BSc Project CS/CE/IS
Computer Science
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Salamtak

Digital platform designed to provide home care services and support

Dept. of _____

Faculty of Computer and Information Systems

Umm Al-Qura University, KSA

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ACKNOWLEDGMENTS

- This document is dedicated to the well-being and empowerment of the elderly population in Makkah, and we hope that the "Salamatk" application will significantly enhance their quality of life and provide them with the support they need.

ABSTRACT

The Salamatk application provides a comprehensive platform for health monitoring, connecting elderly users in Makkah with healthcare providers and essential services. This document outlines key features such as user authentication, appointment scheduling, and emergency assistance, alongside system architecture and user access considerations. Designed specifically for elderly individuals, the application offers a user-friendly interface and operates on iOS devices with internet connectivity. This guide serves to facilitate user onboarding and navigation, ensuring a secure and effective experience.

Keywords:

- **Salamatk:** The name of the application designed to provide home care services and health monitoring for the elderly in Makkah.
- **Health Monitoring:** Refers to the features within the application that allow users to track their health metrics and receive alerts regarding their medical needs.
- **Elderly Care:** Highlights the target demographic of the application, focusing on services that assist older adults in managing their health and accessing care.
- **iOS Application:** Indicates that the Salamatk app is specifically designed for devices running Apple's iOS operating system, emphasizing its accessibility for iPhone and iPad users.

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Chapter 1 INTRODUCTION

Home care applications that aim to reach out to the meeting the community with the elderly services intended to improve the quality of their life are of high importance. In its efficiency, “Salamatk” app is designed to serve older people in Makkah in a holistic manner: it can be used in health monitoring while at the same time ensuring communication with healthcare providers. In turn, the application has been designed in such a way that it will concentrate on enacting the needs of the elderly, manage data in an efficient manner and improve their independence.

1.1 Purpose of the Project

The program targets the elderly in Makkah, providing a nursing home option for those in need. This guide helps choose a skilled facility that fits specific needs, ensuring elderly individuals receive appropriate care without frequent hospital visits.

1.2 Purpose Of this Document

This document outlines the Software Requirements Specification (SRS) for the "Elderly Home Care" software, detailing its functional and non-functional requirements, user interfaces, data management, and testing criteria.

1.3 Overview of this Document

The document provides a comprehensive overview of the software system, including its purpose, scope, and references used in its development.

1.4 Existing System

1.4.1 Existing system description

Currently, elderly individuals often rely on hospitals for care when they are in poor health. Many live alone and lack access to necessary services for healthy living.

1.4.2 Problems in the existing system

Inadequate access to medical procedures and therapies at home.

Challenges in scheduling and receiving timely medical tests.

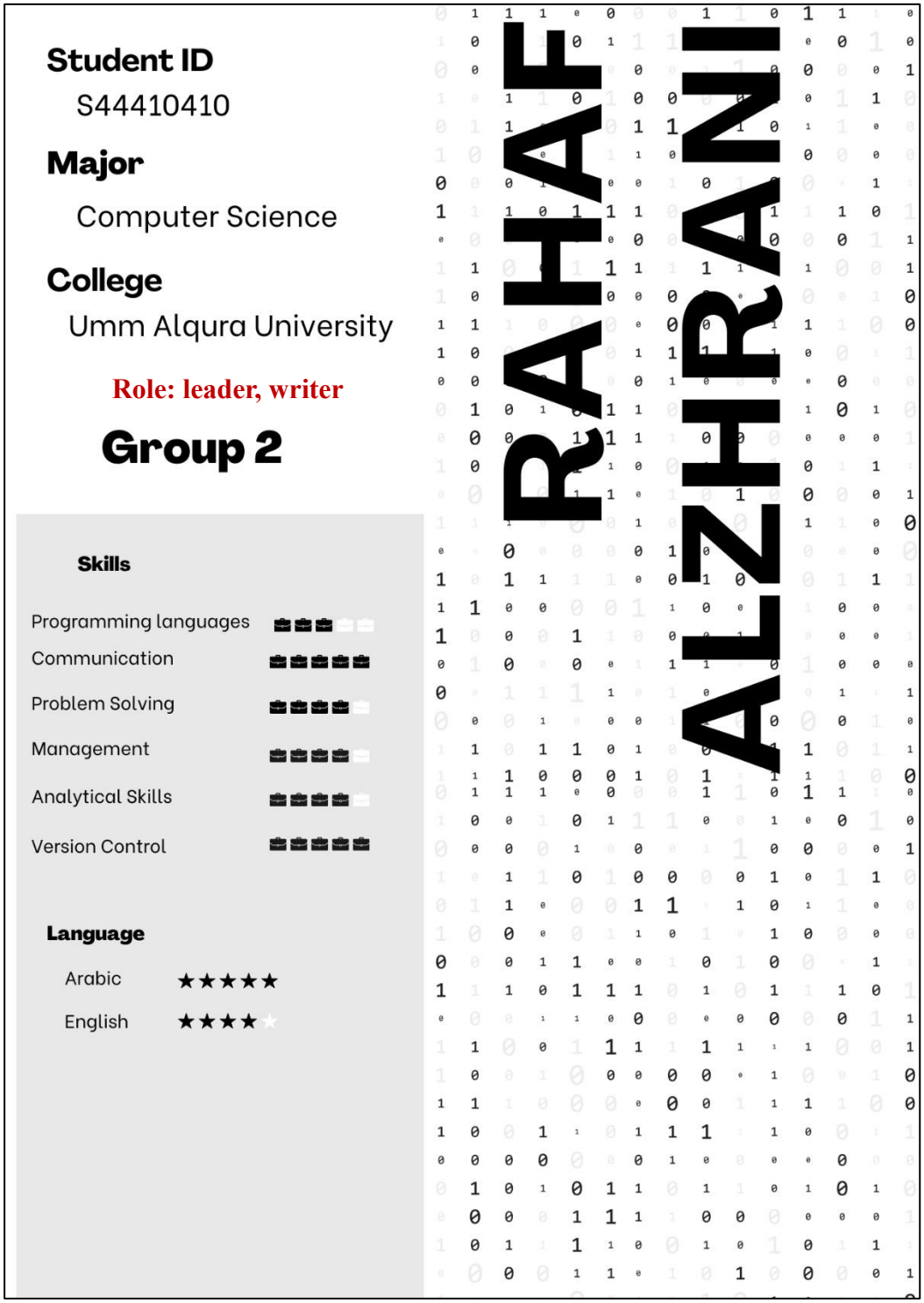
Lack of continuous communication between caregivers and patients.

1.5 Personas

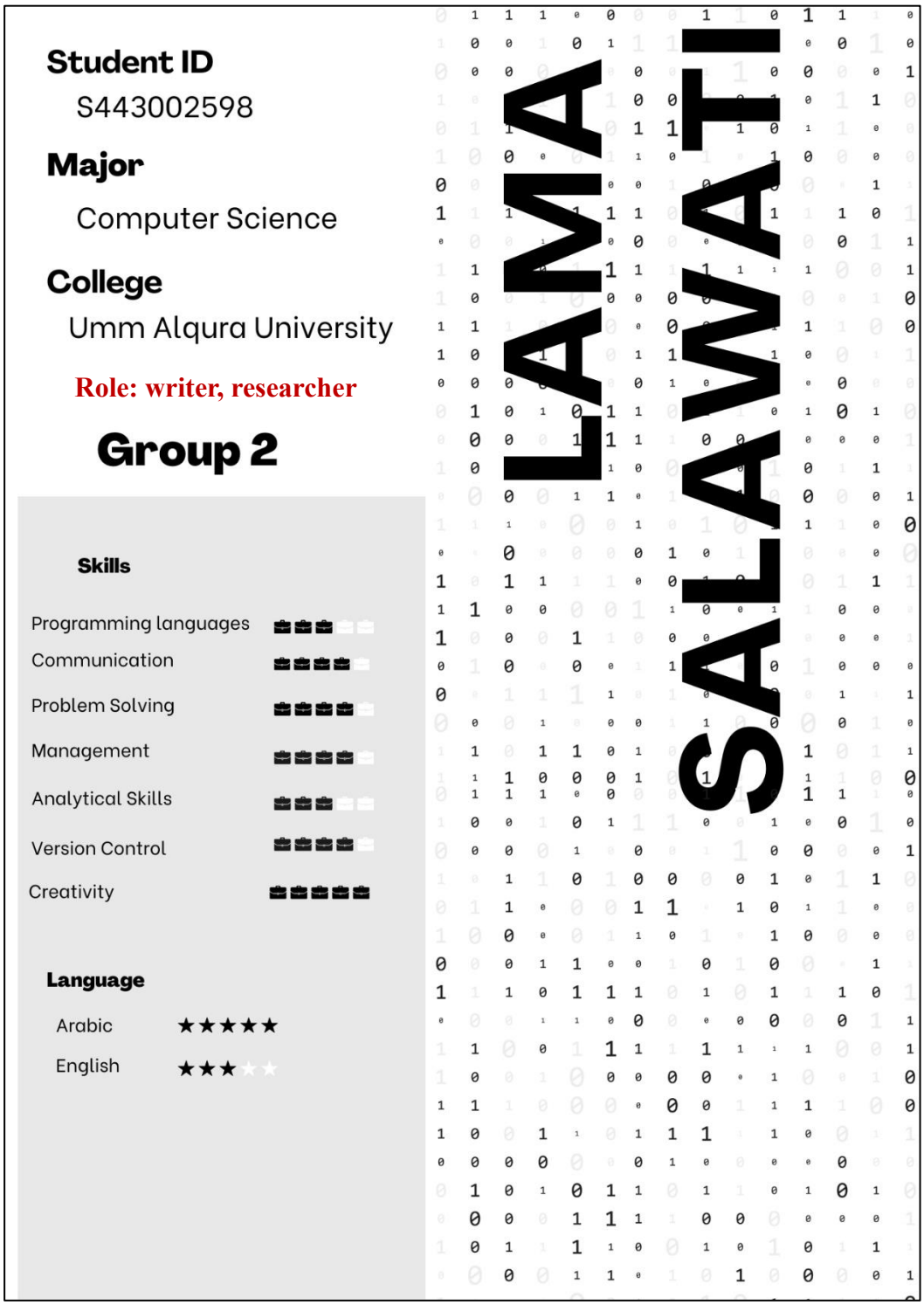
1.5.1 User persona

1.5.2 User personas

1.5.3 User persona



User Persona 1.5.4



1.6 User Stories

1.6.1 For elderly users:

1.6.1.1 As a new user, I want an easy registration process in Salamatk so that I can quickly start using the app.

1.6.1.2 As an elderly resident in Makkah, I want access to a nursing home service through Salamatk so that I can receive medical care and support with daily activities without having to visit a hospital.

1.6.1.3 As an elderly user, I want to receive reminders for my medication schedule through Salamatk so that I can maintain my health consistently.

1.6.1.4 As an elderly user, I want to access educational resources about healthy living through Salamatk so that I can improve my lifestyle.

1.6.1.5 As an elderly user, I want to view the packages that I can subscribe to so that I can decide which one is suitable for me before paying.

1.6.1.6 As an elderly user, I want to be able to have an easy way to pay so that i can book any services I need in a fast way.

1.6.2 For medical staff:

1.6.2.1 As a medical staff member, I want to view and update patient schedules within Salamatk so that I can efficiently manage my appointments**.**

1.6.2.2 As a medical staff member, I want to access a map of patient locations in Salamatk so that I can plan my visits efficiently.

1.6.2.3 As a medical staff member, I want to receive emergency alerts from my patients through Salamatk so that I can respond promptly.

1.6.2.4 As a medical staff member, I want to leave notes after each visit so that the next caregiver or medical staff has up-to-date information on the patient's condition.

1.6.3 For Administrator:

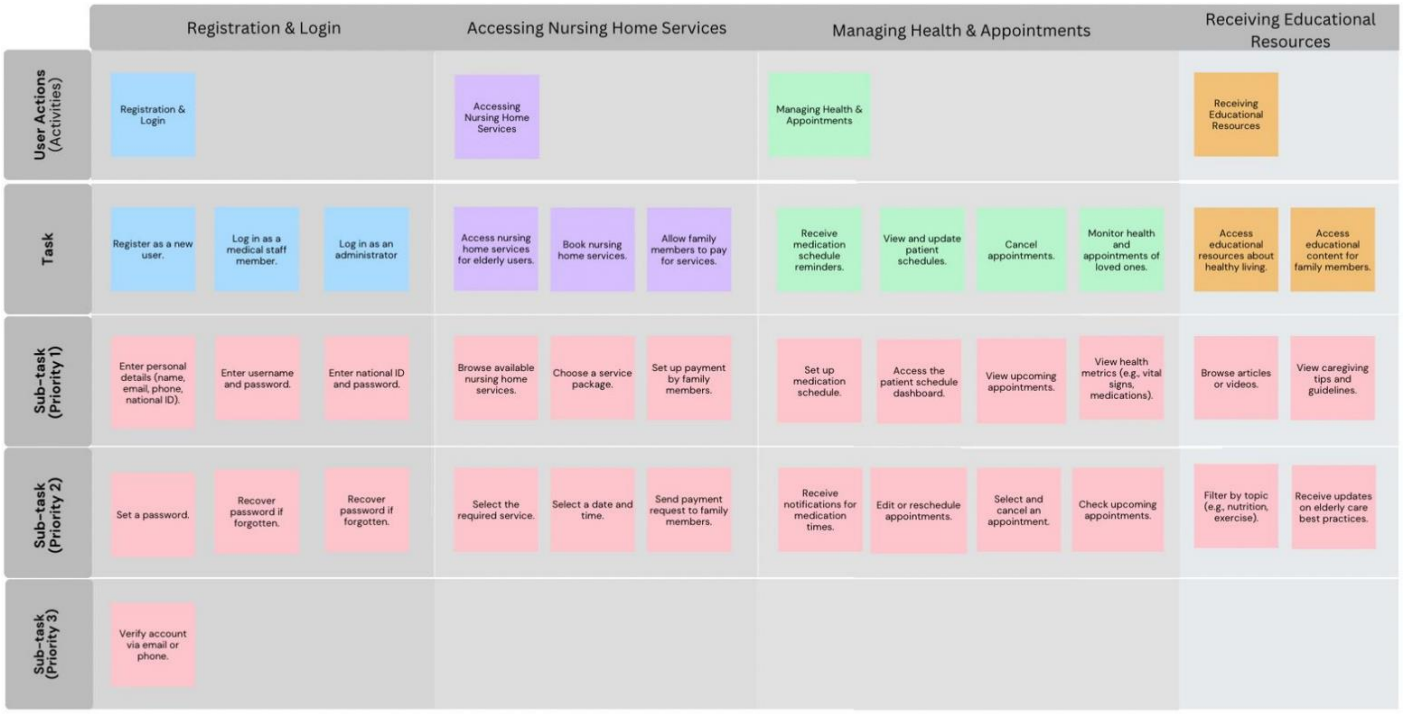
1.6.3.1 As Administrator, l want to view and edit patients information so that l can manage all patients information.

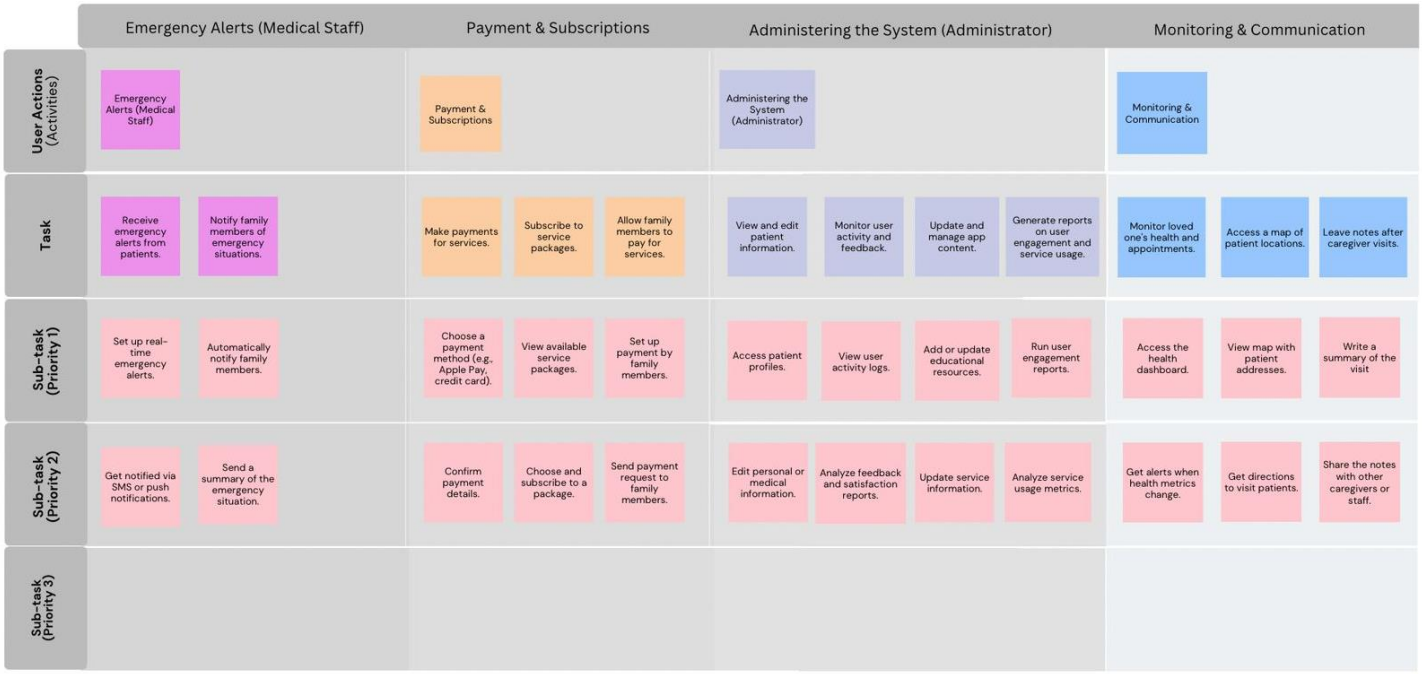
1.6.3.2 As an administrator, I want to monitor user activity and feedback through Salamatk so that I can improve the service and address any issues.

1.6.3.3 As an administrator, I want to update and manage the app's content through Salamatk so that users have access to the latest information.

1.6.3.4As an administrator, I want to generate reports on user engagement and service usage so that I can make informed business decisions.

1.7 User story Map





Summary

This chapter explains how Salamatak is designed to improve users' quality of life by providing seamless access to healthcare services and fostering ongoing communication with medical professionals. By focusing on the unique needs of this demographic, we aim to support greater independence and well-being for elderly individuals through a user-friendly, accessible interface.

Chapter 2 SYSTEM ANALYSIS

This chapter delves into the detailed functional requirements that define the core functionality of the "Salamatk" application. These requirements specify how the system should behave, the interactions between users and the system, and the data that needs to be processed.

2.1 Purpose

The purpose of this document is to outline the software requirements for the "Salamatk" application, designed to assist the elderly in Makkah with home care services.

2.2 Scope

This document covers both functional and non-functional requirements for the software, including user interfaces, data management, and system constraints.

2.3 Product Value

The application aims to improve the quality of care for the elderly by providing a comprehensive platform for health monitoring, communication with healthcare providers, and access to necessary services.

2.4 Intended Audience

The intended audience includes software developers, project managers, stakeholders, and end-users (elderly individuals and their caregivers).

2.5 Intended Use

This document will serve as a guide for the development and validation of the Salamatk application, ensuring that all requirements are met throughout the software development lifecycle.

2.6 General Description

Salamatk is a home health application that provides various services, including tracking health metrics, scheduling appointments, and offering emergency assistance for the elderly.

2.7 System requirements

2.7.1 General Functional Requirements

2.7.1.1 Major System Requirements

- The system must support Android and IOS devices.
- The application must have a user-friendly interface suitable for elderly users.

2.7.1.2 External Interface Requirements

- The application will interface with GPS for location tracking.
- It will connect to a cloud database for data storage and retrieval.

2.8.1 Functional and data requirements

2.8.1.1 Non-Functional Requirements

The "Salamatk" application must meet the following non-functional requirements to ensure its overall performance, reliability, and security:

2.8.1.1.1 Performance: The application must respond to user requests within 2 seconds for 95% of transactions. This ensures a smooth and responsive user experience, which is particularly important for the elderly population.

2.8.1.1.2 Security: All sensitive user data, including personal information, medical records, and financial details, must be protected using industry-standard encryption algorithms.

2.8.1.1.3 Data Encryption: Data must be encrypted both in transit
(while being transmitted over the network) and at rest (when stored on the server).

2.8.1.1.4 Secure Authentication: The login system should employ strong password hashing techniques to prevent unauthorized access to accounts.

2.8.1.1.5 Access Control: The application should have a system for controlling user permissions, ensuring that each user can only access the data and features they are authorized to view or modify.

2.8.1.1.6 Usability: The application must be designed to be user-friendly, accessible, and easy to navigate for the elderly population.

2.8.1.2 Functional Requirements

Software Requirements List:

2.8.1.2.1 User Authentication

1. **Introduction:** Users must log in securely using their username and password.
2. **Inputs:** Username, password.
3. **Processing:** Validate credentials against the database.
4. **Outputs:** Access granted or denied message.
5. **Error Handling:** Provide options for password recovery if credentials are incorrect.

2.8.1.2.2 Appointment Scheduling

1. **Introduction:** Users can schedule medical appointments.
2. **Inputs:** Date, time, doctor selection.
3. **Processing:** Check availability and confirm appointment.
4. **Outputs:** Confirmation of appointment.
5. **Error Handling:** Notify user if the selected time is unavailable.

2.8.1.3 Use Cases

2.8.1.3.1 Use Case 1: Sign In

- **Actors:** User, System.
- **Preconditions:** User has an existing account.
- **Postconditions:** User is logged in and redirected to the dashboard.

2.8.1.3.2 Use Case 2: **Create Account**

- **Actors:** User, System.
- **Preconditions:** User is a new user.
- **Postconditions:** User account is created, and user is logged in.

2.8.1.3.3 Use Case 3: Appointment Scheduling

- **Actors:** User, System.
- **Preconditions:** User is logged in and has access to the service.
- **Postconditions:** Appointment is successfully scheduled, and the user receives a confirmation notification.

Summary

This chapter goes deeper into the app's objectives, scope, and value, emphasizing its role as a comprehensive health service tool for elderly users. This section discusses the intended users elderly individuals, healthcare professionals, and administrators and outlines the primary system requirements. It explains both functional needs (such as appointment scheduling, emergency assistance, and health tracking) and non-functional requirements, including ease of use, data security, and reliable performance, especially on iOS devices.

Chapter 3 DESIGN CONSIDERATIONS

3.1 Purpose

- Allowing the delivery of medical procedures and therapies on site that would not be possible in other housing.
- Save time and effort for the elderly.
- Ease of providing them their tests.
- Continuous communication with the patient.

3.2 Scope

Salamatk will provide what is called custodial care, providing help getting in and out of bed, and assistance with feeding, bathing, and dressing. However, nursing homes differ from other senior housing facilities in that they also provide a high level of medical care to help them manage their health and maintain their independence.

3.4 Overview

The program includes detailed specifications for the " Elderly home care" software, covering functional and non-functional requirements, user interfaces, data management, and testing criteria.

3.5 Reference Material

1- Family Caregiver Guidelines
2- Seniors' Needs Assessment Reports
3- Medical Facilities Best Practices

3.6 Definitions and Acronyms

***3.6.1 Elderly* :** Individuals who are considered to be in the later stages of life, typically past middle age.

3.6.2 Medical Staff : A person who provides direct care and support to individuals who are elderly or have health-related needs.

3.7 System Architecture

a. Specialized Hardware Requirements

There is no specialized hardware requirements. However, the application requires access to **mobile devices with GPS** and other basic functionalities like location tracking for proper operation.

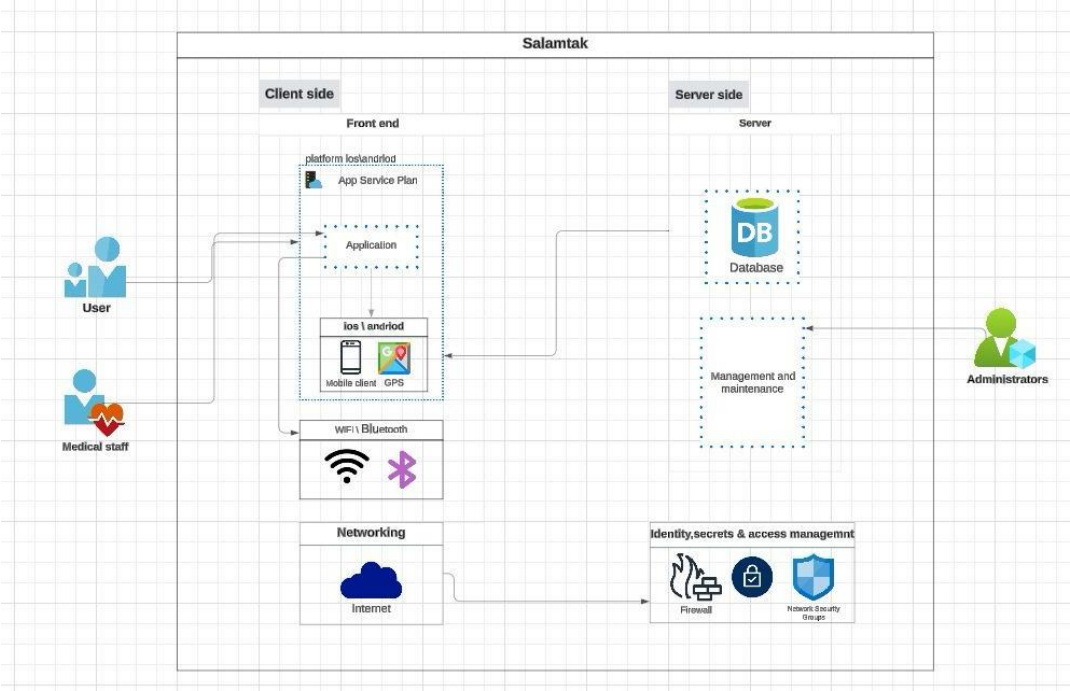
b. Specialized Software Requirements

- **Google Cloud** for reliable database storage.
- The app will also require **Bluetooth** and **Wi-Fi** connectivity for effective data engagement without issues.

c. Programming Languages and Tools

The primary programming language utilized for the development of the project is **Python**, though other languages and tools may be considered as the project evolves, depending on specific requirements and optimization needs.

3.7.1 Salamtak System Overview (SAD)



*The **client side** provides an intuitive user interface for registration and interaction, while the **server side** manages the underlying database and administrative tasks to ensure a secure, scalable, and efficient system.*

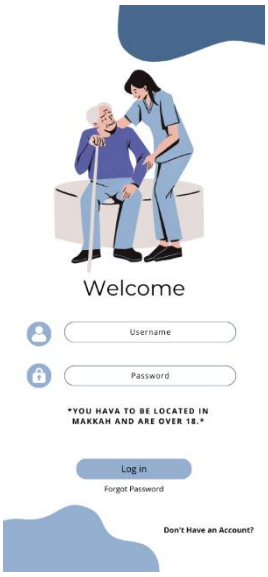
Summary

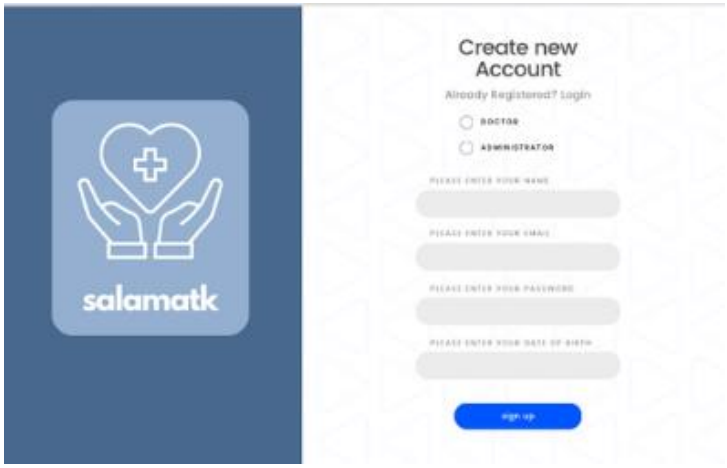
This chapter explains the design considerations elaborates on the structural and operational factors guiding the app's development. It describes how the system will facilitate easy access to medical services, improve the communication process between patients and caregivers, and support elderly users in maintaining their independence. Technical requirements include using GPS and cloud-based data management (via Google Cloud) to support location services and data storage.

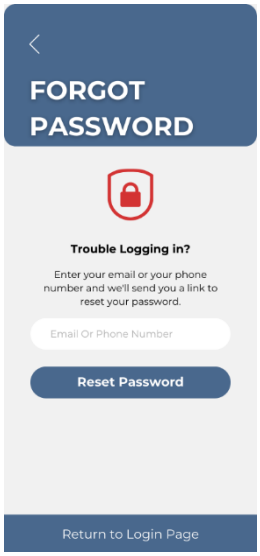
Chapter 4 SYSTEM DESIGN

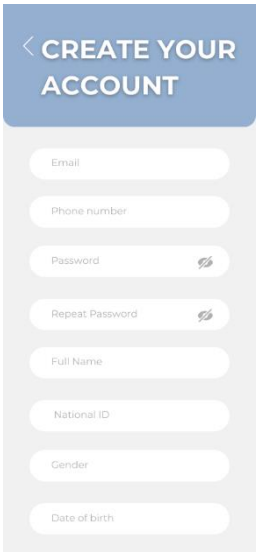
4.1 HUMAN INTERFACE DESIGN

4.1.1 Overview of User Interface (Screen Images)



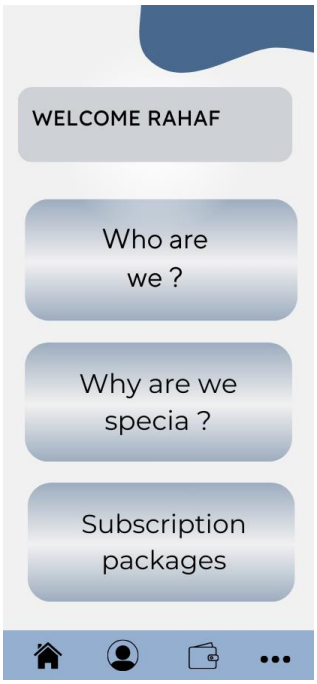


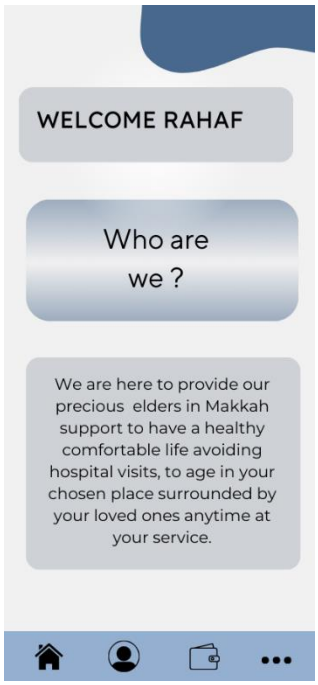


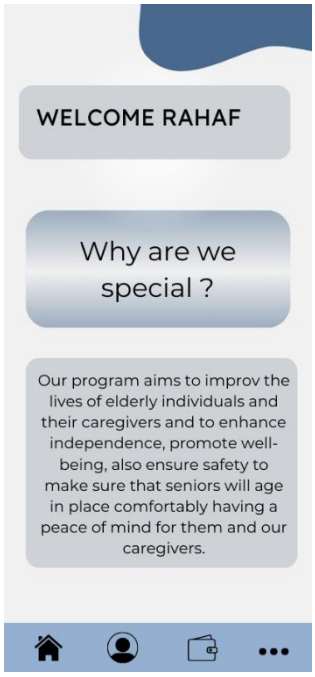


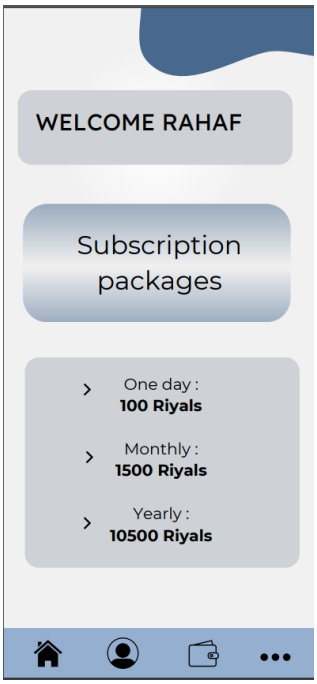
Sign in interface: If the user has an account, he can either enter his username and password so the process is completed successful (Admins and medical staff already has an account) , else you should be creating a new account
or if you forgot your password, you could reset yours with your phone number or email.

Three choices appears after the registration that would reveal a brief description about us, What make us special and types of subsections we offer

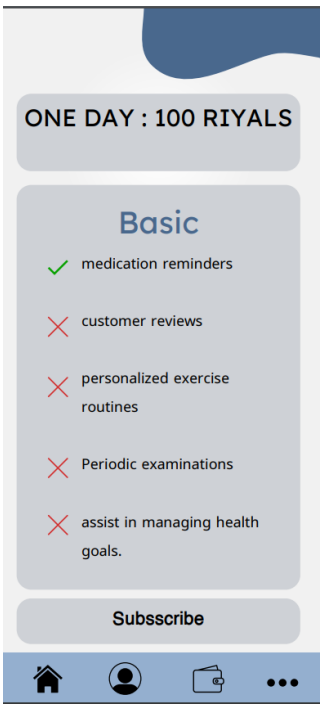


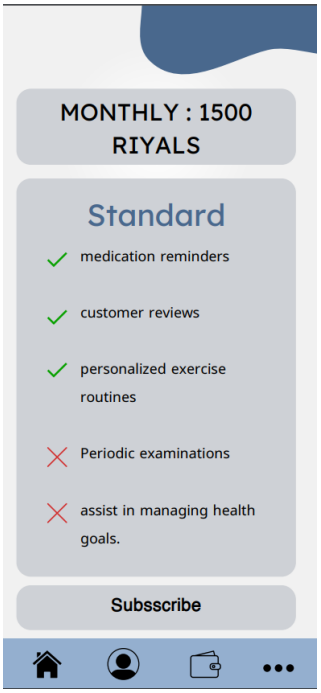


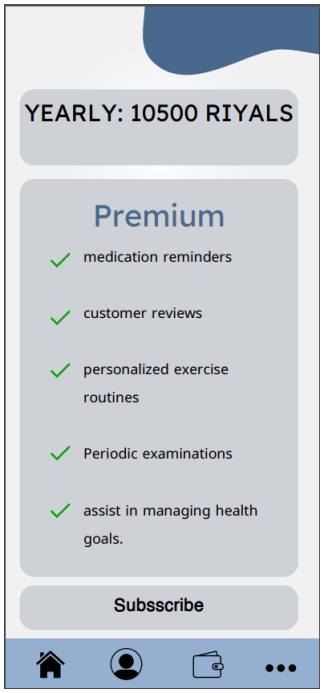


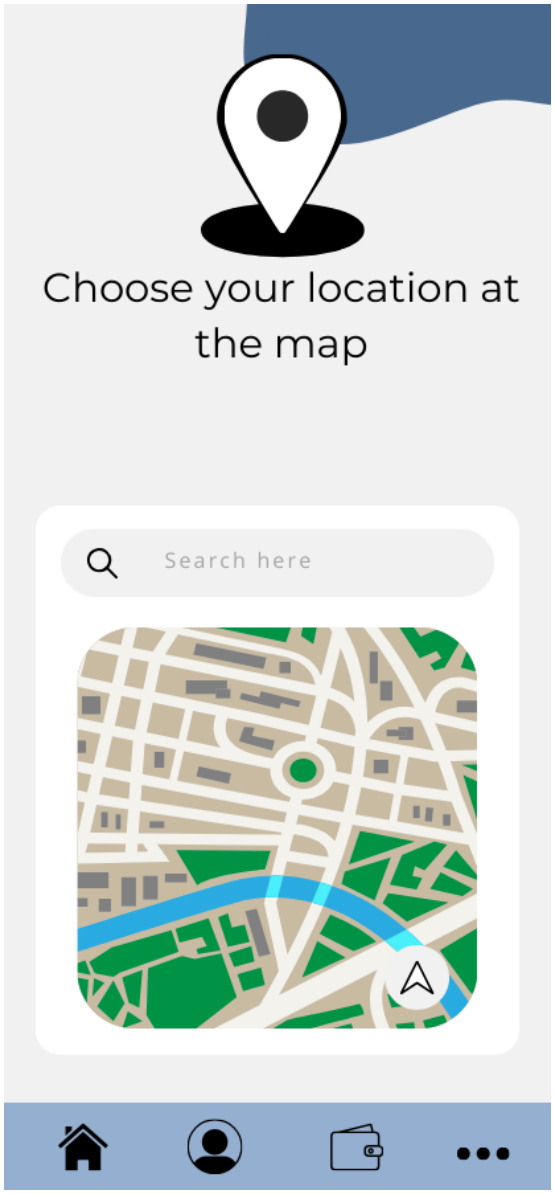


If user press subscription it will appear a description of every package
Basic, Monthly and Yeatly after choosing the subscription you should enter your

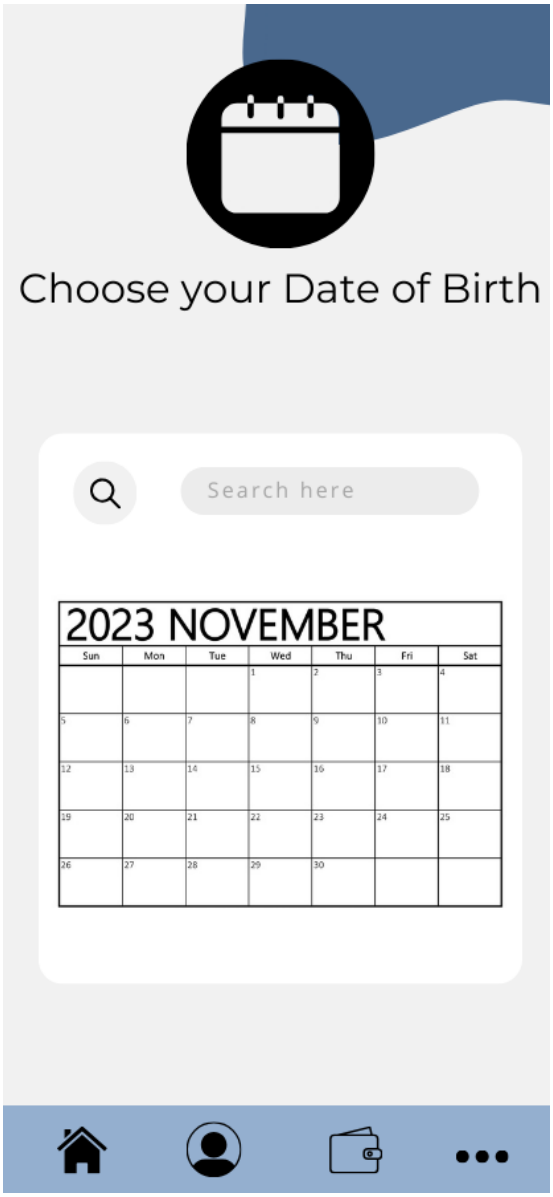








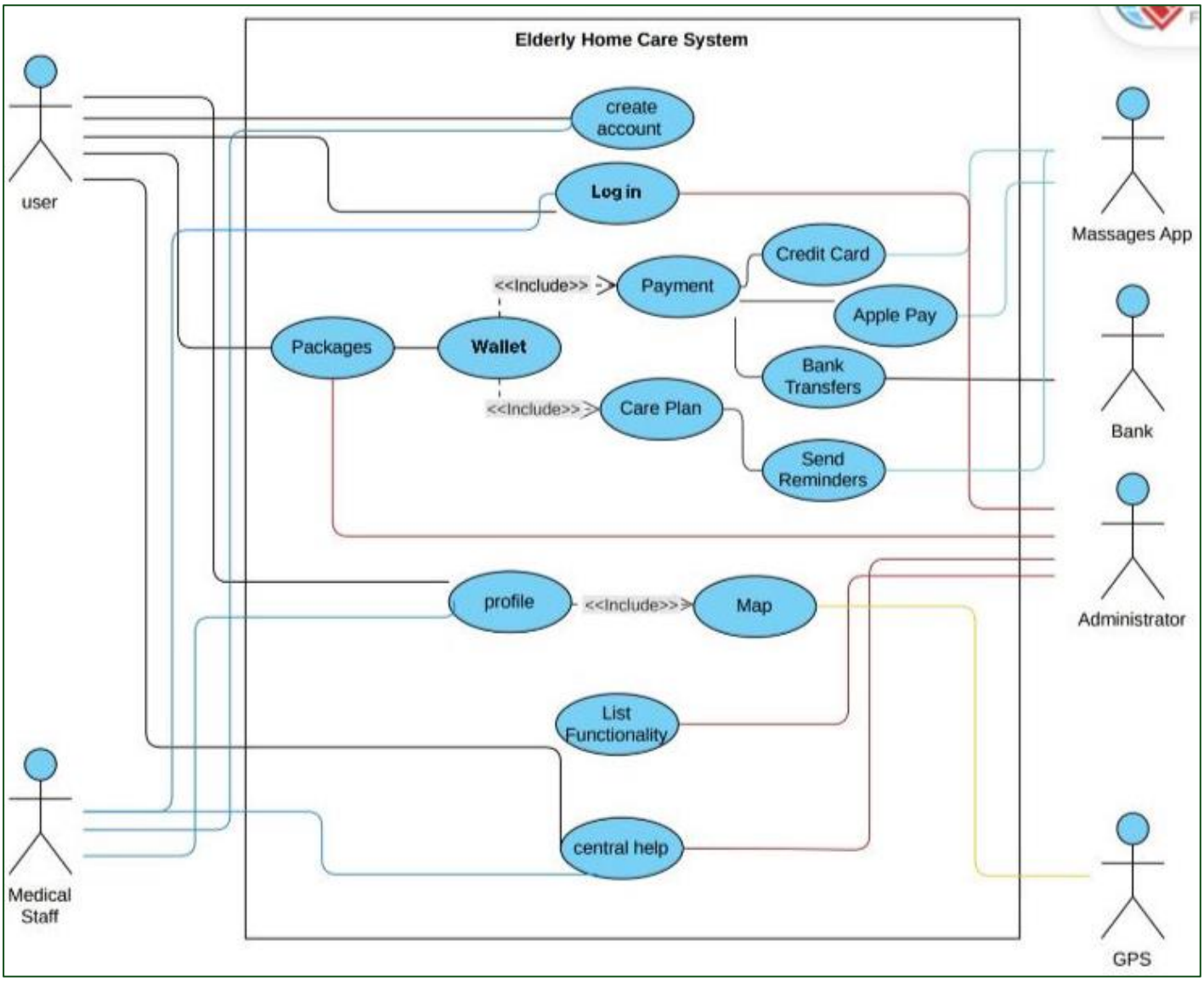
The user must enter his/her location on the map or write it.



The user must enter his/her DOB.

4.2 Detail Design

4.2.1 User Cases



Use Case: log in

Interface	Login
Access	Medical Staff, User,Administrator.
Description	Only login using your email or phone number and password
Data	Input: the user enter their information. Output: home page
Stimulus	User log in
Response	after entering the information the user will be able to do the rest of the functions.

Use Case: Create Account

Interface	Create Account
Access	Medical Staff, User.
Description	if the user didn't have a previous log in then they will need to create a new account.
Data	Input: the user enter their information. Output: home page
Stimulus	User log in don't have an account create account
Response	after entering the information the user will be able to do the rest of the functions and they will be able to return with the same account there will be no need for creating another account.

Use Case: Packages

Interface	Packages
Actor	User, Administrator.
Description	The user selects the package that fits there needs
Data	Input: the user choose to view the packages Output: the App will show the user the available packages
Stimulus	User log in User view the plans
Response	System will displays the packages

Use Case: Wallet

Interface	Wallet
Actor	User, Administrator.
Description	The user can view there wallet.
Data	Input: the user will request to view the wallet Output: wallet balance, the subscription plan and the subscription date will appear
Stimulus	User log in User view the wallet
Response	System will displays the wallet

Use Case: Payment

Interface	Payment
Actor	User, Administrator.
Description	The user selects the payment method.
Data	Input: the user after subscription will choose the payment method. Output: the App will show the user the three available method.
Stimulus	User log in packages the package chosen payment
Response	System will displays the ways that the user can pay with.

Use Case: Credit Card

Interface	Credit Card
Actor	User, Administrator, massages app.
Description	User have the ability to pay with credit card
Data	Input: the user choose the credit card method to pay with. Output: the App will allow the user to pay
Stimulus	User log in packages the package chosen payment credit card
Response	System will allow the user to pay with credit card.

Use Case: Apple Pay

Interface	Apple Pay
Actor	User, Administrator, massages app.
Description	User have the ability to pay with Apple pay.
Data	Input: the user choose the apple pay method to pay with. Output: the App will allow the user to pay
Stimulus	User log in packages the package chosen payment apple pay
Response	System will allow the user to pay with apple pay.

Use Case: Bank Transfers

Interface	Bank Transfers
Actor	User, Administrator, Bank.
Description	User have the ability to pay with bank transfers.
Data	Input: the user choose the bank transfers method to pay with. Output: the App will allow the user to pay with entering cards information
Stimulus	User log in packages the package chosen payment bank transfers
Response	System will allow the user to pay with bank transfers and it will varication code.

Use Case: Care Plan

Interface	Care plan
Actor	User, Administrator.
Description	The user will select the plan that fits there need.
Data	Input: the user choose to view the care plan. Output: the App will show the user the care plan and when is the next payment.
Stimulus	User log in User view the wallet view plan
Response	System will displays the plan.

Use Case: Send Reminders

Interface	Send Reminders
Actor	User, Administrator, massages app.
Description	As the user medication or appointment approaches, the app will sends reminders to the user.
Data	Input: the user choose to view the plan and fill the wanted information Output: the App will schedules the c and sends remainders as the medication or appointment.
Stimulus	User log in User choose their plan massages will be send by the massage app before the appointment by 24 hour, the user will receives a massage at the same moment if it's medication time.
Response	User receives a reminder massages by the massage app.

Use Case: Profile

Interface	Profile
Actor	User, Medical Staff.
Description	The user can view their profile and edit it.
Data	Input: the user will press the profile option. Output: the App will show the user their profile.
Stimulus	User log in profile
Response	System will displays the profile.

Use Case: Map

Interface	Map
Actor	User, Medical Staff, GPS.
Description	The user can select their location on the map.
Data	Input: the user will press on the location option. Output: the App will display the map.
Stimulus	User log in profile location
Response	System will displays the map for the user.

Use Case: List Functionality

Interface	List Functionality
Actor	Administrator.
Description	The administrator can edit and update the functions.
Data	Input: the administrator will choose the function that need editing . Output: the App will display the function.
Stimulus	User log in the function
Response	System will displays the function after the editing and updating.

Use Case: Central Help

Interface	Central help
Actor	User, Medical Staff, Administrator.
Description	The user can select what kind of help they need, and find the solution.
Data	Input: the user will choose the kind of help they need. Output: the App will display the three option to help them.
Stimulus	User log in central help
Response	System will displays three options customer service, settings and show me which's going to help them solve their problem.

Summary

This chapter explain the system design provides a detailed view of the user interface and experience. It describes how elderly users will navigate the app, from registration and login to scheduling appointments and accessing emergency services. Design elements, such as a user-friendly interface tailored to the elderly, ensure that the platform is accessible and intuitive for its target users.

Chapter 5 IMPLEMENTATION AND VALIDATION

5.1 Purpose

Purpose of SCD

The code aims to develop a prototype for the "Salamatk" application, which provides healthcare services for the elderly. This model focuses on offering a login function, allowing users to securely access the platform and enhancing user experience through a simple and easy-to-use interactive interface.

5.2 Overview

Description of the SCD

The code is written in Python and relies on functions for logging in and logging out. User data and passwords are stored in a dictionary to validate the inputs. After entering a username and password, the program checks the validity of the data and displays a welcome message upon success or an error message upon failure. The code also provides an option for logging out.

5.3 Source Code Documentation (SCD)

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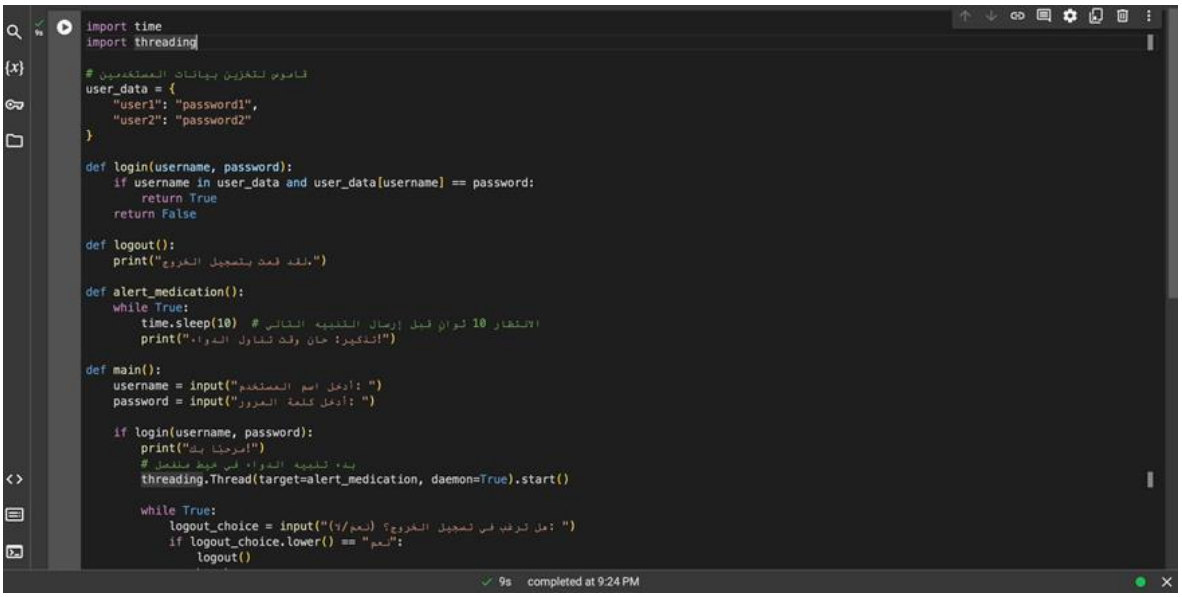
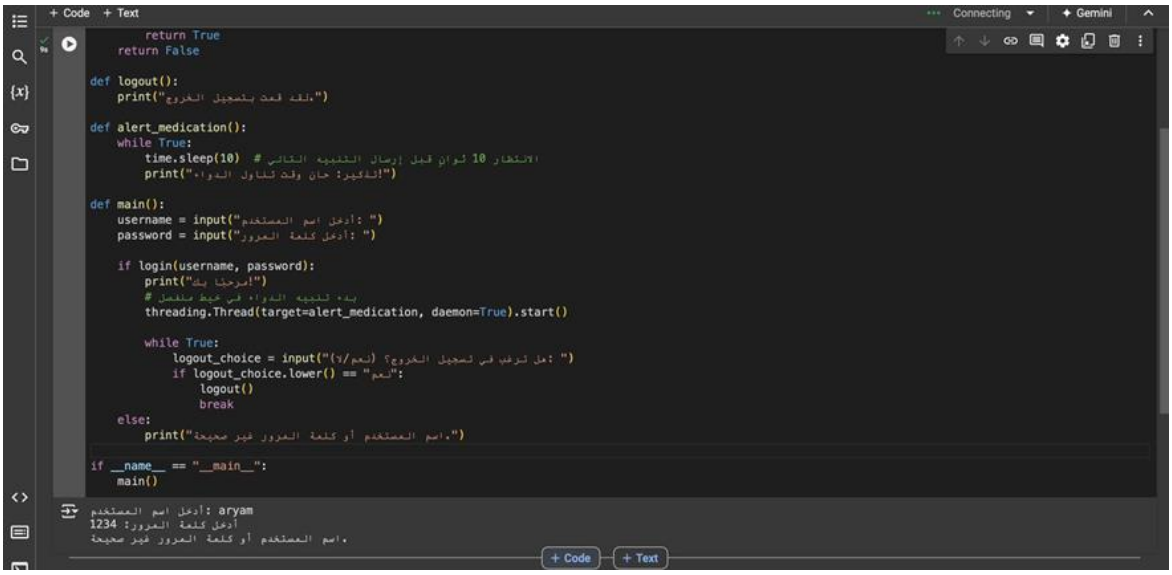


```
import time
import threading

# قاموس لتخزين بيانات المستخدمين
user_data = {
    "user1": "password1",
    "user2": "password2"
}

def login(username, password):
    if username in user_data and user_data[username] == password:
        return True
    return False

def logout():
    print("لقد قمت بتسجيل الخروج.")

def alert_medication():
    while True:
        time.sleep(10)  # الانتظار 10 ثوانٍ قبل إرسال التنبيه التالي
        print("تذكير: حان وقت تناول الدواء!")

def main():
    username = input("أدخل اسم المستخدم: ")
    password = input("أدخل كلمة المرور: ")

    if login(username, password):
        print("مرحبًا بك!")
        # بدء تنبيه الدواء في خيط منفصل
        threading.Thread(target=alert_medication, daemon=True).start()

        while True:
            logout_choice = input("(نعم/ن) هل تريد في تسجيل الخروج؟: ")
            if logout_choice.lower() == "نعم":
                logout()
```

9s completed at 9:24 PM



```
+ Code + Text                                                    Connecting  Gemini
        return True
    return False

def logout():
    print("لقد قمت بتسجيل الخروج.")

def alert_medication():
    while True:
        time.sleep(10)  # الانتظار 10 ثوانٍ قبل إرسال التنبيه التالي
        print("تذكير: حان وقت تناول الدواء!")

def main():
    username = input("أدخل اسم المستخدم: ")
    password = input("أدخل كلمة المرور: ")

    if login(username, password):
        print("مرحبًا بك!")
        # بدء تنبيه الدواء في خيط منفصل
        threading.Thread(target=alert_medication, daemon=True).start()

        while True:
            logout_choice = input("(نعم/ن) هل تريد في تسجيل الخروج؟: ")
            if logout_choice.lower() == "نعم":
                logout()
                break
    else:
        print("اسم المستخدم أو كلمة المرور غير صحيحة.")

if __name__ == "__main__":
    main()

أدخل اسم المستخدم: aryam
أدخل كلمة المرور: 1234
اسم المستخدم أو كلمة المرور غير صحيحة.
+ Code + Text
```

5.3.1 Brief Information about the Code

- User Data Storage: The code stores usernames and passwords in a dictionary.

- Login Function: Validates user credentials and returns a result (either successful or failed).

- Logout Function: Provides an option to log out and confirms the action to the user.

- Medication Alert: The alert function runs in a separate thread, sending reminders to the user every 10 seconds to take their medication.

- User Input: The program prompts the user to enter their username and password.

- Login Attempt: Calls the login function and displays a welcome message on success or an error message on failure.

- Logout Option: Asks the user if they wish to log out after successfully logging in.

5.4 Quality Assurance Documentation (QAD)

5.4.1 Quality Management Plan

The plan helps to schedule QA tasks and manage testing activity for product managers.

Class Name: Salamtak Application			
Functionality:			
Goal	***Outcome***	***Target Objective***	***Performance Measures/Data Source(s)/ Frequency/Responsible Person***
Log in	Enables existing users to log in by entering their email and password.	Validates user credentials for access to the system.	User
Create Account	Allows users to create new accounts by entering their email, name, and password.	Successfully registers new users in the system.	User
Packages	Displays available packages for users to choose from.	Informs users about different service packages offered.	Software/company
Central Help	Provides assistance and guidance on using the application.	Helps users navigate the system and resolve issues.	Administrator
List Functionality	Offers various lists such as Purchase, Rental, Sale, Maintenance, Help, and Delivery.	Provides a selection of available services for user interaction.	Software
Profile	Allows users to view and update their profile information.	Enables users to manage their personal details within the application.	User

5.4.2 Test Specifications

It provides a detailed description of each test [specification or scenario] and the [requirement(s) or Use Case(s)] it tests.

Test Name:		Test Case 3: Display list of all TICRS documents.		
Description:		Case Details screen tab will provide access to users to view or display list of all TCRS documents.		
Requirement(s):		TICRS-6.		
Prerequisites:		The user is logged on as an LIE/SLIE/BA.		
Setup:		Tester must point to Mock P drive in test environment. Verify that the most recent file is currently in Trademarks\FAST 2.1\BIN\Fast Application.exe of the current CM Build. Create a desktop shortcut of the FAST executable file from Mock P and launch the FAST exe. Map to the TICRS drive(s):		
Step	**Operator Action**	**Expected Results**	**Observed Results**	**Pass/Fail**
● 1.	Log in	Users should be able to log in successfully with valid credentials.	Log in by entering their email and password.	Pass
● 2.	Create Account	Users should be able to register a new account with their email, name, and password.	New account created with provided details.	Pass
● 3.	Packages	Users should see a list of all available service packages.	List of available packages displayed.	Pass
● 4.	Central Help	Users should access help information and guidance for using the application.	Help information is clearly presented.	Pass
● 5.	List Functionality	Users should see various service lists, including Purchase, Rental, Sale, Maintenance, Help, and Delivery.	Comprehensive list of services shown.	Pass
● 6.	Profile	Users should be able to view and edit their profile information easily.	User's profile information is accessible and editable.	Pass

In Conclusion The Intergenerational usage of the application "Salamatk" is a pioneering step towards modernizing healthcare practices in the elderly group. The application designs developed in tandem with the requirements of the users will serve the well being of the older population. Ultimately, those in charge of the development and the use of the program are looking to create a comfortable atmosphere for the elderly, hence care for the latter as a complete process of analysis and improvements in their living conditions.

5.5 Salamatk User Manual

5.5.1 Introduction

In this user manual, we provide important information for users to effectively use the (**Salamatk**) application, and it is designed specifically fto help the elderly in Makkah with home care services. The application offers a variety of features aimed at enhancing their quality of life through improved access to healthcare services and monitoring their health.

5.5.2 Overview

The Salamatk application provides a comprehensive platform for health monitoring, connecting with healthcare providers and its primary purpose is to access necessary services, making it easier for users to manage their health.

Key features:

- **User authentication:** secure login to protect personal health information.
- **Appointment scheduling:** users can easily book and schedule medical appointments with healthcare providers.
- **Emergency aid:** quick access to emergency services.

System architecture: the application works on a web-based architecture, allowing users to access it from their devices by the Internet, it can be used on iOS platforms only.

User access mode: the Salamatk app features a user-friendly graphical user interface (GUI) this designed especially for elderly users, and it is easy for them to navigate the application and access a variety of features.

System environment: the application is designed to work iOS devices. It requires Internet connectivity to interact with a cloud database for data storage to make it accessible to user information and services.

Getting Started

This section provides a general walk-through of the **Salamatk** application, guiding users from initiation to exit. the flow of information is organized logically to help users understand the sequence of actions needed.

5.5.3 Cautions & Warnings

Before using the **Salamatk** application users should be aware of the following cautions and warnings:

- **Unauthorized access:** existing the system without proper authorization is prohibited and may result in penalties, always ensure that your login details are kept secure and unique.
- **Data privacy:** the user must protect their login information and always avoid sharing accounts with others to support the confidentiality of person and health information.
- **Emergency situations:** in case of a medical emergency, the user must contact local emergency services directly and not relying on the application only.

5.5.4 Set-up Considerations

The **Salamatk** application can be accessed by standard mobile devices with Internet access. below are the key set up considerations:

- **Equipment requirements:**

  1. Mobile device (iOS).
  2. Internet connection (Wi-Fi or mobile data).
  3. GPS functionality for location services.

- **Age requirement:** users must be at least 18 years old to use the application.
- **Location requirement:** users must be located in Mecca to access the services and features.

5.5.5 User Access Considerations

The **Salamatk** application support two main user groups:

1.Elderly users: they have full access to health monitoring features.

2. Medical staff: they have access to patient schedule update, patient information and emergency alerts. (Each user must have a unique account to access the system).

5.5.6 Accessing the System

To access the **Salamatk** system application user should follow these steps:

1. **User registration:**
    - New users must create an account after downloading the Salamatk app from the App Store.
    - Uses must fill out the registration form with personal information, including name, age (must be at least 18) and location (must be in Makkah).
    - Users must have a secure password.
2. **Logging in:**
    - Open the somatic app on your mobile device.
    - Enter your username and password in the respective fields.
    - Click on the (log in) button.
3. **Password management:**
    - If you need to change or reset your password, navigate to the setting menu after logging.
    - Follow the steps for password recovery or change, which may require verifying your identity through email or SMS.

5.5.7 System Organization & Navigation

The **Salamatk** application is organized into several main sections accessible from the homepage:

- **Dashboard**: displays an overview of the user's health status, upcoming appointments and reminders.
- **Appointment scheduling**: the user can view their schedule, reschedule, or cancel medical appointment.
- **Emergency alerts:** medical staff can view and respond to alert sent by patient in case of emergencies.
- **Wallet management:** users can also view their wallet balance.

5.5.8 Exiting the System

To properly exist the **Salamatk** application users must:

1. Simple tap the logout button found in the settings menu.
2. Then confirm the lookout action to ensure that your session is securely ended.
3. Finally close the application.

Using the System

This section provides a detailed description of each user function and feature of the **Salamatk** application, including the required inputs, system produced outputs and relevant instructions for users. Each feature is organized under its perspective sub-section.

3.1 <User Authentication>

Description: the user authentication feature allows users to securely login to the application.

Inputs:

- **Username:** A unique identifier for each user.
- **Password:** A secret word or phrase used for logging in.

Outputs:

- **Access granted:** a welcome message and read directions to the dashboard upon successful login.
- **Access denied:** an error message if the credentials are incorrect with options for password recovery.

Instructions:

1. open the Salamatk application.
2. Enter your username and password in the respective fields.
3. Click the “login” button.
4. If successful, you will be directed to the dashboard. if not, follow the prompts to recovery your password.

Screen print: [user authentication screen]:

caption: user authentication screen - enter your credentials to log in.

3.2 <appointment scheduling>

Description: this feature allows users to schedule medical appointments.

Inputs:

- **Package selection:** choose the package you want to subscribe to.
- **Personal information:** enter your details if not provided during first registration.
- **Location:** specify your current location. (Must be located in Makkah only).
- **First visit date:** select the date for your first appointment (after that, the visit will be scheduled the same day every week or month based on the selected package).

Outputs:

- **Appointment confirmation:** A message well appears for confirming the scheduled appointment.
- **Error notification:** A message if any required information is missing or if the selected time is unavailable.

Instructions:

1. Navigate to schedule appointment section for the dashboard.
2. Choose the package you wish to subscribe to.
3. Enter your personal affirmation if prompted.
4. Determine your location by inputting your address or using GPS.
5. Select the date for your first visit.
6. Click on confirm appointment.
7. Review the confirmation message to ensure your apartment is scheduled.

Screen print: [appointment scheduling screen]:

Caption: Appointment scheduling screen – Select your preferred package, enter your details, and confirm your appointment.

3.3 <payment processing>

Description: the payment feature allows users to make payments for services through various methods.

Inputs:

- **Payment method:** options include credit card, Apple Pay, or bank transfer.
- **Payment amount:** the total cost of the services selected.

Output:

- **Payment confirmation:** a message confirming successful payment.
- **Error notification:** a message if the payment fails.

Instructions:

1. Go to the “payment” section after selecting a service.
2. Choosing your payment method.
3. Enter the payment amount and any required details.
4. Click “submit payment.”
5. Review the confirmation message for successful payment.

Screen print: [payment processing screen]:

Caption: Payment processing screen - Select your payment method and confirm your payment.

3.4 <Emergency Assistance>

Description: this feature allows users to request emergency assistance from medical staff through the application.

Inputs:

- **Emergency alert:** tap the “Emergency Assistance” button to start a call to emergency services
- **Location:** automatically dedicated or manually entered location for assistance

Outputs:

- **Emergency notification:** a message, confirming that the alert has been sent to medical staff.
- **Estimated response time:** information on how quickly it can be expected.

Instructions:

1. Go to the “Emergency Assistance” on the app.
2. Click the “Emergency Assistance” button.
3. Ensure your location is currently dedicated or entered manually if necessary.
4. Confirm the request to notify medical staff

Screen print: [Emergency Assistance]:

Caption: Emergency Assistance Screen – Request immediate help.

Appendix A: Glossary

Table 1 - Glossary

Term	Definition
Authorization	*The process of granting or denying a user access to certain features or data based on their identity.*
Authentication	*The process of verifying the identity of a user before granting access to a system.*
Confidentiality	*The principle of keeping sensitive information, private, and secure from an authorized access.*
Functionality	*The range of operations that can be performed by a system or application.*
GPS	*Global positioning: A technology used for finding precise location using satellites*
Interface	*The point of interaction between the user and the application that includes a graphical and functional elements*
Navigate	*To explore an application or system (Like using menu or buttons).*
Procedure	*A set of instructions or steps to follow to accomplish a task.*
Monitoring	*The act of regularly checking the status of performance of an Application.*
Registration	*The process of creating a new user account by providing a personal information.*

Summary

Implementation and Validation

This section covers how the Salamatak application is built and tested. It includes code structure, data storage, login/logout functionality, and features like medication reminders. The chapter also outlines a quality assurance plan to ensure that the application meets performance standards and provides a secure, reliable experience.

User Manual

The user manual provides step-by-step instructions for using the app, covering setup, navigation, and functionality. It addresses common user interactions such as logging in, scheduling appointments, making payments, and requesting emergency assistance. This section is structured to help elderly users and medical staff navigate the app's main features, ensuring a seamless and secure user experience.

<Salamatk User Manual>

User Manual

Version 1.0

Date: 10/17/2024

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List of Tables

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Outputs:

- **Appointment confirmation:** A message well appears for confirming the scheduled appointment.
- **Error notification:** A message if any required information is missing or if the selected time is unavailable.

Instructions:

8. Navigate to schedule appointment section for the dashboard.
9. Choose the package you wish to subscribe to.
10. Enter your personal affirmation if prompted.
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12. Select the date for your first visit.
13. Click on confirm appointment.
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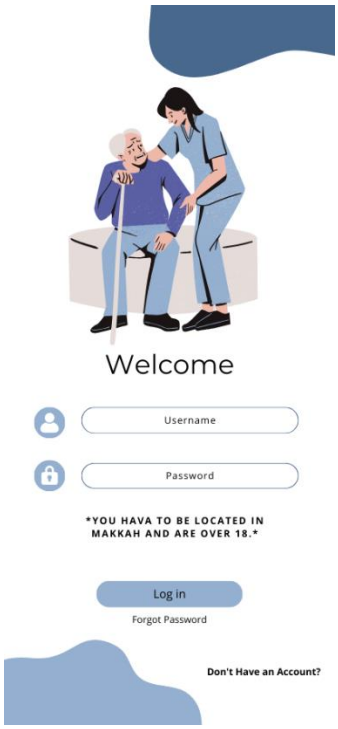
6. Click the “Emergency Assistance” button.
7. Ensure your location is currently dedicated or entered manually if necessary.
8. Confirm the request to notify medical staff

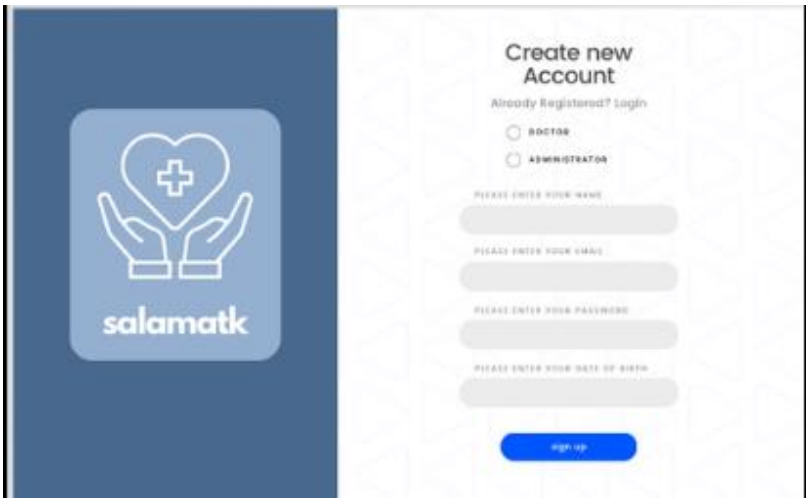
Screen print: [Emergency Assistance]:
Caption: Emergency Assistance Screen – Request immediate help.

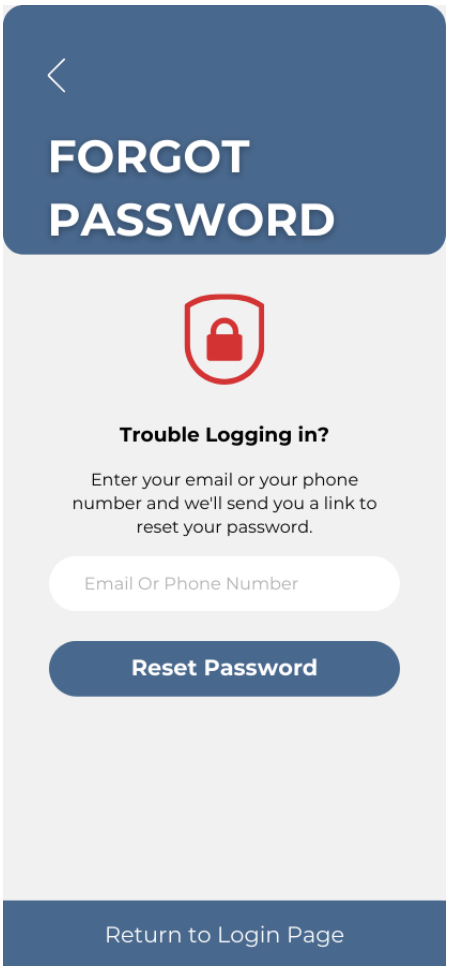
4. Interfaces

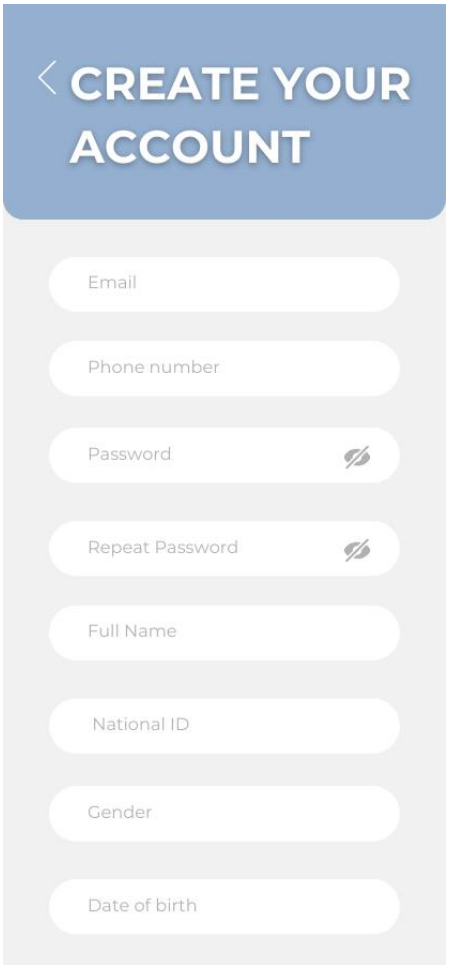
4.1.1 User Interfaces & the Administrator

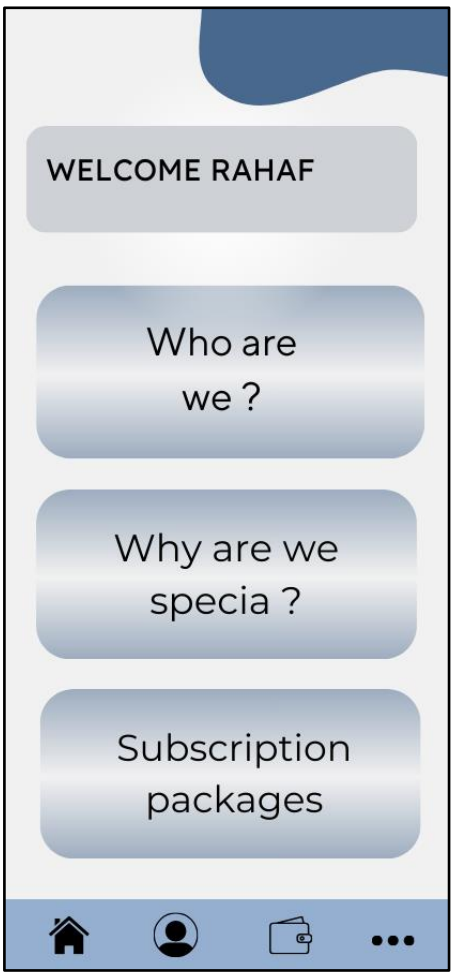
Sign in interface: If the user has an account, he can enter his username and password and the process is completed successfully else you should be creating an account or if you forgot your password, you could reset yours with your phone number or email.






FORGOT PASSWORD
Trouble Logging in?
Enter your email or your phone number and we'll send you a link to reset your password.
Email Or Phone Number
Reset Password
Return to Login Page


CREATE YOUR ACCOUNT
Email
Phone number
Password
Repeat Password
Full Name
National ID
Gender
Date of birth



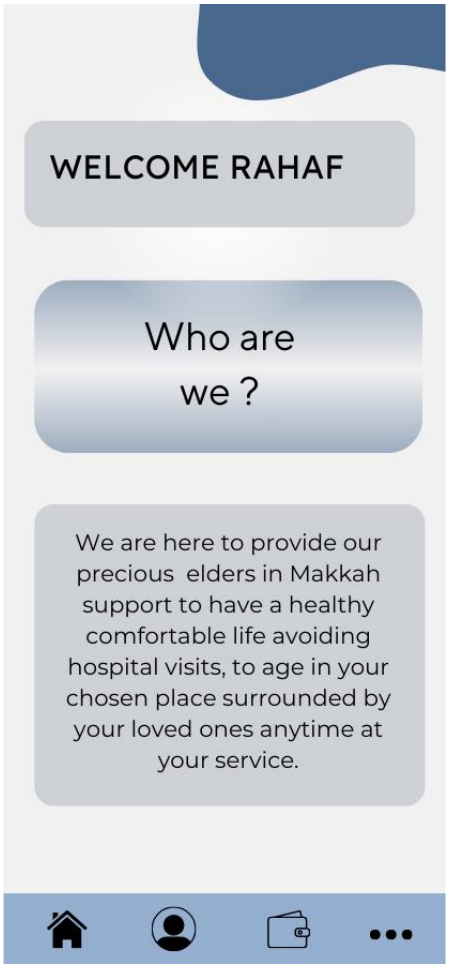


Figure interface 1

The user will have three choices after the registration.

Figure interface 2

The user will have three choices after the registration. If the user chooses the first choice the software will reveal a brief about us.

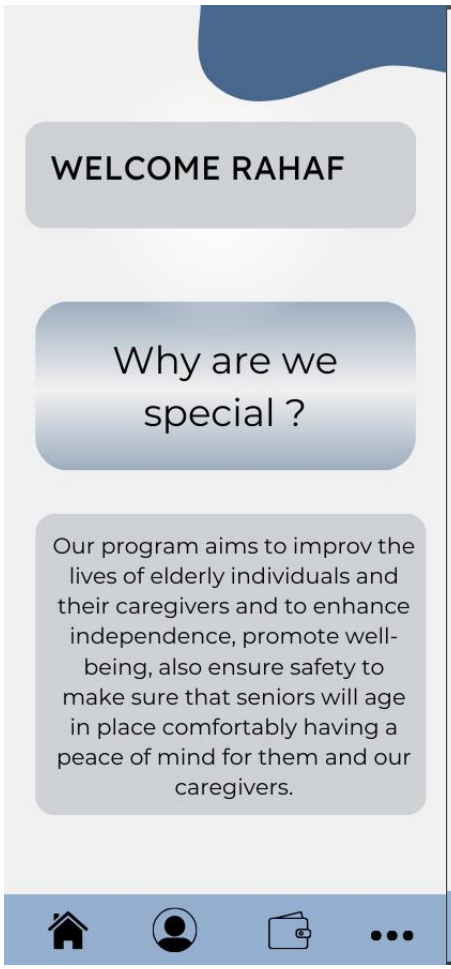


Figure interface 3

What make us special.

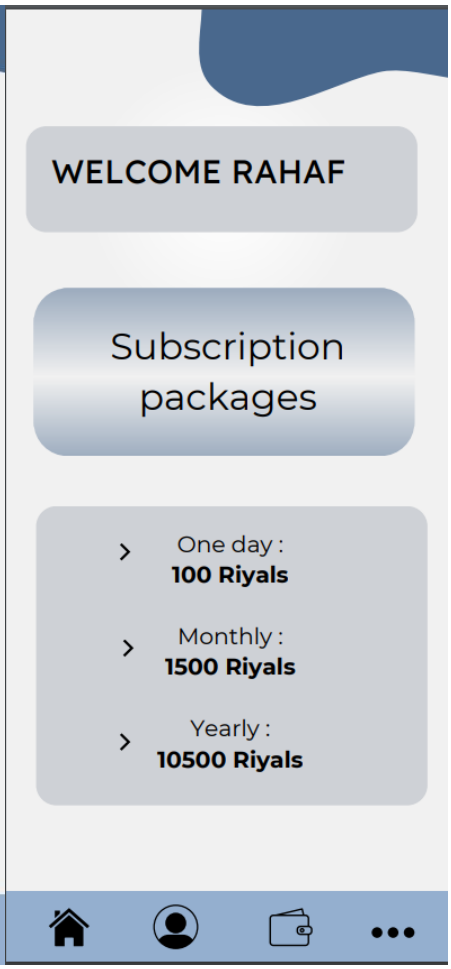


Figure interface 4

types of subsections we offer.

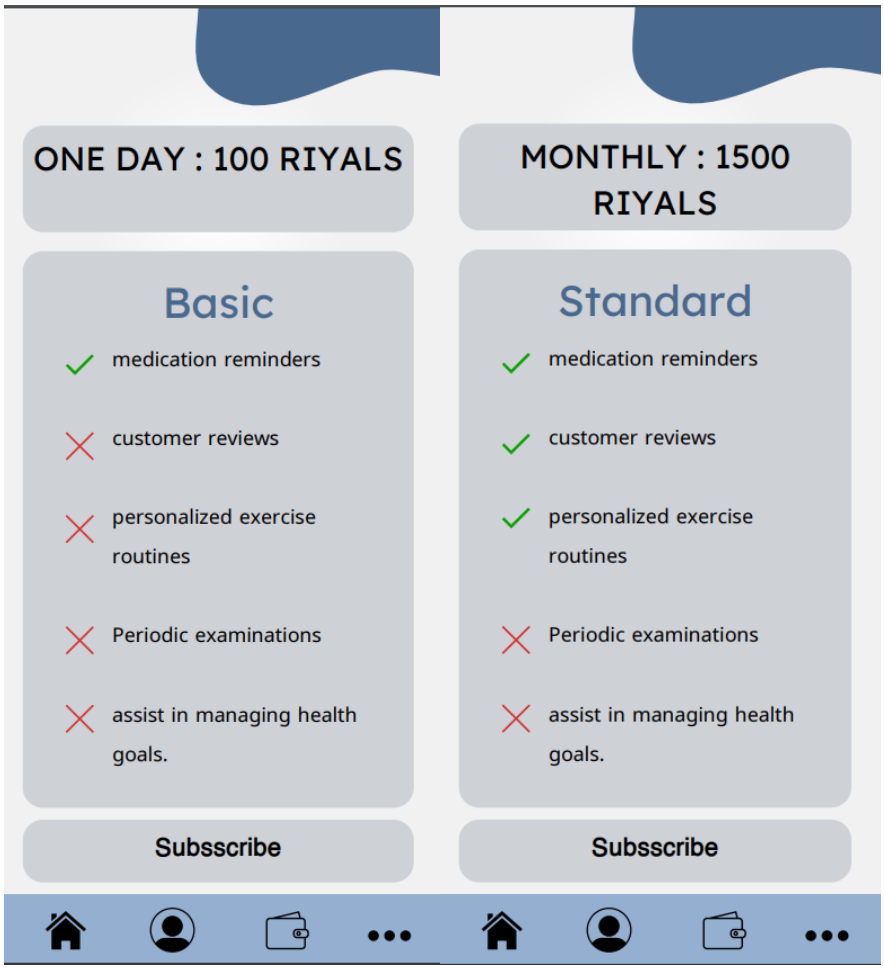


Figure interface 5

The basic subscription.

Figure interface 6

The standard subscription.

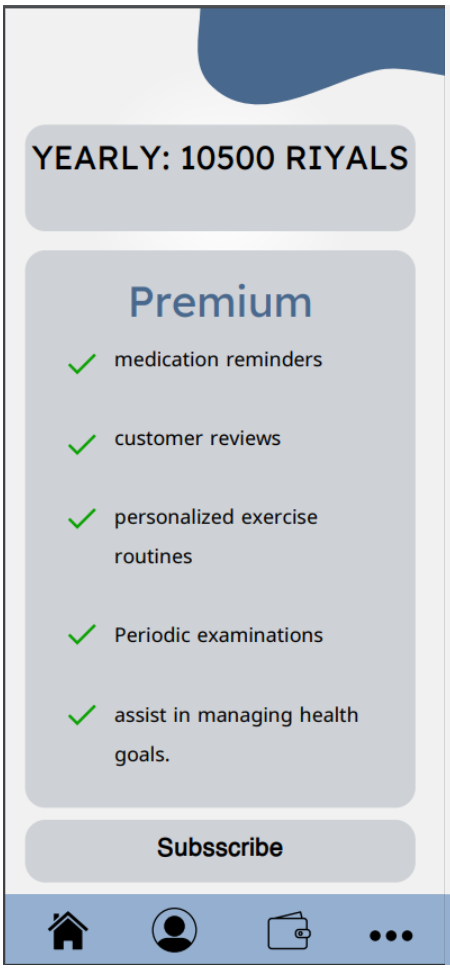


Figure interface7

The yearly subscription.

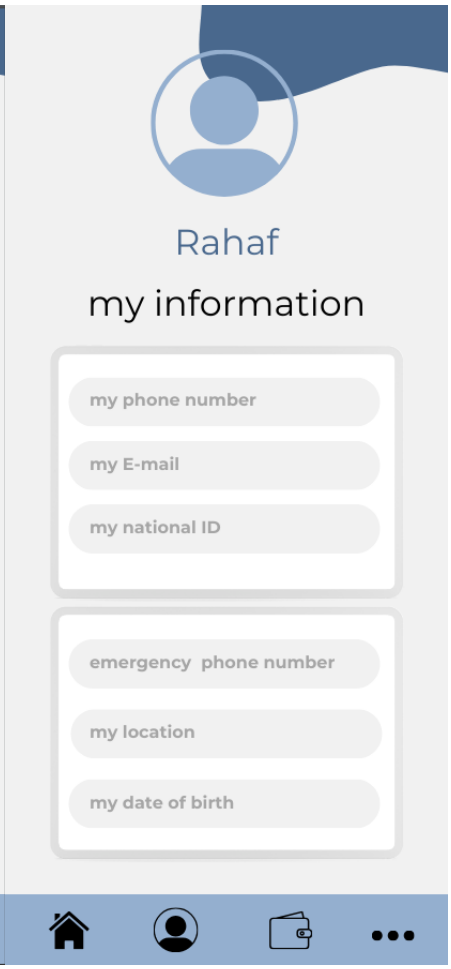
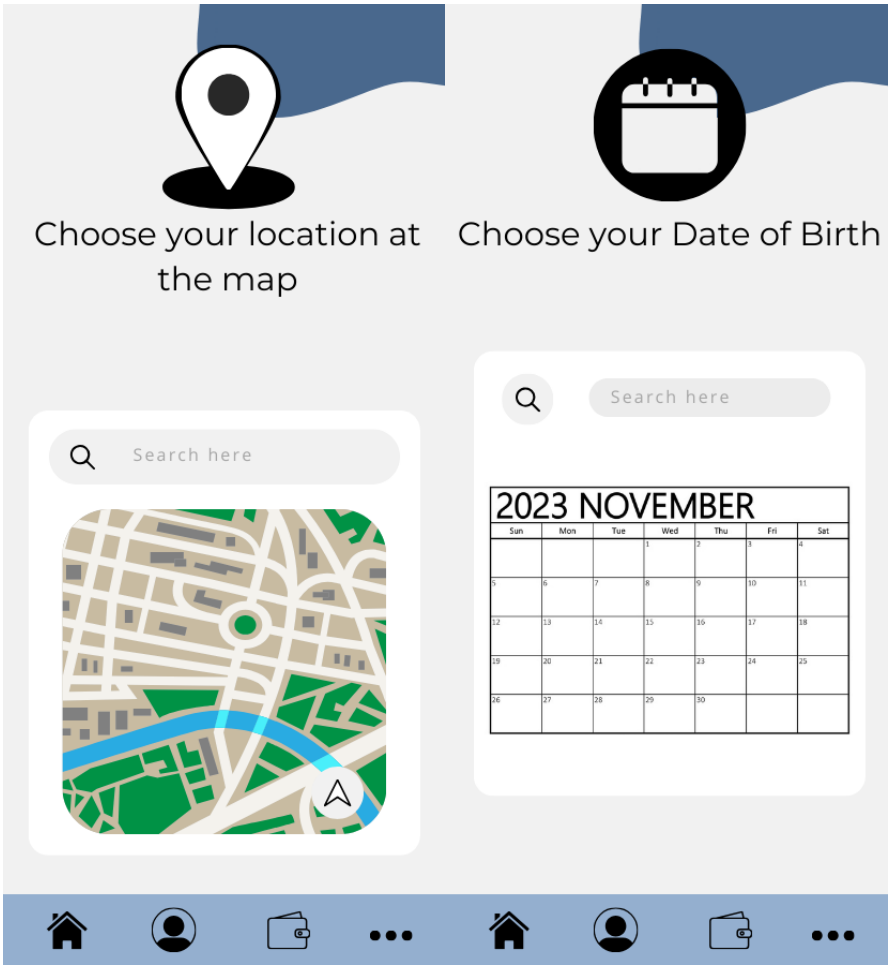


Figure interface 8

after choosing the subscription you should enter your information

Figure interface 8

The user has to enters his/her location on the map or write it.
The user has to enters his/her DOB.



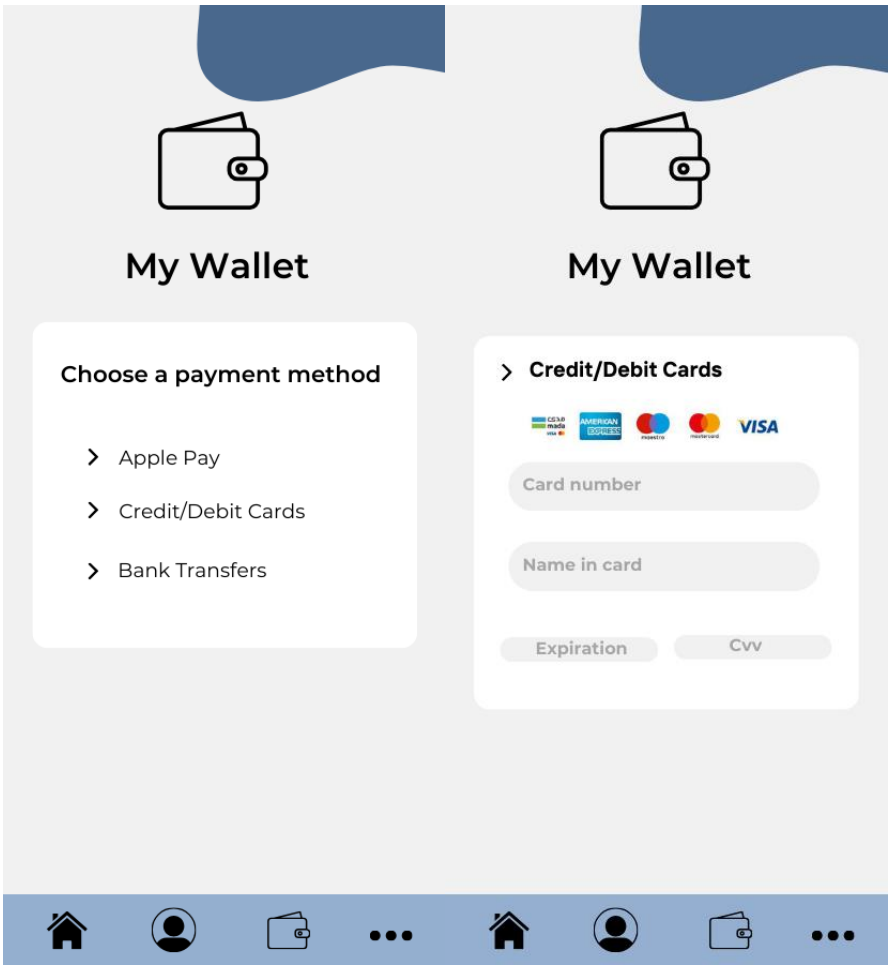


Figure interface 10

The user can choose the payment method that he/she prefer.

Figure interface 11

paying with credit card.

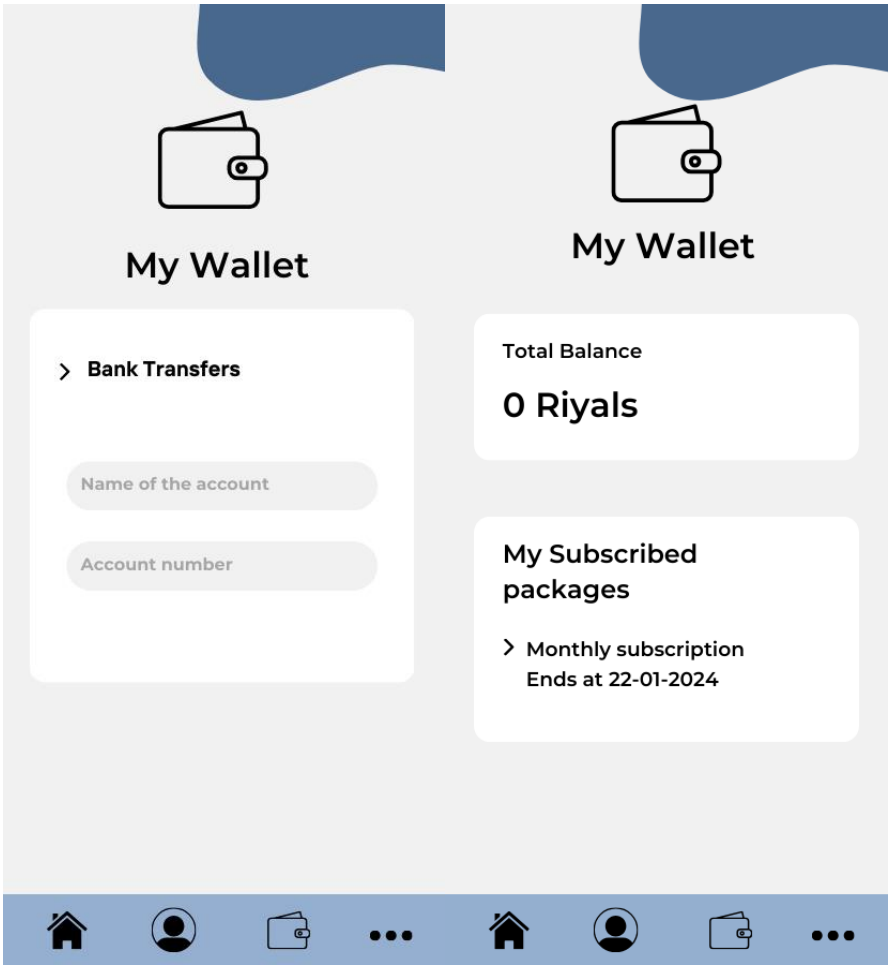


Figure interface 12

Paying with bank transfers.

Figure interface 13

Chick the wallet, and my previous payment.

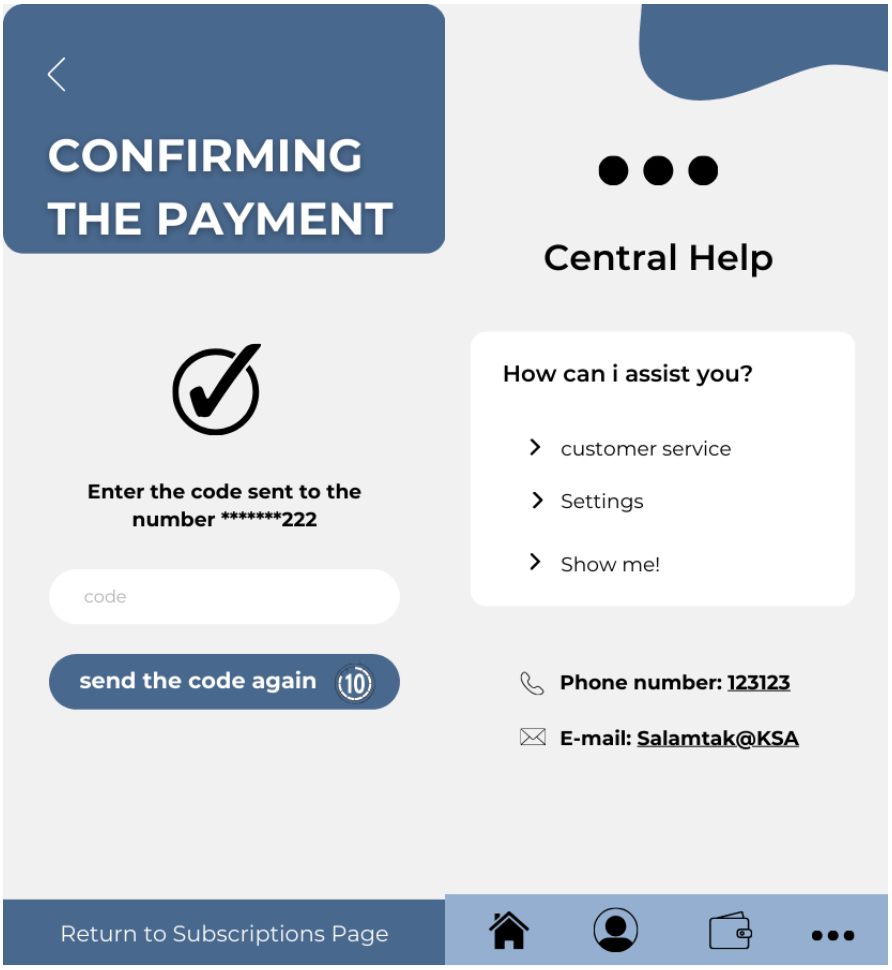


Figure interface 14

Entering the authentication code.

Figure interface 15

The Central help interface.

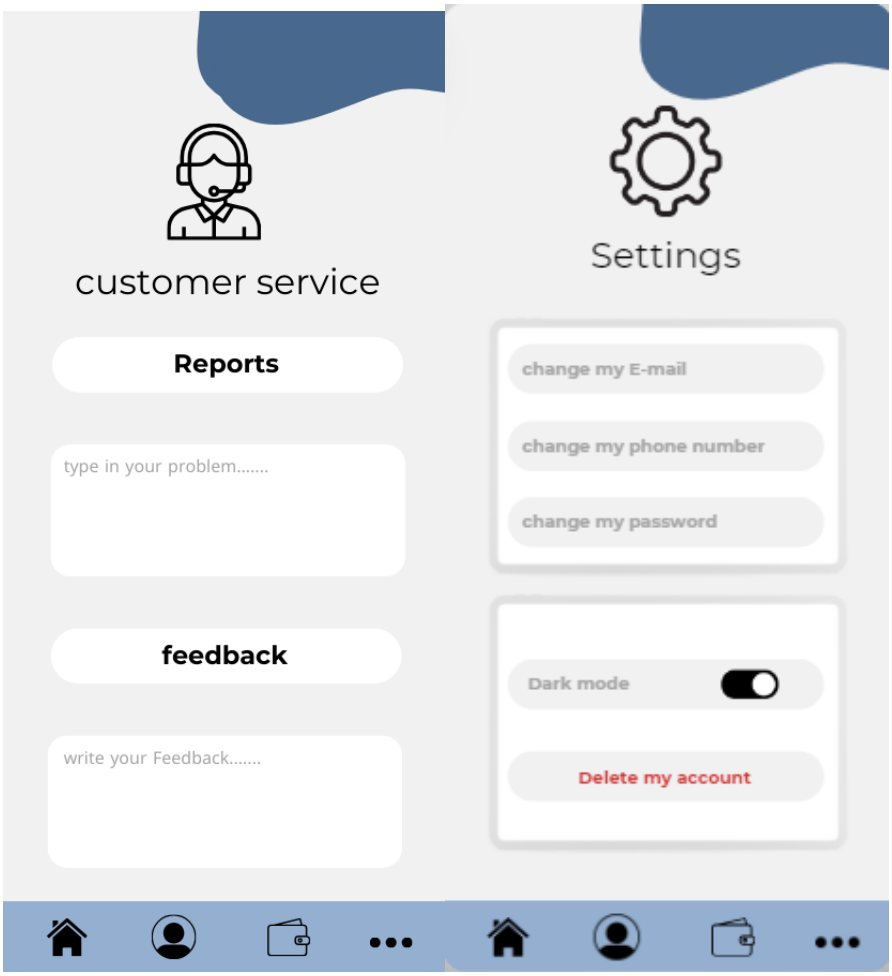
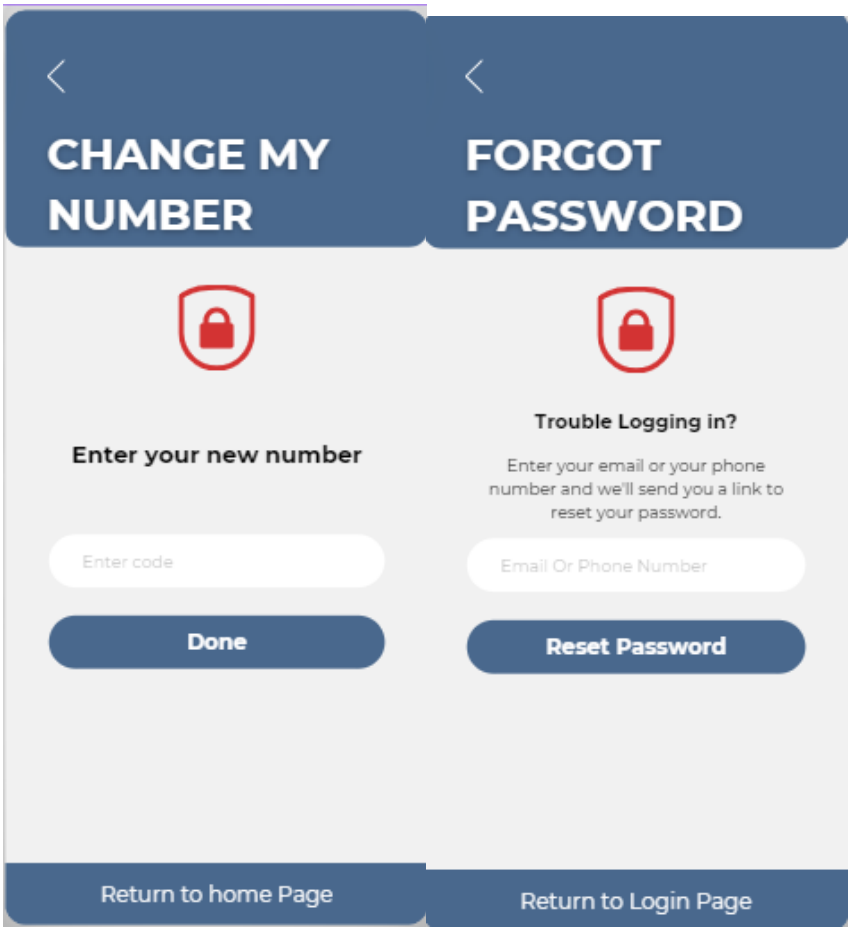


Figure interface 16

Customer service for feedback and reports.

Figure interface 17

The setting interface.


CHANGE MY NUMBER
Enter your new number
Enter code
Done
Return to home Page
FORGOT PASSWORD
Trouble Logging in?
Enter your email or your phone number and we'll send you a link to reset your password.
Email Or Phone Number
Reset Password
Return to Login Page

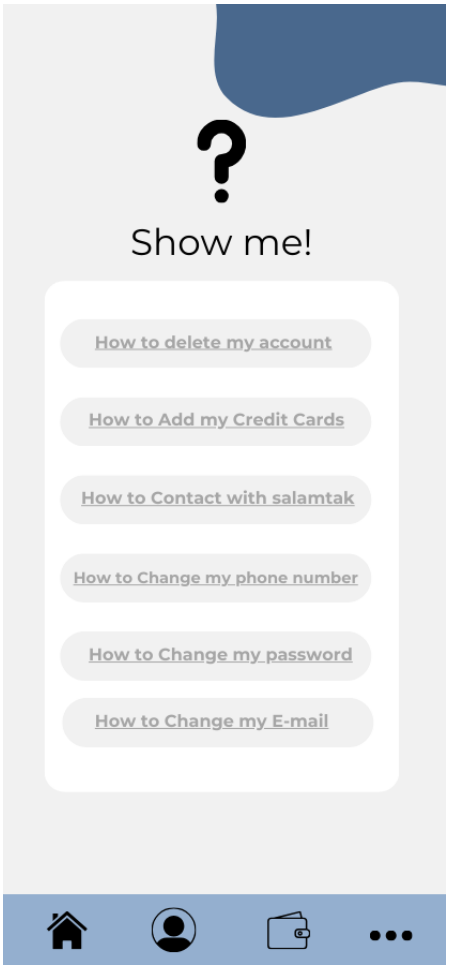


Figure interface 18

Show me is an interface for common questions answers.

Appendix A: Glossary

Table 1 - Glossary

Term	Definition
Authorization	*The process of granting or denying a user access to certain features or data based on their identity.*
Authentication	*The process of verifying the identity of a user before granting access to a system.*
Confidentiality	*The principle of keeping sensitive information, private, and secure from an authorized access.*
Functionality	*The range of operations that can be performed by a system or application.*
GPS	*Global positioning: A technology used for finding precise location using satellites*
Interface	*The point of interaction between the user and the application that includes a graphical and functional elements*
Navigate	*To explore an application or system (Like using menu or buttons).*
Procedure	*A set of instructions or steps to follow to accomplish a task.*
Monitoring	*The act of regularly checking the status of performance of an Application.*
Registration	*The process of creating a new user account by providing a personal information.*

Summary

The user manual provides step-by-step instructions for using the app, covering setup, navigation, and functionality. It addresses common user interactions such as logging in, scheduling appointments, making payments, and requesting emergency assistance. This section is structured to help elderly users and medical staff navigate the app's main features, ensuring a seamless and secure user experience.

Salamatak logo

Abstract work

The "Salamatk" application provides a comprehensive platform for health monitoring, connecting elderly users in Makkah with healthcare providers and essential services. This document outlines the application's key features, including secure user authentication, appointment scheduling, and emergency assistance. Designed with a user-friendly interface specifically for older adults, the app operates on iOS devices with internet connectivity. This guide aims to facilitate user registration and navigation, ensuring a secure and effective experience for all users.

Related work

Glob Care is a healthcare service that provides home visits from doctors and healthcare professionals. The program aims to make medical care more accessible by offering in-home services rather than requiring patients to visit clinics. It focuses on delivering personalized care, including medical check-ups and treatment, based on the patient's needs in a comfortable home environment.

Cons of this app :

Cons:

1. Performance:
- May encounter technical issues or slowdowns in the app.

2. Availability:
- Services are not available throughout the entire Makkah region.

3. Cost:
- Some users might find the service costs high.

4. Technical Support:
- Some may experience delays in response from the support team.

Comparing Salamatak with Glob care:

The "Salamatak" Project stands out as a strong competitor to applications like "Glob Care" due to several aspects. Here's a detailed explanation of how:

1. Local Specialization:
- Understanding the Local Community: "Salamatak" is specifically designed to serve the elderly in Mecca, taking into account the cultural and social needs of the area.
- Customized Services: By focusing on a specific region, the quality of services can be enhanced to meet the unique needs of local users.

2. User Experience:
- Easy User Interface: The application features a simple and user-friendly interface aimed at the elderly, making navigation and use smoother.
- Comprehensive Support: It provides clear instructions and guidance to ensure all users can fully benefit from the app's services.

3. Continuous Communication:

- Integration with Healthcare Providers: Users can directly communicate with healthcare providers, ensuring continuous medical consultations and necessary care.
- Instant Notifications: Allows sending and receiving immediate alerts, whether they are medical appointments or medication reminders.

4. Safety and Emergency Support:
- Emergency Services: The app offers quick access to emergency services, enhancing users' sense of security.
- Continuous Health Monitoring: It monitors users' health status and provides alerts if medical intervention is needed.

5. Focus on Improving Quality of Life:
- Health Education and Awareness: It offers educational resources on healthy living, helping users improve their lifestyle and prevent diseases.
- Comprehensive Care Program: Aims to provide integrated solutions including healthcare, psychological, and social support.

6. Collaboration with Local Entities:
- Strategic Partnerships: "Salamatak" can collaborate with local hospitals and health centers to enhance credibility and ensure reliable and efficient services.
- Leveraging Local Networks: The app can utilize local relationships to facilitate service access and expand offerings.

Through these features, the "Salamatak" project can surpass other applications by delivering specialized and comprehensive services that effectively meet users' needs.

Summary

The *Salamatk* application is a digital platform designed to provide comprehensive health monitoring and support services for elderly users in Makkah. The app connects users with healthcare providers and essential services, facilitating access to medical appointments, emergency assistance, and health management tools. It is designed with an easy-to-use interface tailored for older adults and is available on iOS devices, aiming to create a secure, efficient, and user-friendly experience.

In comparison to similar services like *Glob Care*, which provides home visits by healthcare professionals but faces limitations such as high costs, technical issues, and limited availability in Makkah, *Salamatk* offers several advantages. It is specifically customized to meet the cultural and social needs of the local community, featuring continuous communication with healthcare providers, instant notifications, and dedicated emergency support. Additionally, *Salamatk* promotes quality of life improvements by offering health education resources, psychological support, and collaborative efforts with local hospitals to enhance service reliability and reach. These features make *Salamatk* a robust and locally focused solution for elderly care, surpassing general healthcare applications by addressing the unique needs of its target users.