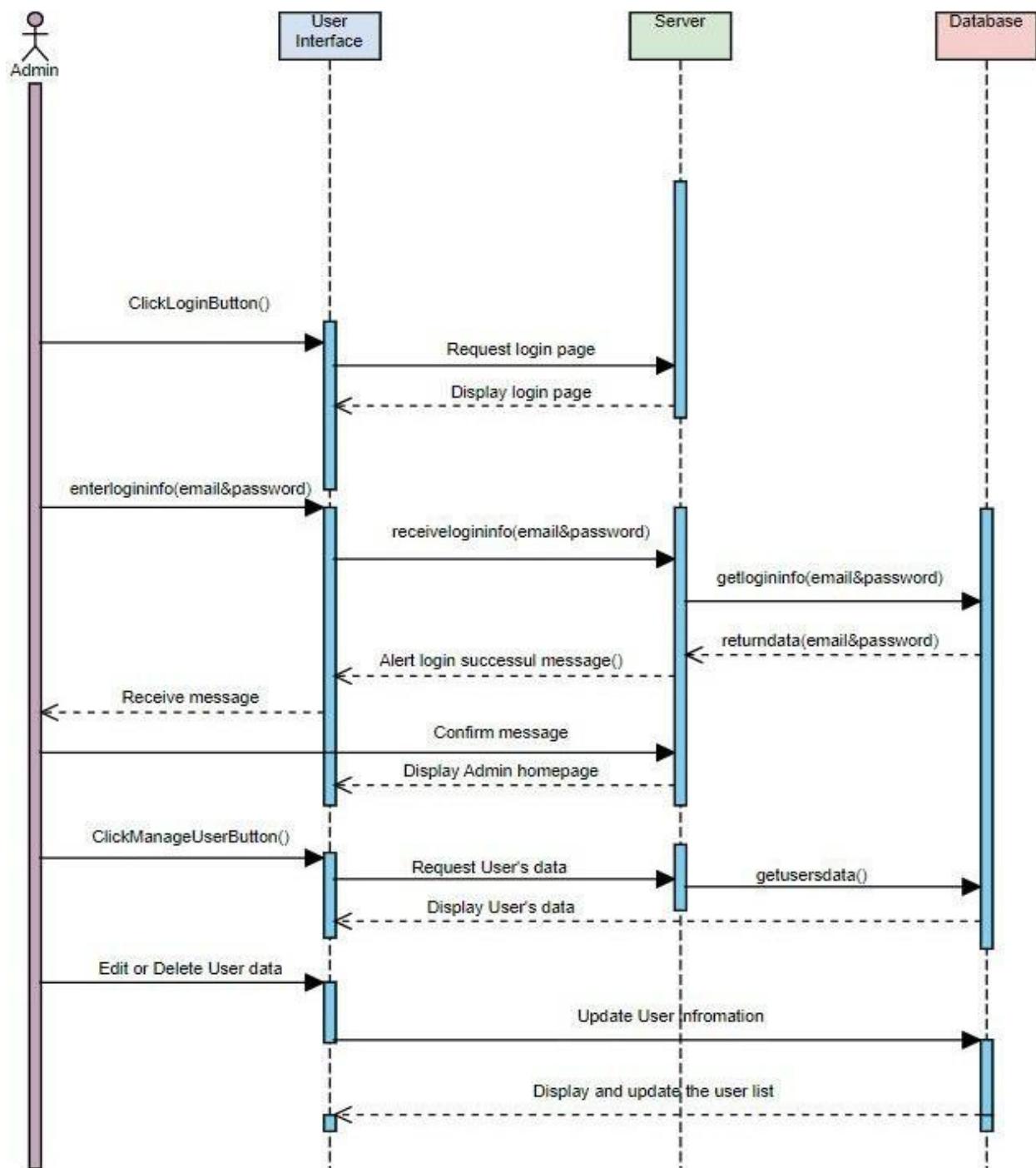
Forget password function. When a user visits our website, the server will ask the user to display the home page in the user's interface, and after the user presses the login button on the home page, the login form will be displayed. Finally, the user will be notified by email that the password has been changed.

4.2.11 Login



User login. When the user browses the home page, the server will ask the interface to load the page, the user presses the login button and the server will display the login screen, the user needs to enter email and password at this time, when the server receives this information, it will send it to the database and check if the information is correct, when the email or password is wrong, it will display an error message, on the contrary, if the information is correct, it will display If the information is correct, a successful login message will be displayed. And I switch to the main page where I have already logged in.

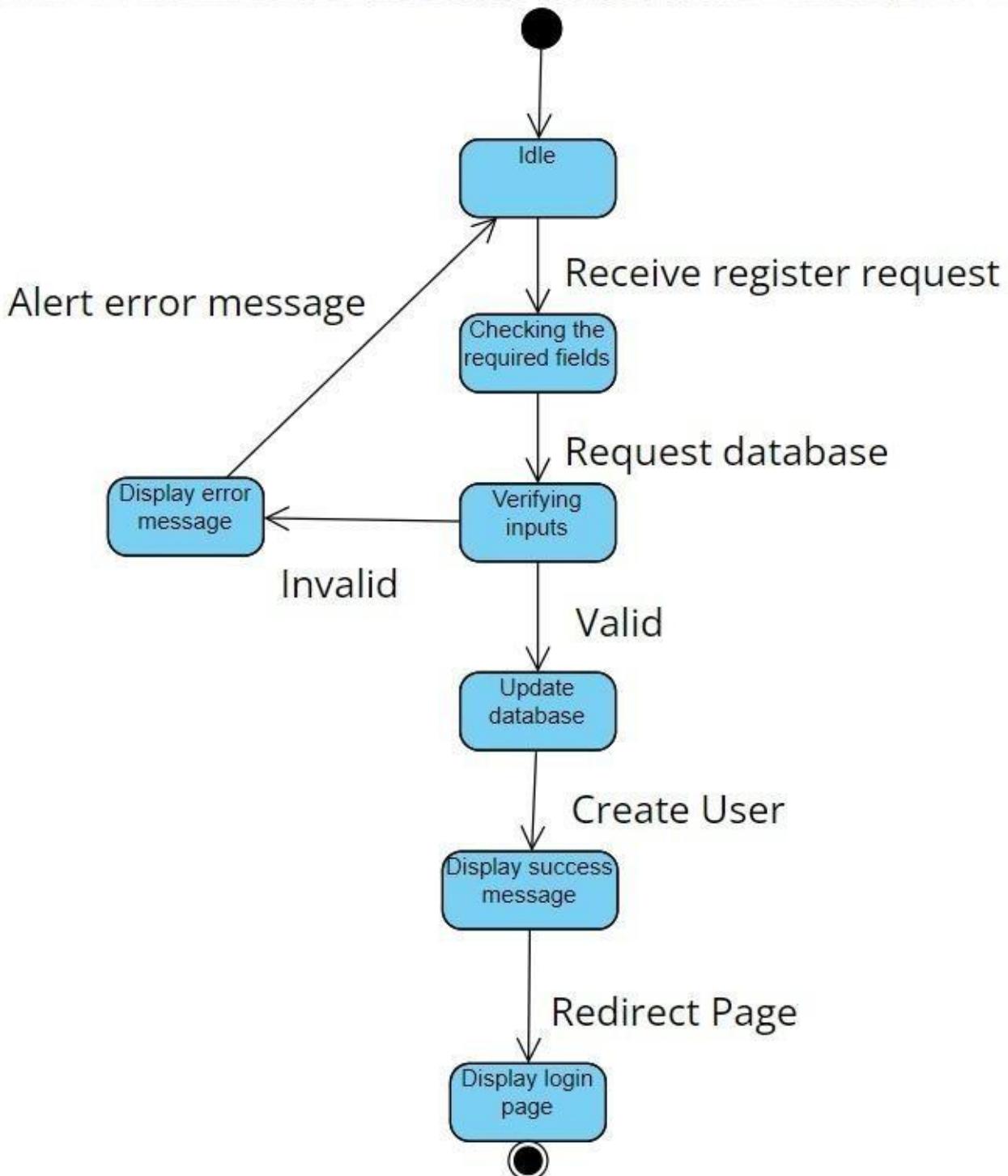
4.2.12 Manage User Account



The administrator manages all user accounts. After the administrator presses the login button, the server will request the login page and display the login page on the interface. After the administrator enters their email and password the server will send the data to the database to check if the email and password are correct. After the administrator confirms the login message prompt, the server will display the main page, and the administrator needs to manage the user's account button, then the server will request all the user's details and display them in a list. The database will be updated as soon as their data is changed, and there will be a pop-up prompt for successful update.

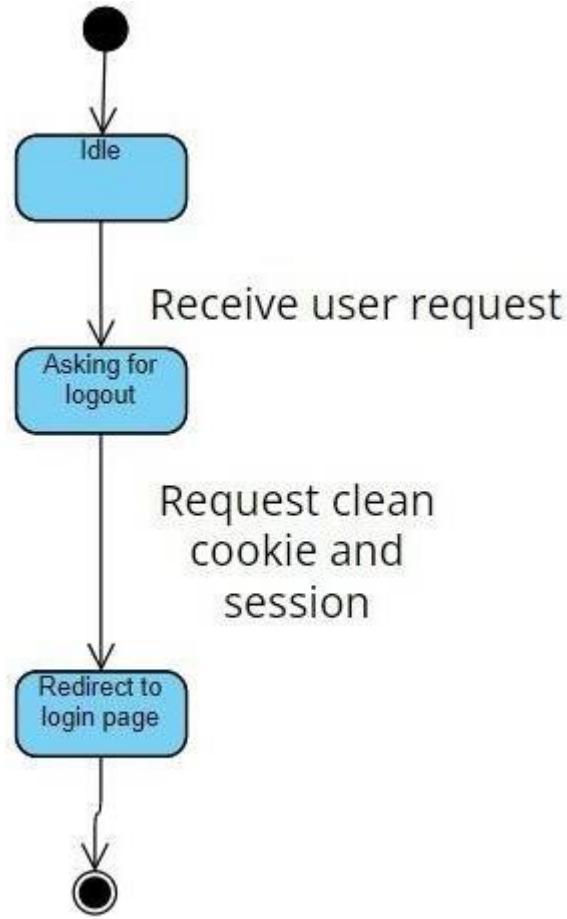
4.3 State Charts with Description

4.3.1 Register



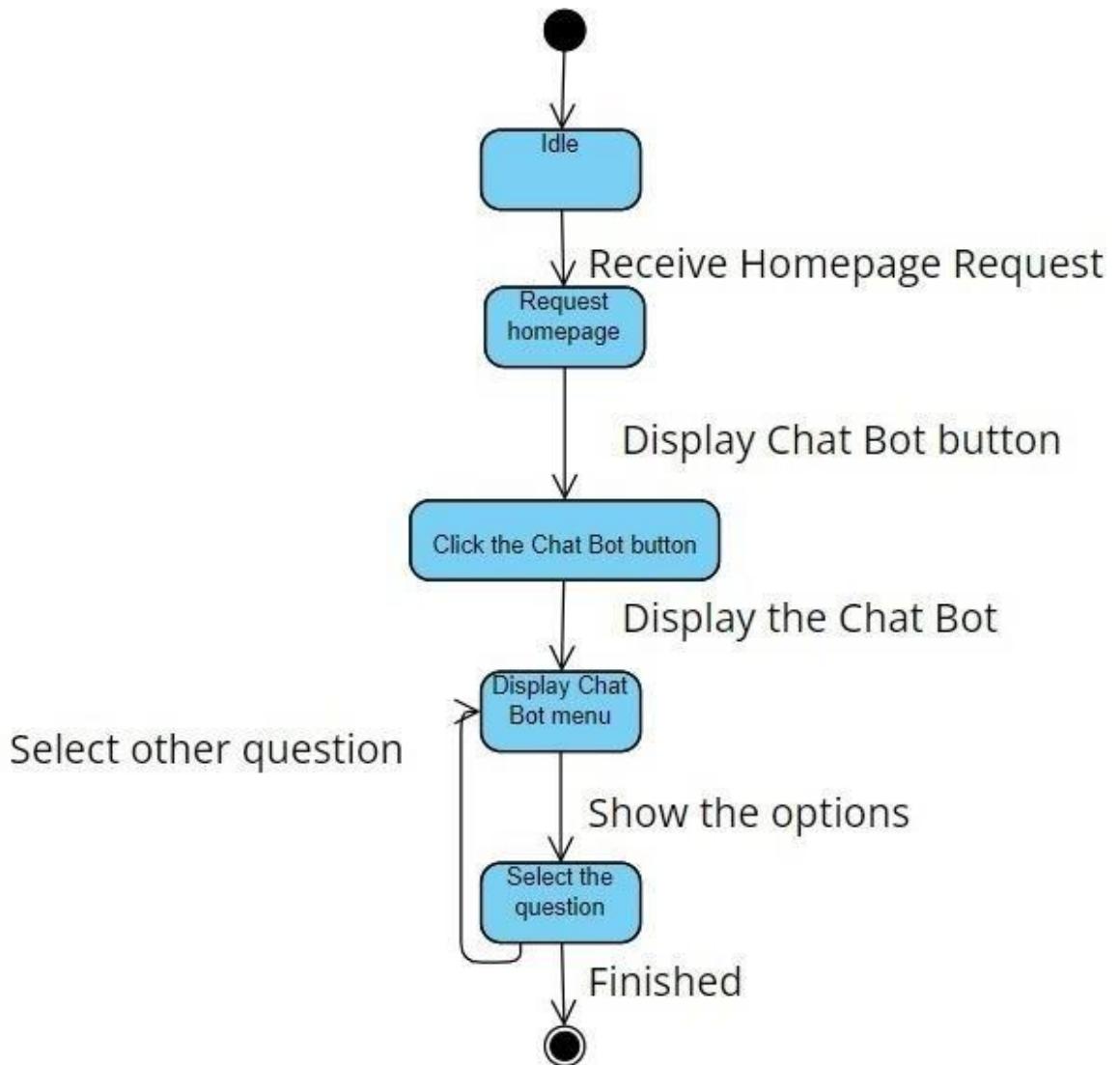
At the beginning, the system is idle. When the registration request is received, it will start checking the formatting requirements in the registration form. When the user's input does not pass, an error message will be displayed and the system will return to idle state. If the user's input is approved, a new user record will be added to the database and a successful registration message will pop up. The user interface will also be linked to the login interface.

4.3.2 Logout



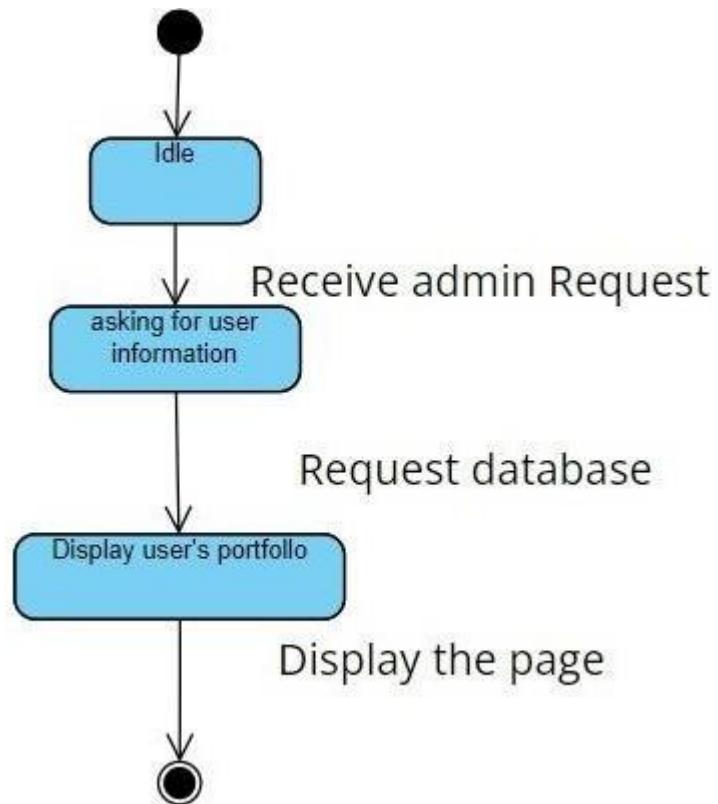
At the beginning, the system is in a idle state. After receiving a user's request to log out, the system will receive instructions to clear cookies and sessions, and when the task is completed, the system will return to the login interface.

4.3.3 Chat Bot



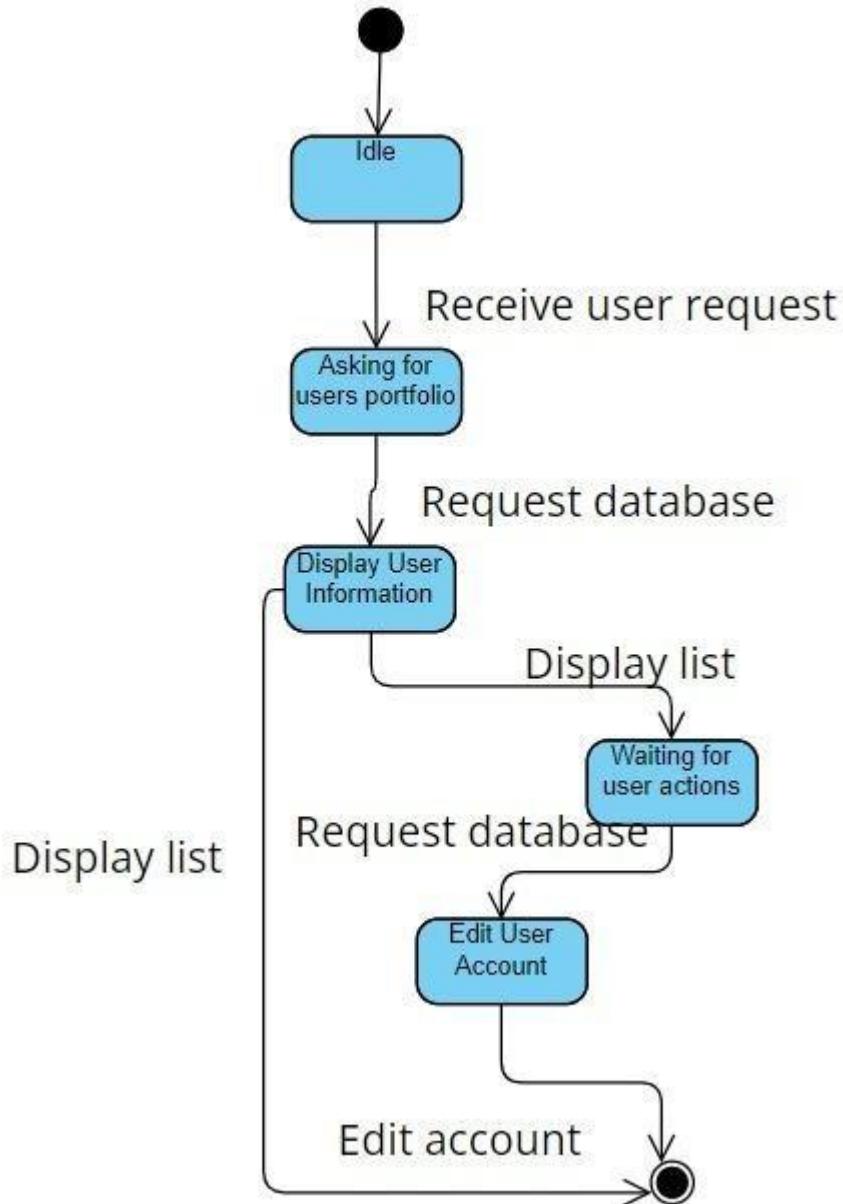
At the beginning, the system is idle. After receiving a request to load the home page, a chat bot button will be displayed on the home page, when the user presses it, a pre-designed menu will pop up for the user to ask questions, the user only needs to press the question to be asked and the answer will be generated automatically.

4.3.4 View User Account



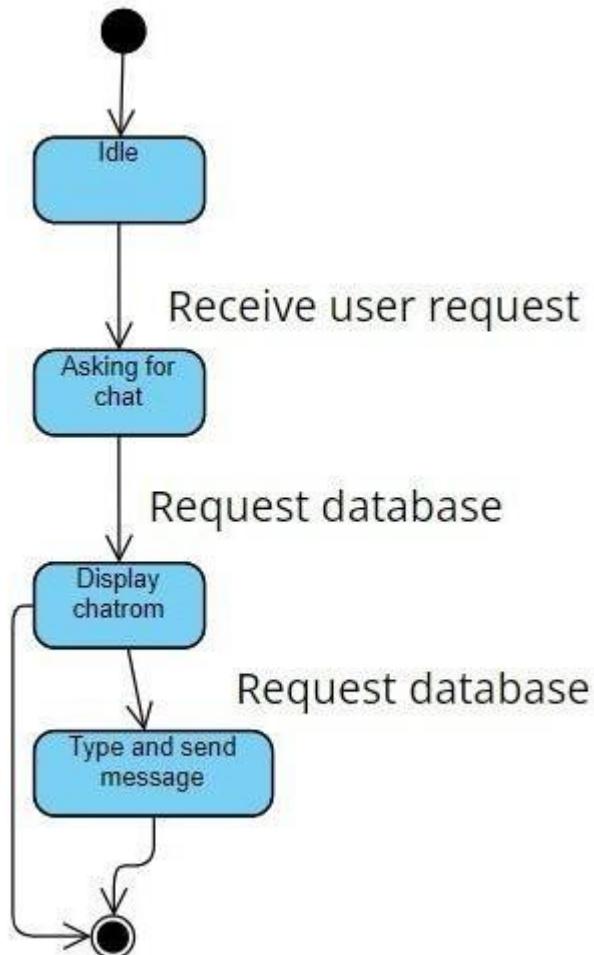
At the beginning, the system is idle. When an administrator request is received to load user data, the server will request access to the database and display the user's data.

4.3.5 Edit Profile



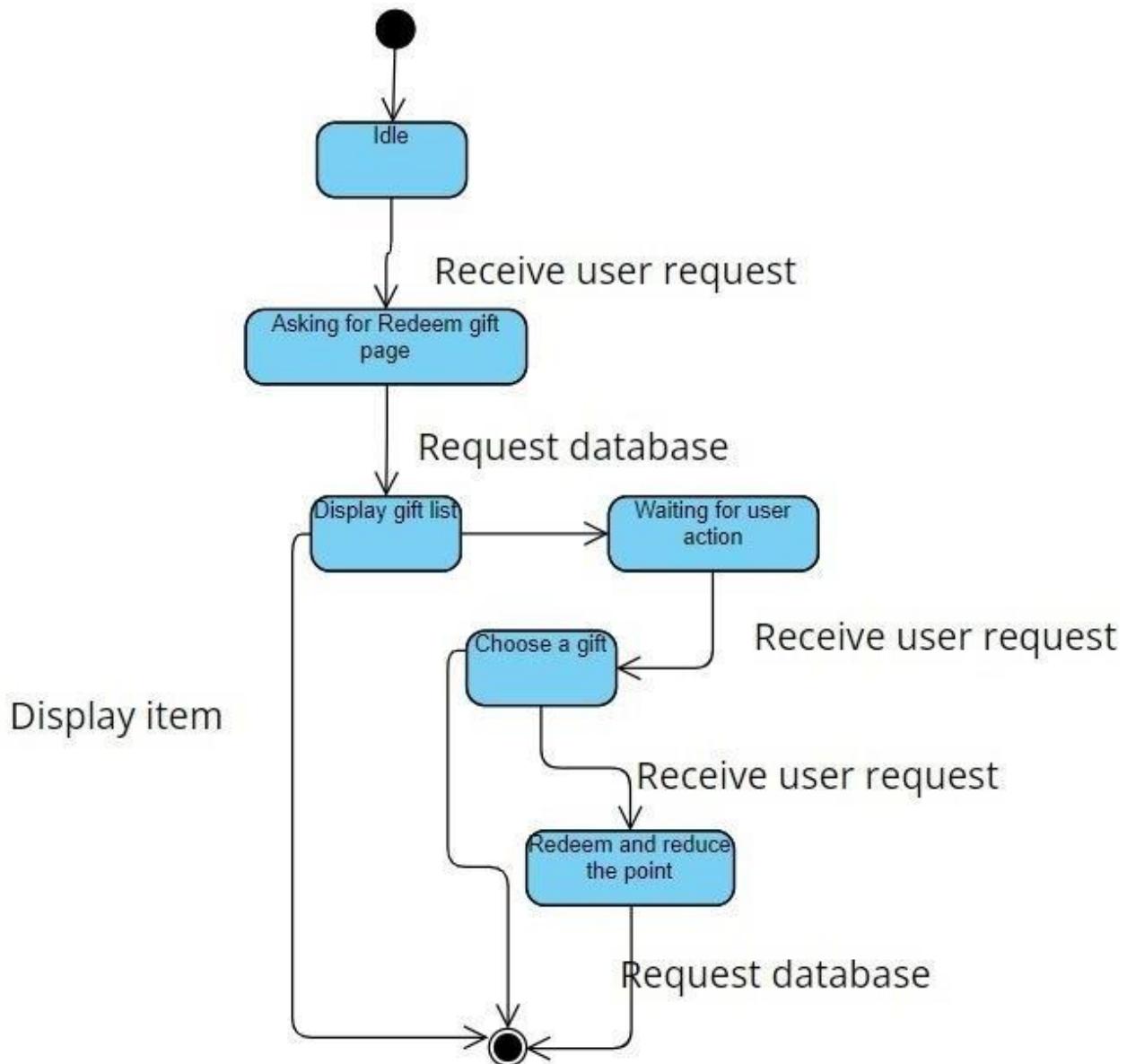
At the beginning, the system is idle. When a request is received from a user to load personal user information, the server will ask for access to the database and then display the user's personal information, and when the user changes the information, the database will receive a request to update it.

4.3.6 Real time Chat



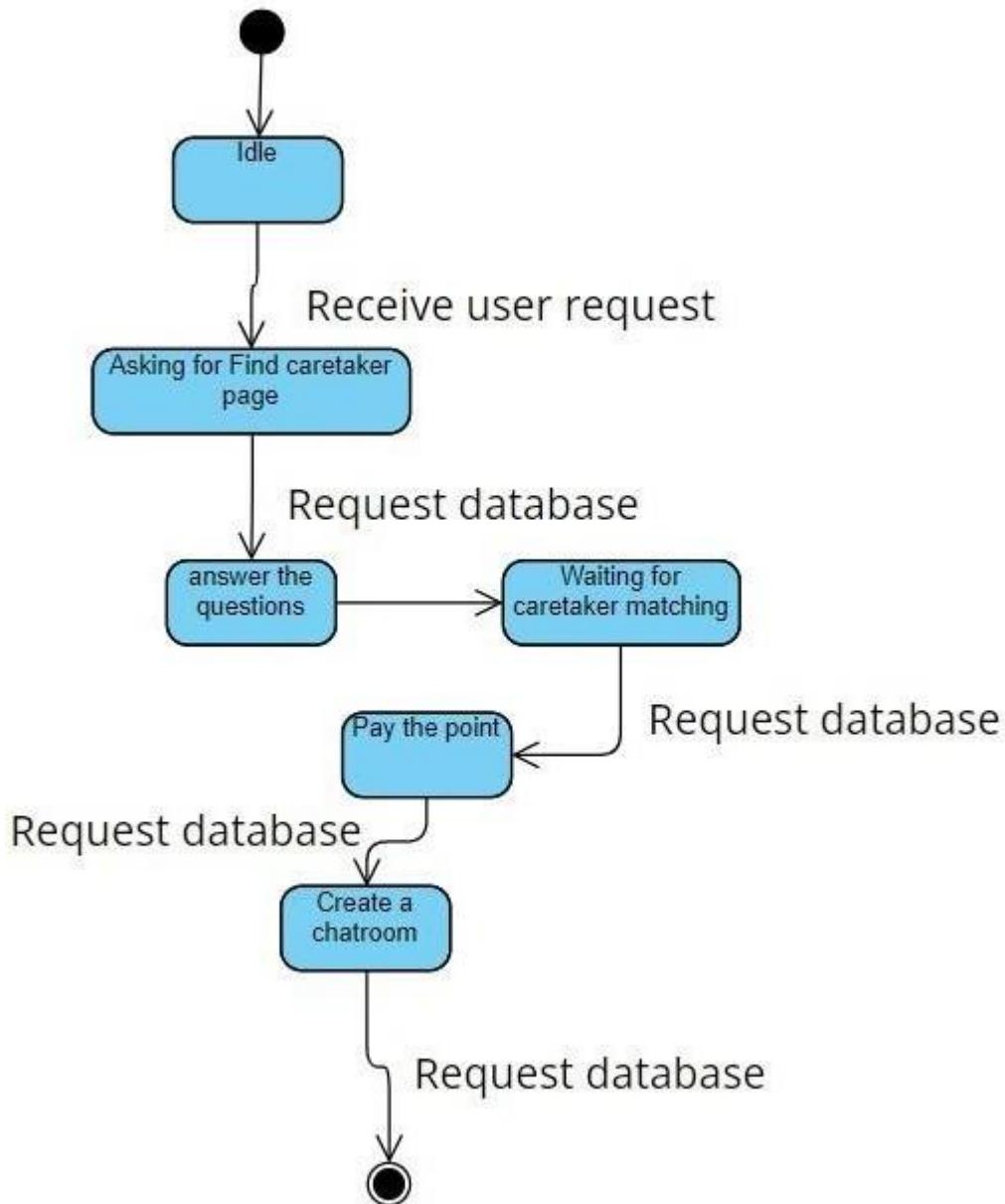
At the beginning, the system is idle. When a request is received to load chat data, the server accesses the database to find the chat history and displays it, and when the user sends another message, the message is saved to the database

4.3.7 Redeem a free Gift



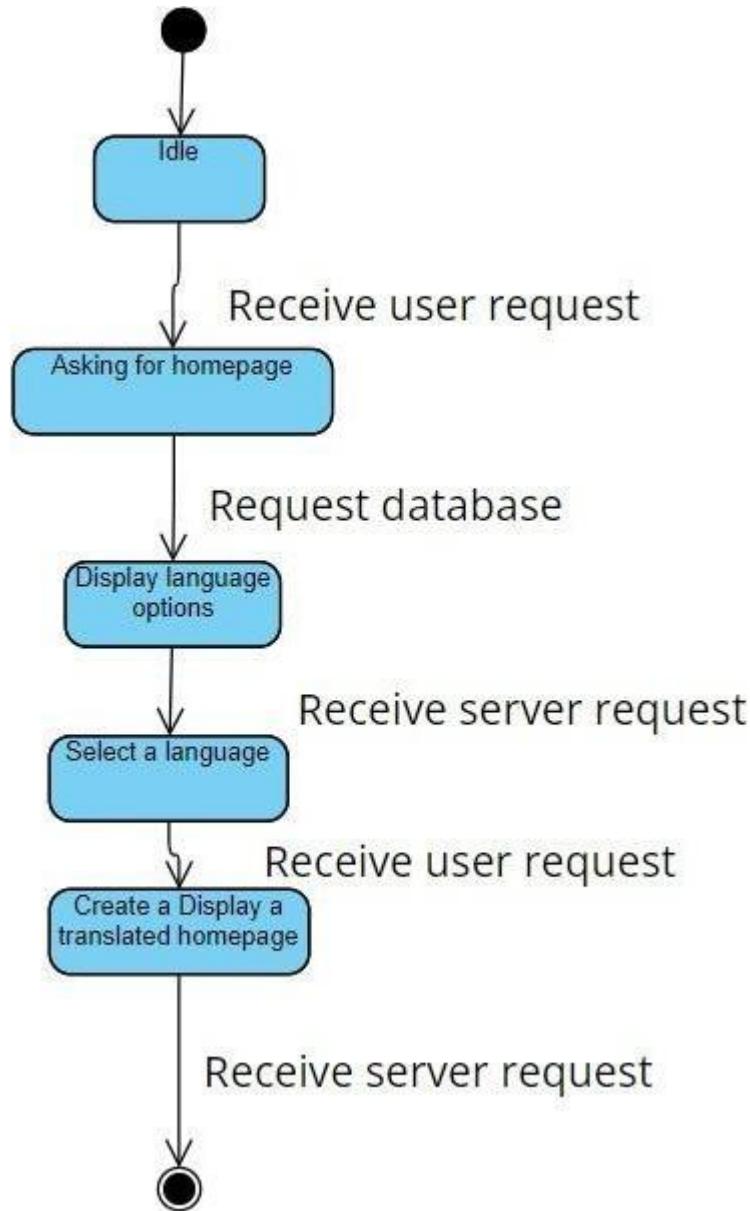
At the beginning, the system is idle. After receiving a user request to add a gift redemption page, the server will access the database and list all the gifts, and when the user selects a gift to redeem and submits it, the database will automatically deduct their points.

4.3.8 Find Caretaker



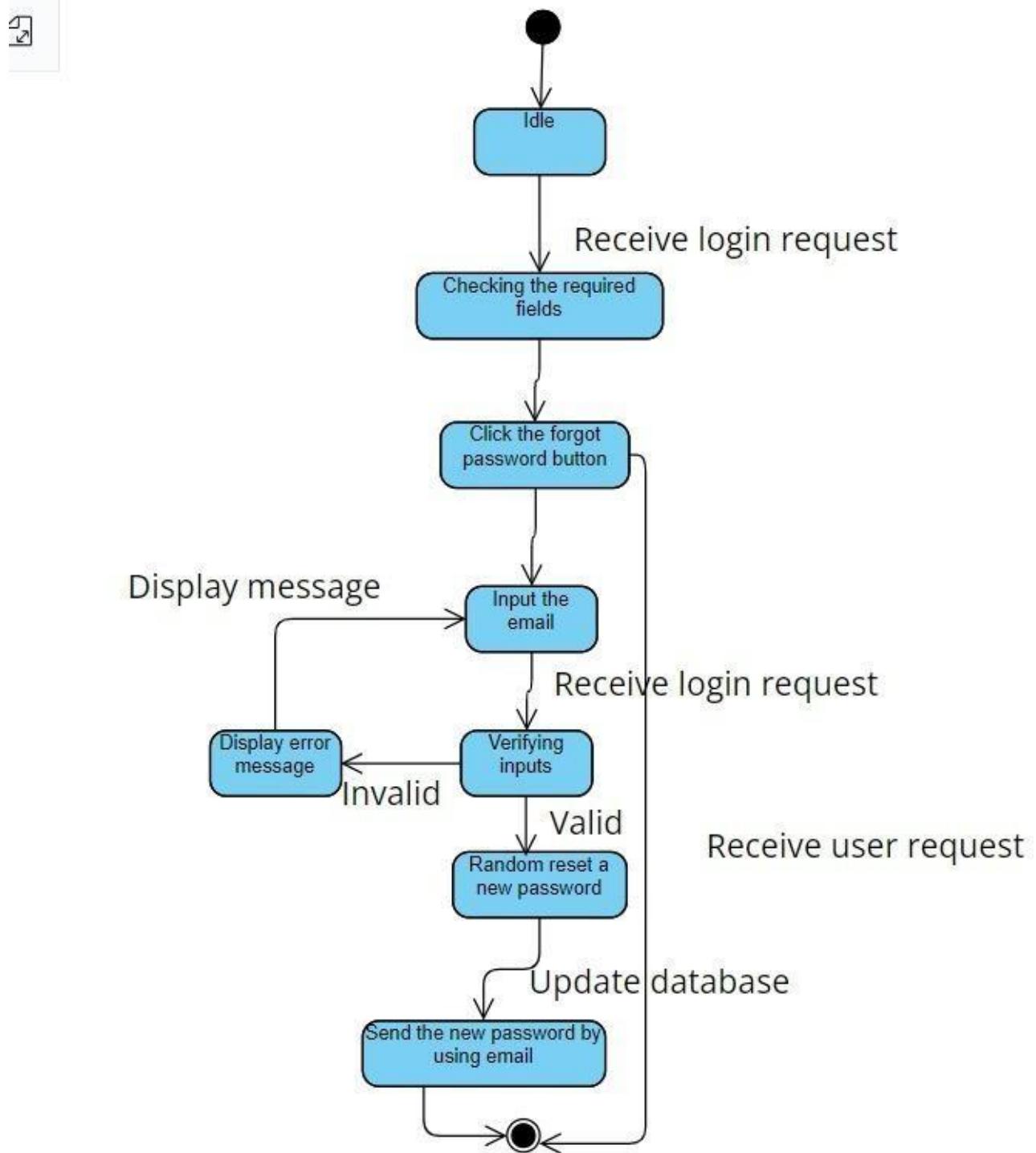
At the beginning, the system is idle. After receiving a user request to add a caregiver page, the server accesses the database and lists 5 questions. After the user answers the questions, the server uses the database to find a caregiver who meets the requirements and deducts a fixed fee from the user and creates a new chat room.

4.3.9 Switch other Language



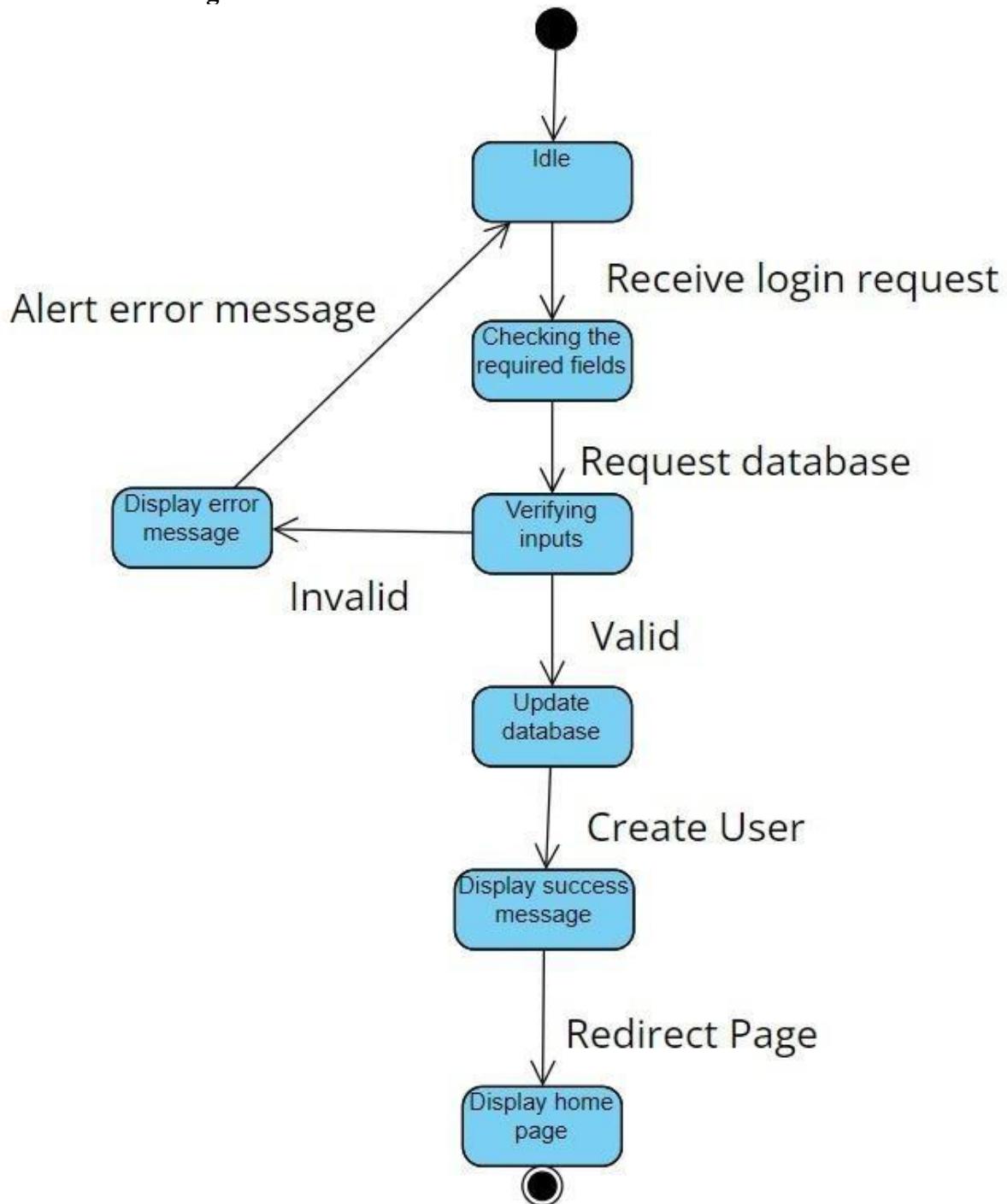
At the beginning, the system is idle. When a user request is received to load the main page, the interface provides a button for the user to select a language, and when the user selects a language, the server redirects the translated page.

4.3.10 Forgot Password



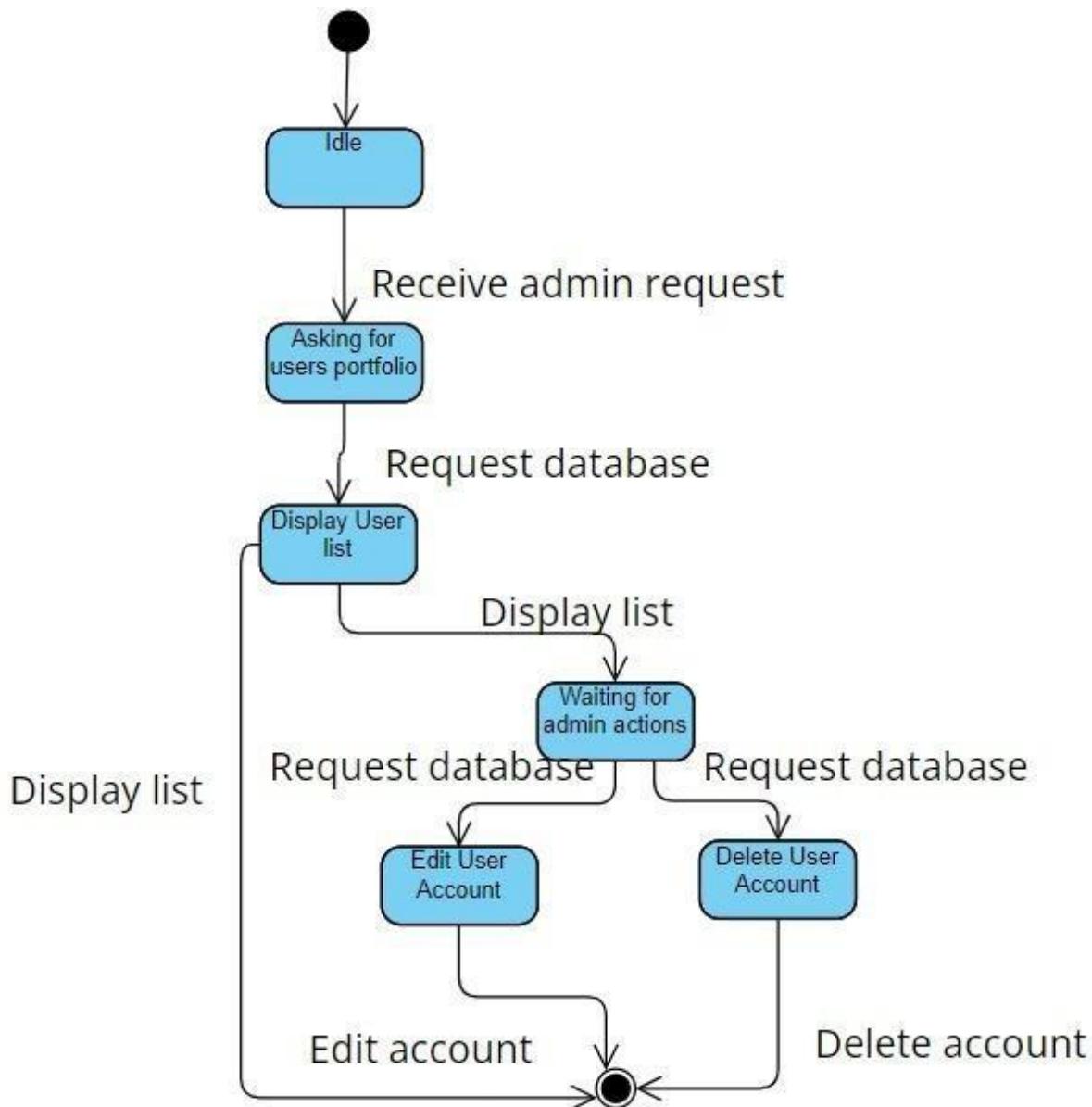
At the beginning, the system is idle. When the login page is received and loaded, it provides the format that needs to be filled out on the login page, and of course when the password button is forgotten down the page, the user is asked to enter their email.

4.3.11 Login



At the beginning, the system is idle. When the login page is received, it will provide the format of the login page that needs to be filled in and the user will need to enter their account password, if the account password is incorrectly entered the system asks the user to re-enter it until the account password is correct, then the login message is displayed and the login to the main page.

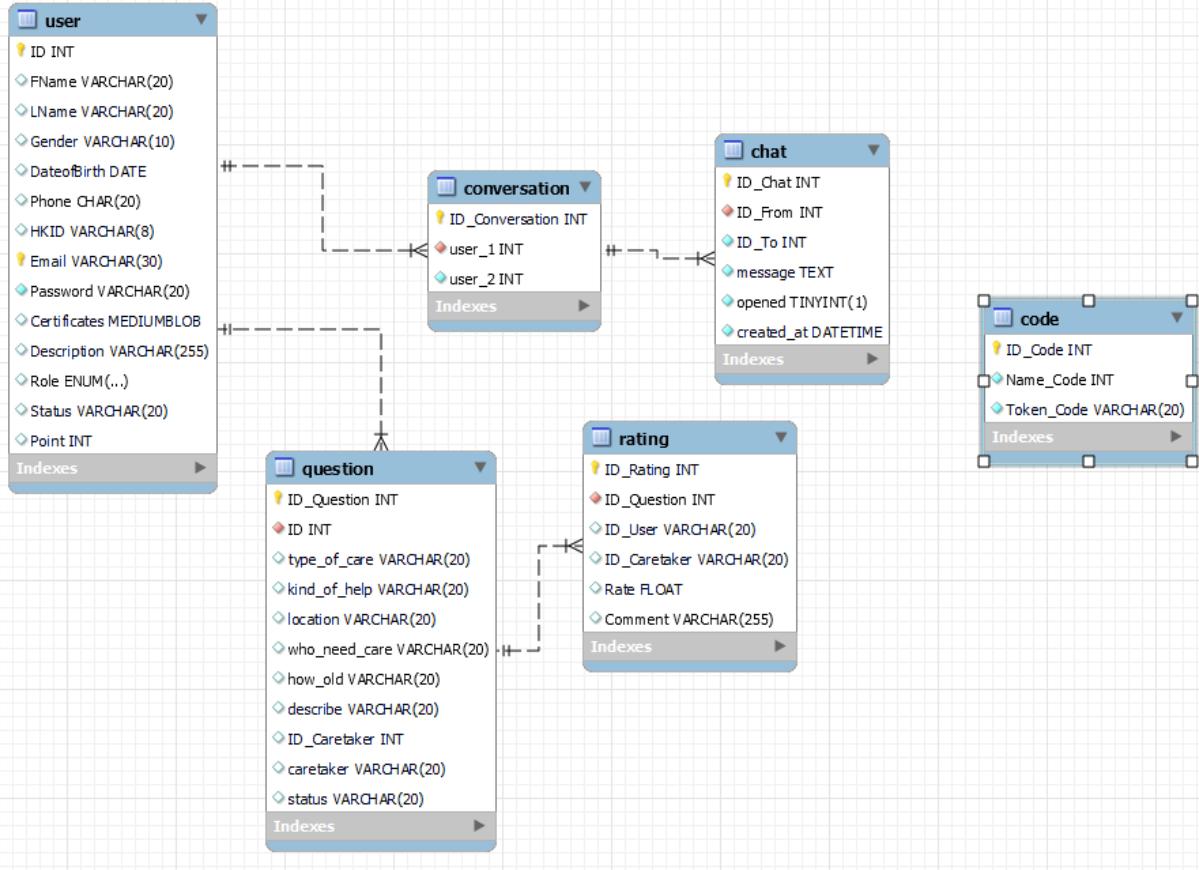
4.3.12 Manage User Account



At the beginning, the system is idle. When an administrator request is received to load user data, the server will request access to the database and display the user's data. The administrator can choose to change or delete the user's data, and the database will be updated or deleted when the data is changed.

4.4 Database Design & Physical Data Model

4.4.1 Physical Data Model



4.4.2 Database Design

User

#	名稱	類型	編碼與排序	屬性	空值(Null)	預設值	備註	額外資訊	動作
□ 1	ID 🔑	int		否	無	AUTO_INCREMENT		修改 刪除 更多	
□ 2	FName	varchar(20)	utf8mb4_0900_ai_ci	是	NULL			修改 刪除 更多	
□ 3	LName	varchar(20)	utf8mb4_0900_ai_ci	是	NULL			修改 刪除 更多	
□ 4	Gender	varchar(10)	utf8mb4_0900_ai_ci	是	NULL			修改 刪除 更多	
□ 5	DateofBirth	date		是	NULL			修改 刪除 更多	
□ 6	Phone	char(20)	utf8mb4_0900_ai_ci	是	NULL			修改 刪除 更多	
□ 7	HKID	varchar(8)	utf8mb4_0900_ai_ci	是	NULL			修改 刪除 更多	
□ 8	Email 📩	varchar(30)	utf8mb4_0900_ai_ci	否	無			修改 刪除 更多	
□ 9	Password	varchar(20)	utf8mb4_0900_ai_ci	否	無			修改 刪除 更多	
□ 10	Certificates	mediumblob		是	NULL			修改 刪除 更多	
□ 11	Description	varchar(255)	utf8mb4_0900_ai_ci	是	NULL			修改 刪除 更多	
□ 12	Role	enum('normal', 'caretaker', 'admin')	utf8mb4_0900_ai_ci	是	NULL			修改 刪除 更多	
□ 13	Status	varchar(20)	utf8mb4_0900_ai_ci	是	NULL			修改 刪除 更多	
□ 14	Point	int		是	0			修改 刪除 更多	

Rating

#	名稱	類型	編碼與排序	屬性	空值(Null)	預設值	備註	額外資訊	動作
□ 1	ID_Rating 🔑	int		否	無	AUTO_INCREMENT		修改 刪除 更多	
□ 2	ID_Question 🔑	int		否	無			修改 刪除 更多	
□ 3	ID_User	varchar(20)	utf8mb4_0900_ai_ci	是	NULL			修改 刪除 更多	
□ 4	ID_Caretaker	varchar(20)	utf8mb4_0900_ai_ci	是	NULL			修改 刪除 更多	
□ 5	Rate	float		是	NULL			修改 刪除 更多	
□ 6	Comment	varchar(255)	utf8mb4_0900_ai_ci	是	NULL			修改 刪除 更多	

Conversation

#	名稱	類型	編碼與排序	屬性	空值(Null)	預設值	備註	額外資訊	動作
□ 1	ID_Conversation 🔑	int		否	無	AUTO_INCREMENT		修改 刪除 更多	
□ 2	user_1 🔑	int		否	無			修改 刪除 更多	
□ 3	user_2	int		否	無			修改 刪除 更多	

Question

	#	名稱	類型	編碼與排序	屬性	空值(Null)	預設值	備註	額外資訊	動作
<input type="checkbox"/>	1	ID_Question	int		否	無	AUTO_INCREMENT		修改 刪除 更多	
<input type="checkbox"/>	2	ID	int		否	無			修改 刪除 更多	
<input type="checkbox"/>	3	type_of_care	varchar(20)	utf8mb4_0900_ai_ci	是	NULL			修改 刪除 更多	
<input type="checkbox"/>	4	kind_of_help	varchar(20)	utf8mb4_0900_ai_ci	是	NULL			修改 刪除 更多	
<input type="checkbox"/>	5	location	varchar(20)	utf8mb4_0900_ai_ci	是	NULL			修改 刪除 更多	
<input type="checkbox"/>	6	who_need_care	varchar(20)	utf8mb4_0900_ai_ci	是	NULL			修改 刪除 更多	
<input type="checkbox"/>	7	how_old	varchar(20)	utf8mb4_0900_ai_ci	是	NULL			修改 刪除 更多	
<input type="checkbox"/>	8	describe	varchar(20)	utf8mb4_0900_ai_ci	是	NULL			修改 刪除 更多	
<input type="checkbox"/>	9	ID_Caretaker	int		是	NULL			修改 刪除 更多	
<input type="checkbox"/>	10	caretaker	varchar(20)	utf8mb4_0900_ai_ci	是	NULL			修改 刪除 更多	
<input type="checkbox"/>	11	status	varchar(20)	utf8mb4_0900_ai_ci	是	NULL			修改 刪除 更多	

Code

	#	名稱	類型	編碼與排序	屬性	空值(Null)	預設值	備註	額外資訊	動作
<input type="checkbox"/>	1	ID_Code	int		否	無	AUTO_INCREMENT		修改 刪除 更多	
<input type="checkbox"/>	2	Name_Code	int		否	無			修改 刪除 更多	
<input type="checkbox"/>	3	Token_Code	varchar(20)	utf8mb4_0900_ai_ci	否	無			修改 刪除 更多	

Chat

	#	名稱	類型	編碼與排序	屬性	空值(Null)	預設值	備註	額外資訊	動作
<input type="checkbox"/>	1	ID_Chat	int		否	無	AUTO_INCREMENT		修改 刪除 更多	
<input type="checkbox"/>	2	ID_From	int		否	無			修改 刪除 更多	
<input type="checkbox"/>	3	ID_To	int		否	無			修改 刪除 更多	
<input type="checkbox"/>	4	message	text	utf8mb4_0900_ai_ci	否	無			修改 刪除 更多	
<input type="checkbox"/>	5	opened	tinyint(1)		否	0			修改 刪除 更多	
<input type="checkbox"/>	6	created_at	datetime		否	CURRENT_TIMESTAMP	DEFAULT_GENERATED		修改 刪除 更多	

Chapter 5. Systems Implementation

5.1 Use of Software/Library

Visual Studio Code

Websites are made using the robust coding editor Visual Studio Code. There are several supported programming languages, including PHP, JavaScript, CSS, and HTML. The editor may have more functionality added to it via its sizable extension library. Microsoft Studio Code is a fantastic alternative for web development since it is portable, speedy, and user-friendly.

MyPHP

A well-liked programming language for creating server-side web applications is MyPHP. Dynamic websites may be made using its large feature and function library. HTML, CSS, and JavaScript may all be used with myPHP to create a full online application. It is interoperable with several DBMs, including Oracle, PostgreSQL, and MySQL.

WAMP

The WAMP software stack is used for web development on the Windows operating system. It provides a straightforward process for configuring a Windows Desktop with the Apache web server, MySQL database, and PHP programming language. For creating dynamic web applications, it is a common option.

PHP

Websites are typically made using PHP, a server-based programming language. It is open-source and has a strong developer community that actively supports its development. Among the web servers that support PHP are Apache, Nginx, and IIS. Online apps, dynamic websites, and e-commerce websites may all be made using it.

jQuery

The rapid and lightweight JavaScript tool known as jQuery facilitates HTML page navigation, event handling, and animation. It may be used to increase the interactivity of websites and is compatible with many different web browsers. JQuery provides a wide range of tools and skills to create dynamic web pages and online apps.

MySQL

Web development frequently uses MySQL, a relational database management system that is open-source and free. For managing big volumes of data for online applications, it provides a scalable and efficient way. To create dynamic webpages and web applications, it integrates with myPHP.

Bootstrap 5

The popular front-end CSS framework Bootstrap 5 is used by programmers to create adaptable and mobile-first web apps. To aid in the building of dynamic and responsive web pages, it offers a variety of pre-built CSS classes and JavaScript plugins. Bootstrap 5 is simple to use and adaptable enough to satisfy a range of design needs.

PHPMailer

A strong email-sending package for PHP called PHPMailer enables programmers to send emails with attachments and SMTP support. It is a well-liked option for PHP developers since it is a trustworthy and adaptable library that can be used to deliver both straightforward and complicated email messages. Also, a large number of capabilities are supported by PHPMailer, such as HTML email, inline pictures, multiple recipients, and more. It is an extensively used library that has been tried out and shown to work well when sending emails from PHP-based web applications.

5.2 System Constraints

Server Capacity

Server capacity is one of the primary system constraints that a PHP website may face. The processing speed, memory size, and bandwidth of the server may be a constraint on the website's performance. The website may require extra server resources as it grows bigger and more complex in order to handle the escalating traffic and user requests. Slow website load times, website outages, and other issues might occur if the server is unable to manage the traffic and requests. To get past server capacity restrictions, the website might have to transfer to a higher-capacity server or start using a content delivery network (CDN). The website may also need to optimize its media assets and source code in order to utilize less server resources to display web pages. In order to make sure that the website can manage both present and future traffic needs, it is also crucial to routinely evaluate the server's performance and modify resources as necessary.

Database Constraints

If the PHP website uses a database to store and retrieve data, it may face constraints such as slow database queries or data corruption. This can cause slow loading times, website downtime, or other issues. A poorly designed database schema or inefficient query structure can also lead to database constraints. The website may need to optimize its database queries, employ a database management system that is built for high performance, and carry out routine database maintenance in order to prevent database limitations. To guarantee that data can be retrieved in the event of data loss or corruption, database backups should also be carried out often.

Security Constraints

A key system limitation that a PHP website may experience is security. Security limits could be put in place if the website is not sufficiently guarded against hacking attempts, viruses, or other threats. The functioning and reputation of the website might be harmed as a consequence of data breaches, website outages, or other issues. To avoid security constraints, the website may need to implement the necessary security safeguards, including firewalls, SSL certificates, and regular security audits. It's essential to maintain the website and any related software updated with the most recent security enhancements in order to prevent vulnerabilities. To ensure that only

authorized users have access to sensitive data, it is crucial to create user authentication, password constraints, and access restrictions.

Compatibility Constraints

Constraints on compatibility occur when a PHP website is incompatible with particular browsers, operating systems, or gadgets. This may lead to a poor user experience, reduced traffic, and financial loss. The website may need to run compatibility tests on a number of browsers and devices to make sure that it works correctly on various platforms in order to avoid compatibility restrictions. To make sure that it is optimized for various screen sizes and resolutions, the website might also need to follow responsive web design standards.

5.3 Test Plan & Strategies

5.3.1 Test Plan

List of testing items and functions

There are a total of 17 functions that would be tested.

Role	Functions to be tested
Normal User / Caretaker	Register
Normal User / Caretaker / Administrator	Logout
Normal User / Caretaker	Chat Bot
Administrator	View User Account
Normal User / Caretaker	Edit Profile
Normal User / Caretaker	Real Time Chat
Normal User	Redeem a Free Gift
Normal User / Caretaker	View Comment Area
Normal User	Rating and Comment
Normal User	Find Caretaker
Normal User	View Order
Caretaker	View Accepted Job List
Caretaker	Find Job
Normal User / Caretaker / Administrator	Switch other Language
Normal User / Caretaker / Administrator	Forgot Password
Normal User / Caretaker / Administrator	Login
Administrator	Manage User Account

5.3.1.1 Test Schedule

The testing for the system requires two weeks to complete. The details of the schedule are listed below.

Task No.	Task	Start Time	End Time
1	Prepare test specification: <ul style="list-style-type: none">● Test control procedures● Test cases● Test data● Test environment	1-3-2023	5-3-2023
2	Set up of testing environment	6-3-2023	8-3-2023
3	Load test data	9-3-2023	10-3-2023
4	Conduct test: <ul style="list-style-type: none">● Unit test● Link test● Function test● System test● Security test	11-3-2023	15-3-2023

5.3.2 Test Strategies

Unit Testing

Each unit or component must be individually tested to ensure that the PHP code is working as planned. This may be done by carefully examining if each line of code functions as planned. I also do manual testing to create test cases for certain scenarios, ensuring that the code is tested in a range of circumstances and functions as intended.

Link Testing

Link testing involves guiding visitors to the appropriate websites and verifying that all of the website's links work. To do this, carefully verify that each link leads to the appropriate page. To make sure every link has been checked and is working, I may use a checklist.

Function Testing

Testing individual website features or functions to make sure they operate as intended is known as function testing. To do this, personally test each website feature or function to make sure it works as planned. I may also use manual testing to write test cases for various situations, test the feature or function under various circumstances, and make sure it works as intended.

System Testing

System testing entails checking the entire website to make sure all the parts are functioning as intended. By manually evaluating the website to make sure it functions as intended, this may be accomplished. In order to test the website under various circumstances and guarantee that it performs properly, I also utilize manual testing to write test cases for various scenarios.

Security Testing

Security testing entails examining the effectiveness of the website's security measures in thwarting hacker attempts, malware, and other security risks. This may be done by manually testing the website to find any weak points in the security procedures in place. To evaluate the security measures in various circumstances and make sure they work properly, I may also utilize manual testing to write test cases for various scenarios.

5.3.3 Passing or failing criteria for items/features

Task No.	Functions	Passing criteria	Failing criteria
1	Register	<p>Users are able to register for an account by providing personal information.</p> <p>The registration function ensures that duplicate email addresses are not allowed, preventing multiple accounts from being created with the same email address.</p>	<p>The registration form does not include proper validation, allowing users to enter invalid or incorrect information.</p> <p>Users are unable to register for an account due to errors or technical issues.</p>
2	Logout	<p>Users are able to log out of their account by clicking the logout button or link.</p> <p>After logging out, users are redirected to the login page and cannot access any</p>	<p>Users are unable to log out due to errors or technical issues.</p> <p>After logging out, users are still able to access restricted pages or features.</p>

		restricted pages or features.	
3	Chat Bot	<p>Provides accurate responses to user queries and requests.</p> <p>Can handle different types of queries and provide relevant and helpful responses.</p>	Unable to handle different types of queries or provide helpful responses, leading to user dissatisfaction.
4	View User Account	<p>Admin are able to access users' account information, including users' personal details and settings.</p> <p>Displays accurate and up-to-date information about the user's account.</p>	Provides a confusing or unintuitive interface for users to manage their account information, leading to user dissatisfaction.
5	Edit Profile	The edit profile function includes proper validation to ensure that users enter valid information and	Do not allow users to update or modify their HKID card number and email.

		<p>prevent data entry errors.</p> <p>Saves the updated information to the database and displays the changes accurately on the user's profile page.</p>	
6	Real Time Chat	<p>Able to access the Real Time Chat function and initiate conversations with caretaker or normal user.</p>	<p>Not allow users to delete or archive messages, causing clutter and difficulty in managing conversations.</p>
7	Redeem a Free Gift	<p>Users are able to access the Redeem a Free Gift function and enter the valid code to redeem the free gift.</p> <p>The Redeem a Free Gift function includes proper validation to ensure that users enter a valid code and</p>	<p>Users are unable to access the Redeem a Free Gift function due to errors or technical issues.</p> <p>The Redeem a Free Gift function does not include proper validation, allowing users to enter invalid or expired codes.</p>

		prevent data entry errors.	
8	View Comment Area	<p>Users are able to view the scores and comments posted on website content.</p> <p>The View Comment Area function displays comments in a clear and user-friendly interface, including the comment author, scores, and content.</p>	<p>Users are unable to access the View Comment Area function due to errors or technical issues.</p> <p>The View Comment Area function displays comments in a confusing or unintuitive interface, making it difficult for users to read.</p>
9	Rating and Comment	Allows normal users to provide comments and feedback on website content in a clear and user-friendly interface.	Provides a confusing or unintuitive interface, making it difficult for users to rate and comment on website content.
10	Find Caretaker	<p>Provides 5-6 questions about the requirements of the caretaker.</p> <p>And the normal user allow to answer the questions by</p>	<p>Cant display the questions to the normal user or have a bad UI design.</p> <p>Normal user not allow to submit the</p>

		using multiple choice.	multiple choice answer.
11	View Order	<p>The View Order function displays the order details, including the order requirement, order status, and personal information.</p> <p>The View Order function includes proper security measures, such as user authentication and encryption of sensitive data.</p>	<p>The View Order function does not display the order details in a clear or user-friendly interface, causing confusion or difficulty for users.</p> <p>The View Order function does not include proper security measures, putting user information at risk.</p>
12	View Accepted Job List	<p>Provides the own jobs list, which displayed order's status ,customer information, contact method and order requirement.</p> <p>Caretaker allow to edit the order's status.</p>	<p>Caretaker are unable to access the own jobs list due to errors or technical issues.</p> <p>Caretaker not allow to edit the order's status.</p>

13	Find Job	<p>Provides the order list, which order's status is "Matching" and able the caretaker to accept the order, unless the order market is empty.</p>	<p>The Find Job function displays job postings in a confusing or cluttered interface, making it difficult for users to read or interact with job postings.</p>
14	Switch other Language	<p>In the homepage users are able to select their preferred language from the list of available languages including (Eng, 繁 and 简).</p> <p>The Switch Language function changes the language of the homepage and displays the content in the selected language.</p>	<p>Users are unable to access the Switch Language function due to errors or technical issues.</p> <p>The Switch Language function does not change the language of the homepage or displays the content in the incorrect language.</p>
15	Forgot Password	<p>Users are able to access the Forgot Password function and initiate the password</p>	<p>Users cannot access their email accounts and they cannot view the emails that reset their passwords.</p>

		recovery process by providing their email address.	
16	Login	Normal Users and Caretakers are able to enter their login credentials, including their email address and password, and successfully access their account and protected website content.	Normal Users and Caretakers are unable to access their account or protected website content due to errors or technical issues.
17	Manage User Account	Administrators are able to access and manage user accounts, including creating new accounts and modifying existing accounts. The Manage User Account function allows administrators to ban user accounts if necessary.	The Manage User Account function does not include proper security measures, putting user information at risk.

5.3.4 Test Deliverables

Black-box Test

There are 17 test cases in this black box test. All test cases passed because the actual output results were exactly the same as the predicted output results. This means that the system functions perfectly in working order. All users can use the system ideally. Details of all test cases can be found in Appendix 1.

Stress Test

The stress test showed that the system performed effectively. Within one minute, 250 virtual clients were able to access the system. 365 milliseconds was the average response time. This indicates that the system is very responsive. Appendix 2 contains its details.

Browser Test

The system has been tested with browsers. Six browsers - Google Chrome, Internet Explorer, Firefox, Edge, Safari, and Opera - were used for testing on macOS or Windows 10. It shows that the system is compatible with the most widely used browsers. Details can be found in Appendix 3.

Chapter 6. Systems Implementation

6.1.1 Difficulties

Because I had never used the PHP programming language before, it was a difficult task that required careful planning, painstaking attention to detail, and problem-solving abilities. This report lists the problems that were found along with their related fixes.

Assuring that user information is correct down to the last detail and that it is safe is one of the main problems in developing a website CareHK. To safeguard consumers against dishonest carers, this necessitates the implementation of robust security measures. Implementing a secure user identification verification method to stop fake caregivers from successfully registering users is one way to address this problem. When a caregiver registers for an account, we ask them for credentials, and before their account can be established and they can begin receiving orders, the administrator must authenticate the credentials. By stopping fraud on the one hand and guaranteeing that all information is accurate on the other, this protects the security of our website for all users.

Another challenge encountered during the development process was managing the database effectively. To manage the substantial quantity of data, including user information, job advertisements, and order details, the website needed a powerful database management system. To get around this issue, we used a relational database management system (RDBMS) to efficiently store and manage the data. We also created effective database queries and indexes to make sure the website could handle large volumes of data without encountering any speed issues.

It was difficult to design a user-friendly interface that would give companies and job searchers a smooth experience. It was my obligation to design a user interface that would make it simple for website visitors to browse, look for jobs, and submit applications. To solve this issue, we adopted a user-centered design approach, which involves conducting user interviews, creating user personas, and creating validated wireframes and prototypes. We also employed responsive design strategies to make the site usable on a variety of platforms, including desktops, laptops, tablets, and smartphones.

6.1.2 Further Enhancement

Further development of enhanced user profiles

By enabling users to give more specific information about themselves, such as their talents, experience, and certifications, enhancing the user profiles on the website may enhance the user experience. This may be done by expanding the user profile form's features and enabling users to submit supporting files like resumes and cover letters. A user verification system can also improve the website's trustworthiness and lessen the possibility of fake job ads.

Further development of job recommendation engine

By offering consumers individualized job recommendations based on their profiles and search histories, a job recommendation engine may enhance the user experience. This may be done by analyzing user behavior with machine learning algorithms and making suggestions depending on their preferences. The user experience and user engagement may also be enhanced by giving users the option to remember their job choices and get notifications when new job posts that fit their criteria are published to the website.

Further development of chatbot integration

The user experience may be enhanced by integrating a chatbot into the website to offer users immediate help and assistance. This may be accomplished by putting in place a chatbot that can respond to commonly asked questions, offer suggestions and advice for job searches, and assist users with any technical problems they might run across on the website. Also, consumers may receive real-time updates on job posts and other pertinent information via chatbots.

Further development of advanced analytics

Using sophisticated analytics software can offer insightful data on user behavior and website performance. Developers may find areas for development and enhance the functioning of a website by tracking user engagement, conversion rates, and other key performance indicators using tools like Google Analytics. Including user feedback tools, like as surveys and feedback forms, may also give developers useful insights into user preferences and point them in the direction of areas where they can improve.

Further development of social networking

By enabling users to interact and network with other users, social networking elements integrated into the website can enhance the user experience. This may be done by putting in place a social networking system that enables users to make profiles, connect with other users, and exchange material like job listings. Users may also get extra job search tools from social networking sites, such advice on how to look for a job and industry information.

6.2 Conclusion

The development process was fraught with difficulties, such as code optimization, cross-browser compatibility, and user feedback. However, these issues were successfully resolved by using best practices including modularity, scalability, test automation, continuous integration and deployment (CI/CD), and accessibility.

The suggested improvements in this study, such as linking the website to social media, putting a job suggestion engine in place, and enhancing user profiles, can improve the user experience and expand the usefulness of the website. A website's creators may continually enhance it depending on user demands thanks to the usage of sophisticated analytics tools and user feedback systems, which can reveal important insights into user behavior and preferences.

The website's functionalities, such as the Chat Bot, Real-Time Chat, and Rating and Comment system, can provide users with a more personalized experience and facilitate communication between job seekers and employers. Additionally, the Find Caretaker and Find Job features can help users to search for relevant job postings and job seekers, respectively.

The Redeem a Free Gift feature can incentivize users to engage more with the website and increase user retention. The Forget Password option may lessen user annoyance and enhance the user experience by guaranteeing that users may easily change their passwords and gain access to their accounts.

By using the Change User Account option to manage their profiles, change their settings, and deactivate their accounts, users may have more control over their personal information. The View Accepted Job List and View Order features can help job seekers to keep track of their applications and job offers, respectively, increasing transparency and accountability in the hiring process.

Overall, developing a website CareHK in PHP programming language requires a multidisciplinary approach that involves technical expertise, creativity, and user-centered design principles. By continuously improving the website and implementing the proposed enhancements, developers can ensure that the website remains

competitive and valuable to users, providing a seamless experience for both job seekers and employers.

Chapter 7. Appendices

A1. Black-box Test

1. Register

Test Case ID	Test-001
Test Case	Register
Objective	Test whether the user can successfully register as a member
Test Procedure	1. Click on the Register button 2. Fill in the required personal information and click the submit button
Expected Result	A prompt message indicates that the account was successfully created and a new record was added to the database
Actual Result	As expected
Pass / Fail	Pass

2. Logout

Test Case ID	Test-002
Test Case	Logout
Objective	To test whether a logged-in user can successfully log out and browse the main page as a guest
Test Procedure	1. Click on the menu icon in the upper right corner 2. Click the logout button
Expected Result	The interface is loaded to the main page of the website and all cookies are deleted.
Actual Result	As expected
Pass / Fail	Pass

3. Chat Bot

Test Case ID	Test-003
Test Case	Chat Bot
Objective	Test whether the user can solve the problem through chat bot after login
Test Procedure	<ol style="list-style-type: none"> 1. After logging in to CareHK, you will see a chat bot button in the bottom left corner. 2. Click the chat bot button 3. Select the "Reset Password" option.
Expected Result	The chat bot replies to the user with the steps to reset the password
Actual Result	As expected
Pass / Fail	Pass

4. View User Account

Test Case ID	Test-004
Test Case	View User Account
Objective	Test whether the administrator has permission to view or read the user's data
Test Procedure	<ol style="list-style-type: none"> 1. Administrator logs in to their account 2. Click the Manage Users button
Expected Result	Account Data Table will show all users' ID, Full Name, phone number, Email, Certifications, Description, Role, Status
Actual Result	As expected
Pass / Fail	Pass

5. Edit Profile

Test Case ID	Test-005
Test Case	Edit Profile
Objective	Test whether users can edit their personal information after logging in
Test Procedure	<ol style="list-style-type: none"> 1. Users enter their email and password on the login page, then click the login button 2. Select "My Profile" in the navigation bar 3. Edit the phone number and change it to 85212345678
Expected Result	The database is successfully updated with their phone number and the changed information is displayed in the interface
Actual Result	As expected
Pass / Fail	Pass

6. Real Time Chat

Test Case ID	Test-006
Test Case	Real Time Chat
Objective	Test if users can send personal text to the chat area
Test Procedure	<ol style="list-style-type: none"> 1. Users enter their email and password in the login screen and click the login button 2. Click on the "Forum" button in the navigation bar 3. Enter the text to be entered and click Send
Expected Result	The user's text is successfully seen by other users and the content is saved to the database
Actual Result	As expected
Pass / Fail	Pass

7. Redeem a Free Gift

Test Case ID	Test-007
Test Case	Redeem a Free Gift
Objective	For regular users, enter their email and password in the login screen and click the login button
Test Procedure	<ol style="list-style-type: none"> 1. Click on "Redeem Gift" in the navigation bar 2. Select the notebook from the multiple choices and click Redeem
Expected Result	The user's Point will be deducted and a random set of codes will be generated for the user to redeem the physical gift
Actual Result	As expected
Pass / Fail	Pass

8. View Comment Area

Test Case ID	Test-008
Test Case	View Comment Area
Objective	Test the user's ability to see other people's ratings and comments on caretaker
Test Procedure	<ol style="list-style-type: none"> 1. In the login screen, users enter their email and password and click on the login button 2. Then select "View Comment" from the navigation bar
Expected Result	All caretakers' ratings and comments will be displayed as a list
Actual Result	As expected
Pass / Fail	Pass

9. Rating and Comment

Test Case ID	Test-009
Test Case	Rating and Comment
Objective	Test to see if the user can rate and comment on the caregiver after the order is completed
Test Procedure	<ol style="list-style-type: none"> 1. Assuming the order is completed and the order status is "Await Comment" 2. The user presses the "Rating" button in the navigation bar 3. The interface will then display all orders 4. The user finds the order and rates and comments on it 5. Click the Submit button
Expected Result	The record will be saved to the database and posted to the "View Comment".
Actual Result	As expected
Pass / Fail	Pass

10. Find Caretaker

Test Case ID	Test-010
Test Case	Find Caretaker
Objective	Test the user's ability to match the right caretaker with the "Find Caretaker"
Test Procedure	<ol style="list-style-type: none"> 1. Users enter their email and password in the login screen and click the login button 2. Click on the "Find Caretaker" button in the navigation bar 3. Answer about three to six questions 4. Press the submit button
Expected Result	The order will be posted to the marketplace and a successful submission message will pop up.
Actual Result	As expected
Pass / Fail	Pass

11. View Order

Test Case ID	Test-011
Test Case	View Order
Objective	Test the ability of users to view their individual orders
Test Procedure	<ol style="list-style-type: none">1. Users enter their email and password in the login screen and click the login button2. Click on the "My Order" button in the navigation bar
Expected Result	Then all orders and the order details will be listed
Actual Result	As expected
Pass / Fail	Pass

12. View Accepted Job List

Test Case ID	Test-012
Test Case	View Accepted Job List
Objective	Test the ability of caretaker to view their individual orders
Test Procedure	<ol style="list-style-type: none">1. Caretaker enter their email and password in the login screen and click the login button2. Click on the "My Jobs" button in the navigation bar
Expected Result	Then all orders and the order details will be listed
Actual Result	As expected
Pass / Fail	Pass

13. Find Job

Test Case ID	Test-013
Test Case	Find Job
Objective	To verify that the system that caretaker can accept job and displays relevant results to the user.
Test Procedure	<ol style="list-style-type: none"> 1. Click the button of "find job" that the system displays relevant job listings. 2. Use filters, such as job category, location, and experience level, and verify that the system displays accurate and relevant results based on the filters. 3. Select a job and press the "Accept" button
Expected Result	<p>The system displays the job listings in the correct order based on the selected sorting criteria.</p> <p>The system displays accurate and detailed job information after a job listing is accepted.</p>
Actual Result	As expected
Pass / Fail	Pass

14. Switch other Language

Test Case ID	Test-014
Test Case	Switch other Language
Objective	To verify that the system can successfully display the home page in different languages and the language switch functionality works correctly.
Test Procedure	<ol style="list-style-type: none"> Click on the language switch button on the home page and verify that the system displays a list of available languages. Select a language from the list and verify that the system switches the home page to the selected language. Verify that the text, images, and other elements on the home page are displayed correctly in the selected language. Select another language from the list and verify that the system switches the home page to the newly selected language. Verify that the language switch functionality works correctly and does not cause any unexpected behavior or errors.
Expected Result	<p>The system displays a list of available languages when clicking on the language switch button on the home page.</p> <p>The system switches the home page to the selected language when a language is selected from the list.</p> <p>The text, images, and other elements on the home page are displayed correctly in the selected language.</p> <p>The system switches the home page to the newly selected language when selecting another language from the list.</p> <p>The language switch functionality works correctly and does not cause any unexpected behavior or errors.</p>
Actual Result	As expected
Pass / Fail	Pass

15. Forgot Password

Test Case ID	Test-015
Test Case	Forgot Password
Objective	To verify that the system correctly handles user requests for resetting forgotten passwords and ensures the security of user accounts.
Test Procedure	<ol style="list-style-type: none"> 1. Click on the "forgot password" link on the login page and verify that the system prompts the user to enter their email address. 2. Enter a valid email address or username and verify that the system sends a password reset link or temporary password to the user's email address. 3. Attempt to reset the password with an invalid email address or username and verify that the system rejects the request and provides appropriate error messages. 4. Attempt to reset the password with an email address or username that is not associated with a registered account and verify that the system rejects the request and provides error messages. 5. Attempt to reset the password for a locked account and verify that the system does not allow the user to reset the password and provides appropriate error messages.
Expected Result	<p>The system prompts the user to enter their email address or username when clicking on the "forgot password" link on the login page.</p> <p>The system sends a password reset link or temporary password to the user's email address after a valid email address or username is entered.</p> <p>The system rejects the password reset request with an invalid email address or username and provides appropriate error messages.</p> <p>The system rejects the password reset request for an email address or username that is not associated with a registered account and provides appropriate error messages.</p> <p>The system does not allow the user to reset the password for a locked account and provides appropriate error messages.</p>
Actual Result	As expected
Pass / Fail	Pass

16. Login

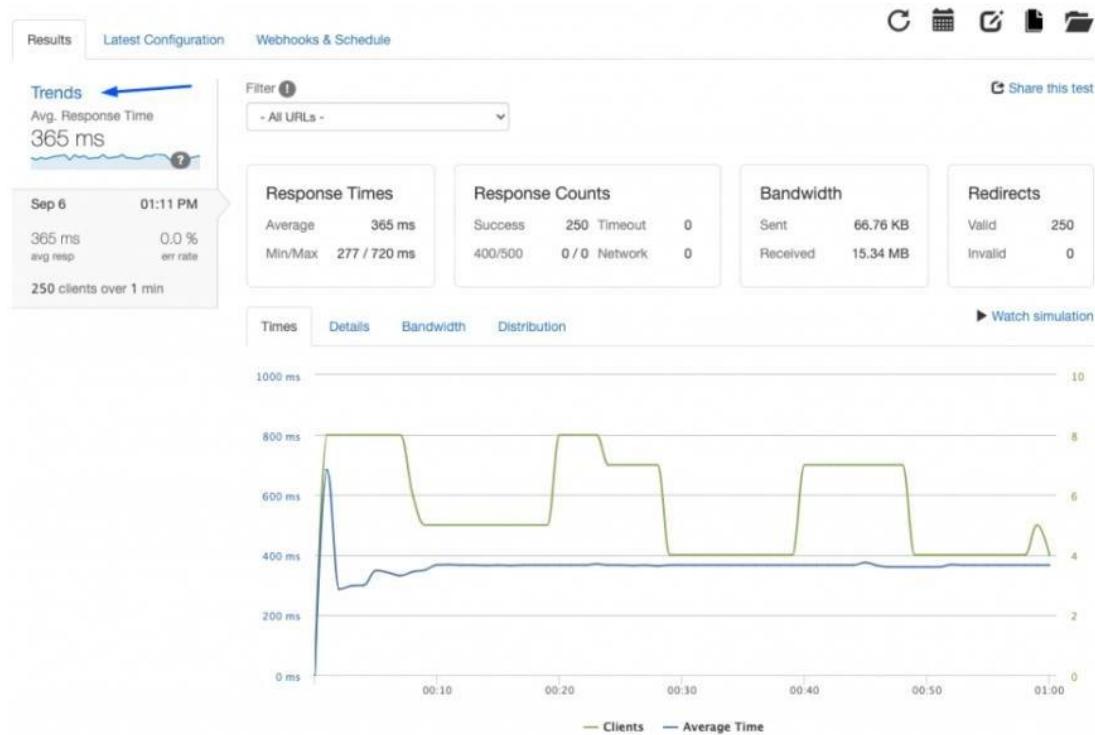
Test Case ID	Test-016	Te
Test Case	Login	Re
Objective	To verify that the system correctly authenticates users and grants access to authorized users only.	
Test Procedure	<ol style="list-style-type: none"> 1. Go to the login page 2. Enter a email and password combination and verify that the system logs the user in and grants access to the appropriate resources. 3. Attempt to login with an invalid email or password and verify that the system rejects the login attempt and provides appropriate error messages. 4. Attempt to login with a valid email and an incorrect password and verify that the system rejects the login attempt and provides appropriate error messages. 5. Attempt to login with a locked account and verify that the system rejects the login attempt and provides appropriate error messages. 6. Attempt to login with an expired password and verify that the system prompts the user to reset the password and does not grant access until the password is reset. 	
Expected Result	<p>The system successfully authenticates users with valid email and password combinations and grants access to authorized resources.</p> <p>The system rejects login attempts with invalid email or passwords and provides appropriate error messages.</p> <p>The system rejects login attempts with valid email and incorrect passwords and provides appropriate error messages.</p> <p>The system rejects login attempts with locked accounts and provides appropriate error messages.</p> <p>The system prompts users to reset expired passwords and does not grant access until the password is reset.</p>	
Actual Result	As expected	
Pass / Fail	Pass	Pas

17. Manage User Account

Test Case ID	Test-017
Test Case	Manage User Account
Objective	To verify that the system can successfully manage user accounts, including creating, updating, and deleting user accounts, as well as ensuring that user data is properly stored and secured.
Test Procedure	<ol style="list-style-type: none"> 1. Caretaker enter their email and password in the login screen and click the login button 2. Click on the "User Management" button in the navigation bar 3. Update the user account information, such as changing the password or email address, and verify that the changes are saved properly. 4. Delete a user account and verify that the account is removed from the system and its associated data is deleted.
Expected Result	<p>The system successfully updates user account information and saves the changes properly.</p> <p>The system successfully deletes user accounts and removes their associated data</p>
Actual Result	As expected
Pass / Fail	Pass

A2. Stress Test

The stress test is conducted by loader.io



A3. Browser Test

The browser test is done by LambdaTest.

Browsers / OS	Window11	MacOS
Chrome	✓	✓
Firefox	✓	✓
Edge	✓	✗
IE	✓	✗
Safari	✗	✓
Opera	✓	✗

