Chapter 0: Preface

Today, when society develops, the need to ensure nutrition for each individual in the family is more and more focused. From these needs, a variety of nutritional monitoring applications are created but do not meet the needs of users. We will develop a mobile application based on an android operating system. The motivation for this project came from the group meeting and we discussed all of the project options available to us. therefore, a fully functional application that meets all the needs of the user has been discussed and designed by the team. Tracking your nutrition has so many benefits, from helping to manage food intolerances to increasing energy, avoiding changes in mood, and fueling the rhythms of your day. Whatever your reasons for logging your meals, a good app can help.

Chapter 1: Introduction

1.1 Purpose

This document outlines the usage and implementation of the Nutrition App System.

1.2 Document Conventions

This Document was created based on the IEEE template for System Requirement Specification Documents.

1.3 Scope

This application is intended for those who do not know whether their diet and activities are healthy or not. The app will help users control and achieve their goal.

Human health is always the first priority, so we want to build this app to keep everyone's health in the best state.

Chapter 2: Glossary.

The definition of a calorie: is the amount of energy needed to raise the temperature of 1 gram (g) of water through 1° Celsius. The type and amount of food we eat determine how many **calories** we consume.

Chapter 3: User requirement definition

Login: Users can log in their account into the system based on the database by inputting their username/email and password in login form.

Signup: Users can create a new account into the system by inputting some basic information about them in sign up form.

Unregister: the user removes the username and password from the database

Calculator: User input some information(gender, weight,…) to calculate.

Schedule Reminder: Users can be reminded by the system in order to do their plan.

Set the goal: This is a function that helps users to set goals for themselves to help improve their nutritional status.

Manage user information: Function that allows users to add, delete, or edit information of users.

Add data: function to help users input information about achieved goals and thereby help the computational system make the most suitable nutritional regimens for the user.

Eliminate unwanted foods: This is an interesting function to help users choose their favorite food sources to improve nutritional quality and help the system to come up with the most suitable regimen for each subject.

Warn: This is a convenient function of the system that contributes to improving the efficiency of users' nutritional quality management by notifying users when they are doing wrong or alerting users when they are not doing enough system requirements.

Input information of food: This is a manual function that helps the user to provide information about the Nutrient Sources of a food that contributes to improving the performance of the formulation of nutrition.

Chance the user interface: is an interesting function of the system that contributes to the attractiveness of the user to help the user maintain their own nutritional control.

Set up the security of the app: is a utility function of the system that contributes to enhancing user experience when not having to log in many times to the system and still ensuring security by using other functions such as photo application password or Fingerprint.

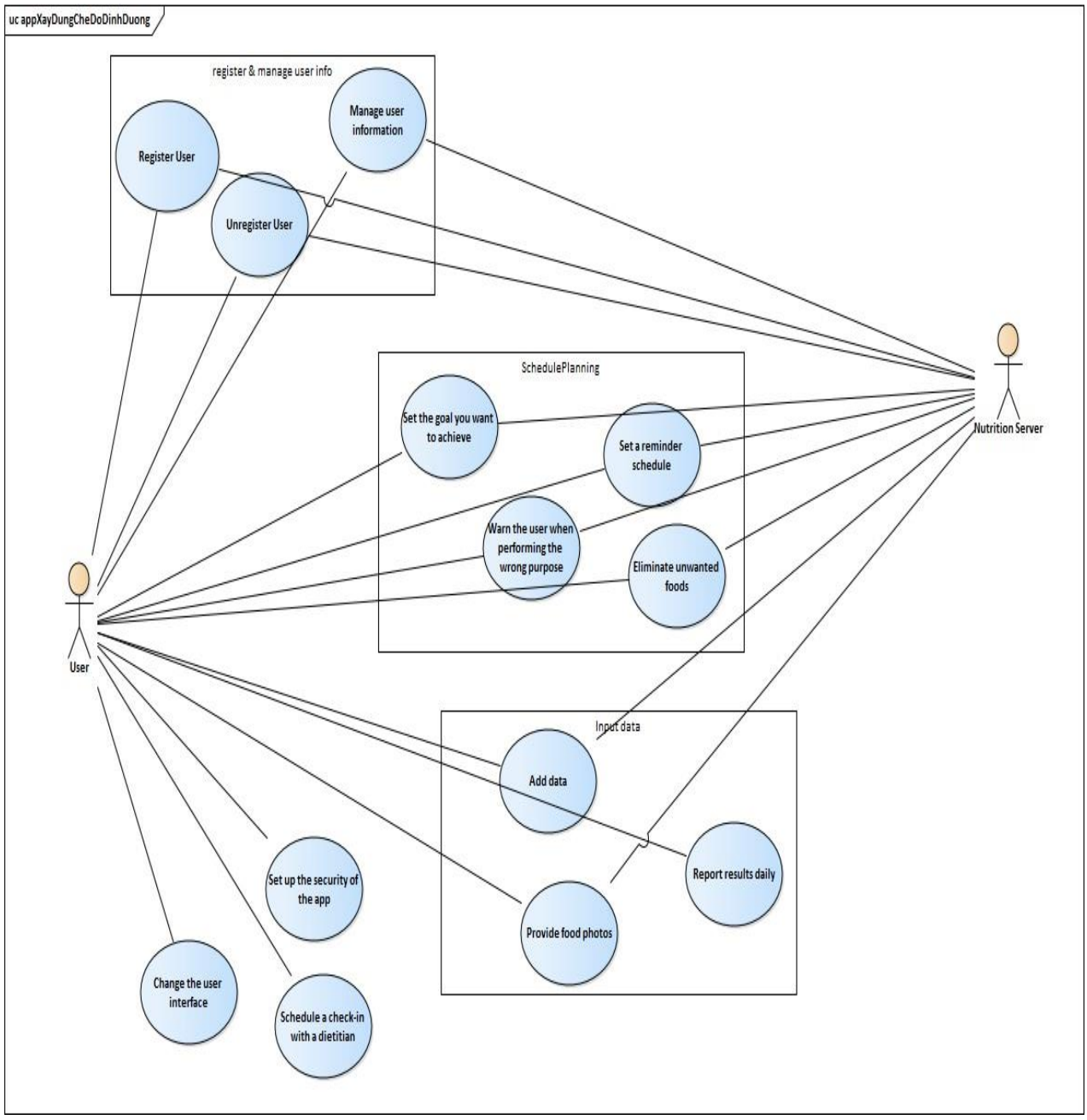
Schedule with dietitian: This is an advanced function of the system that ensures dietary formulation is completely scientific. when regularly helping users have direct communication days with a nutritionist

User requirement

NUM	Requirement	Explain in details
1	Daily Diet	Allow users to make their own diet schedules, even set expected targets to lose weight.
2	User Information	Decide user purposes: to track eating habits, track physical activities or lose weight.
3	Groups of food	By having each meal information, users can measure how well they eat every day.
4	Reminder	Users should have reminders to start eating healthily at the right time based on their schedules.

5	Calories Counter	Show how many calories are in different foods.
6	Mode of rest and work	Create a detailed and suitable timetable to evaluate their time more specifically.
7	Things to avoid	Suggest solutions to change the diet more suitably to get normal calories intake.
8	Photos	Help to recognize food in photos and information about food consumed.

Chapter 4: System Architecture



Chapter 5: System requirements specification

Since we have mobile application and external database server, we need different hardware and software requirement for each.

Operation requirements: Operating system: any computer OS.

Android Operating system.

Database: MySQL.

Hardware Requirements: Hardware requirements which were used during the development processing: Mobile devise with Android Operating system.

*** Functional requirements:**

- Client requirements: has all the privileges on exercise seeker and the exercise seeker details. Client cannot make any change to the systems except register and add to my favorite.

a) Business requirement

b) System requirements

- Environment

-Simulation

- Automation

- Authentication

- Backup/restore

*** Non-functional requirement** (user related)

Chapter 6: System models

6.1 Brief Use case description:

Login: Open the project show registration activity to user, required enter data to registration, after registration the user moving to the application.

Register (sing up): After the first step, if a user is not registered in the application should click sign up button, then enter the required data, the system validates user input, and displays interface of that user.

Manage user information: After registration the user can modify his or her personal information

Set the goal you want to achieve: The user sets the goals he / she wants to achieve in the process

Set the reminder schedule: The user sets his / her time, schedule of activities, and meals. The system remind according to user set time

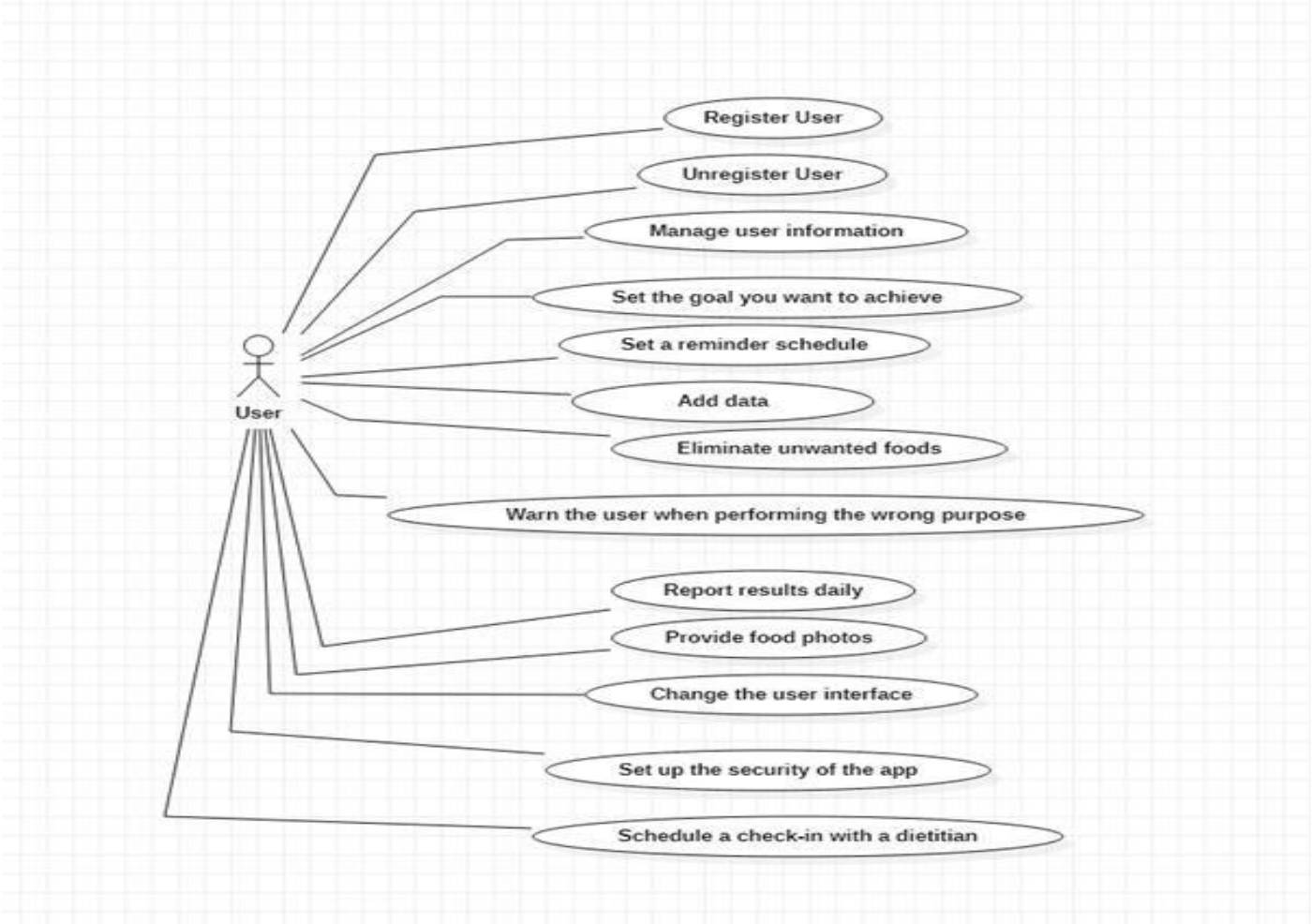
Add data: the user enters their activity data during the day

Provide food photo: After entering data, the system will calculate the user's kcal for the day

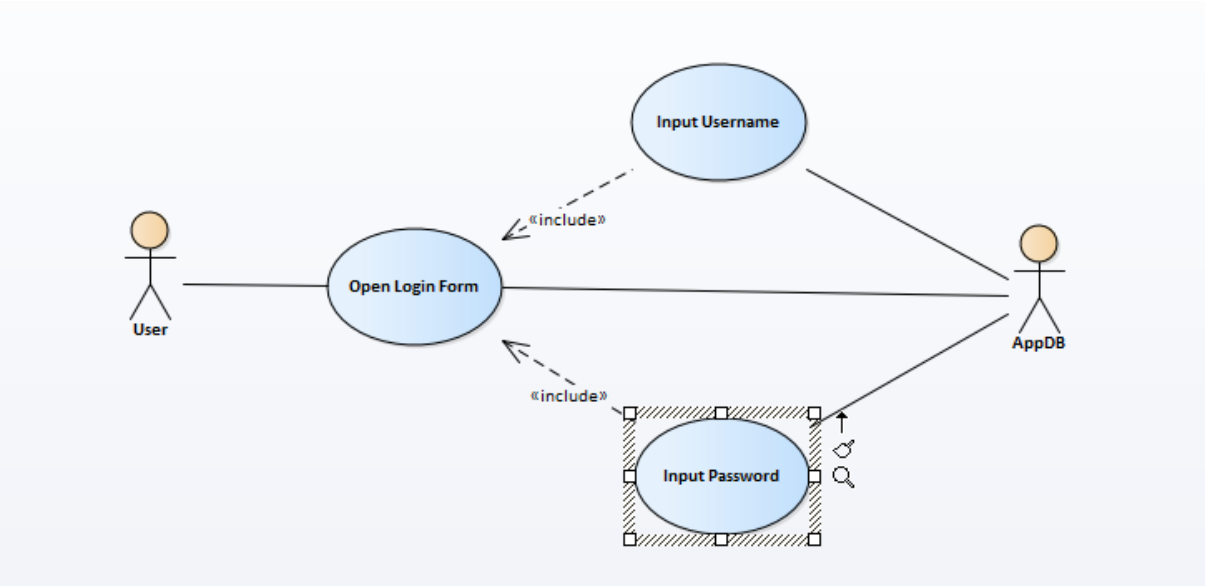
Warning: After entering data, the system will calculate whether the user has achieved or exceeded the initial target, if any, the system will notify the user.

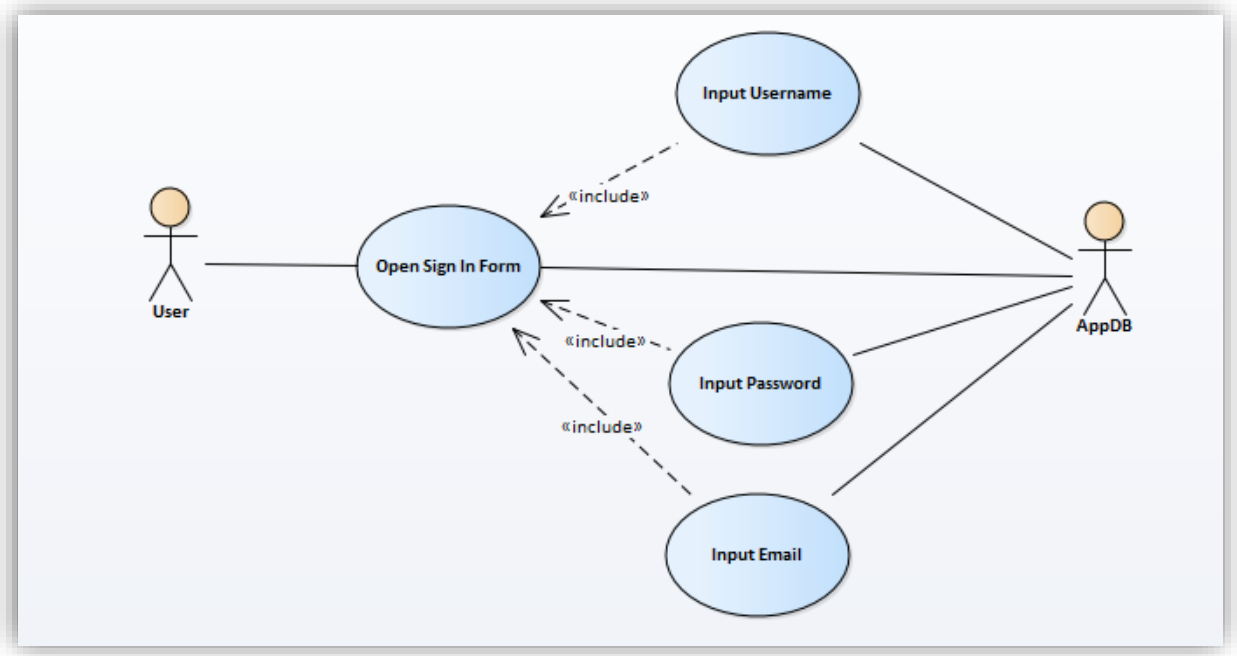
6.2 Function design

Overview



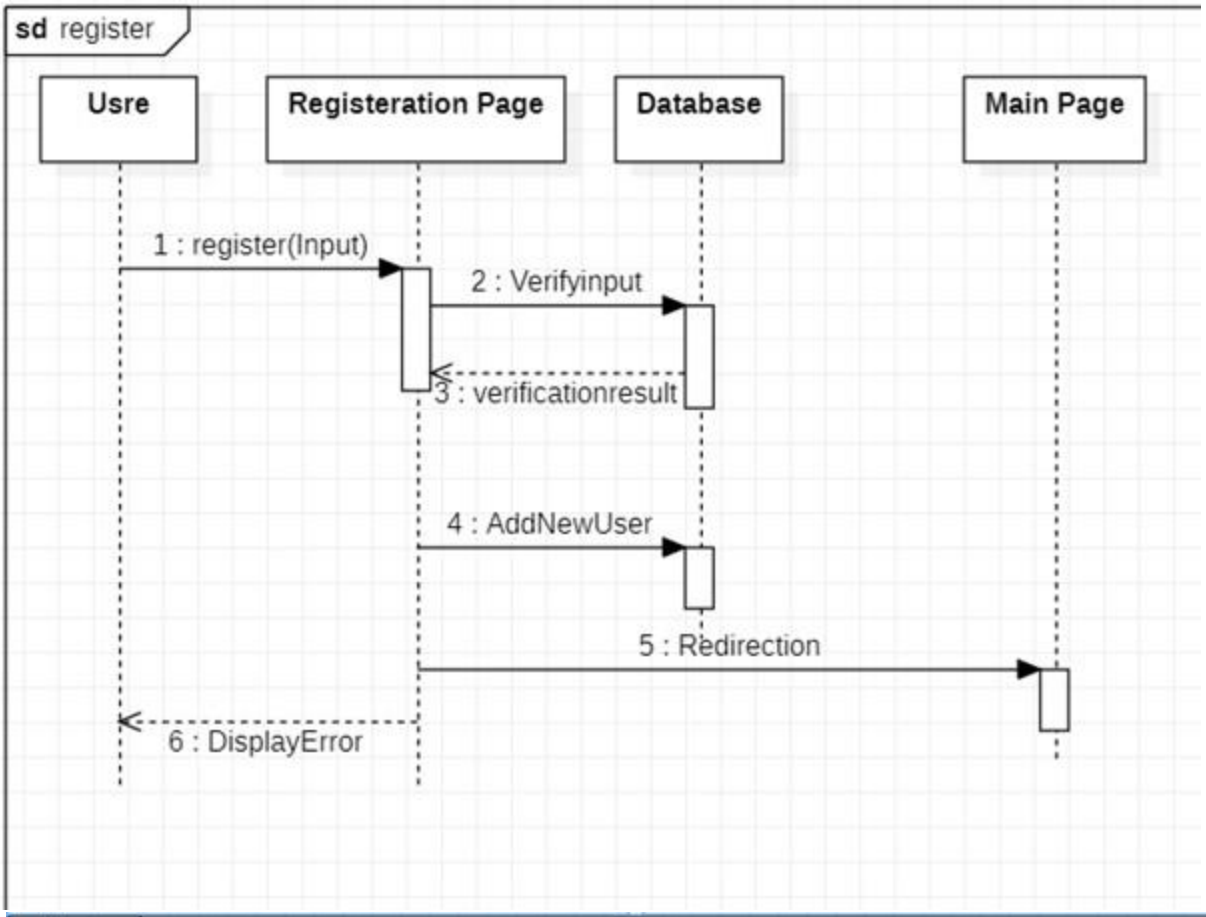
Register/ Login

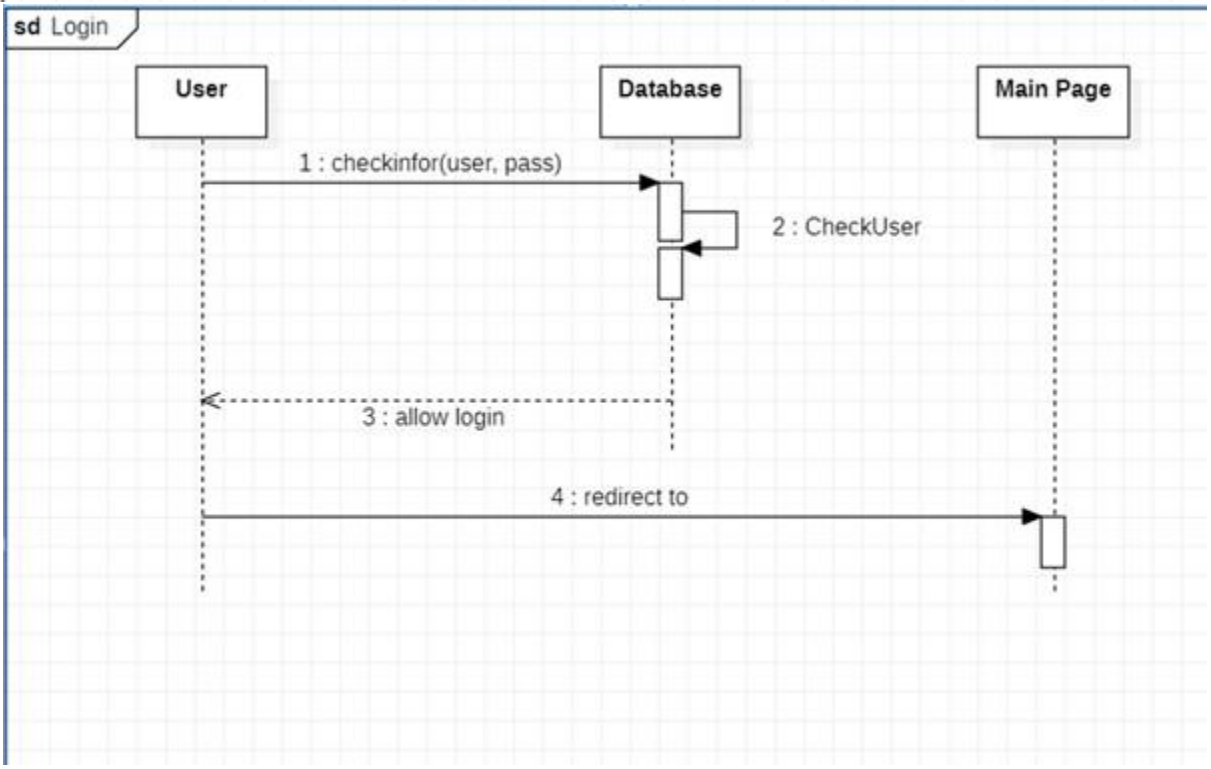




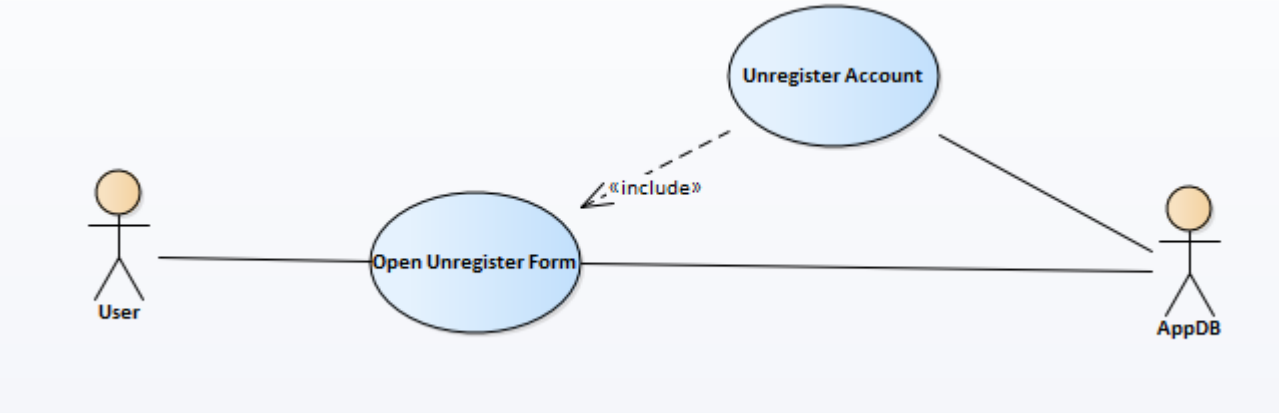
Log in / Sign in the application	
Actors	Nutrition App User, Nutrition App System

Description	A user may register the application to Nutrition App System collecting the customers database. The information shown
	includes name, sex, age, weight, height and summary of their daily food.
Data	Users' personal information, diet summary
Stimulus	User command issued by application system
Response	Confirmation that the application has been updated
Comments	The application owners must have certain security permissions to access users information.

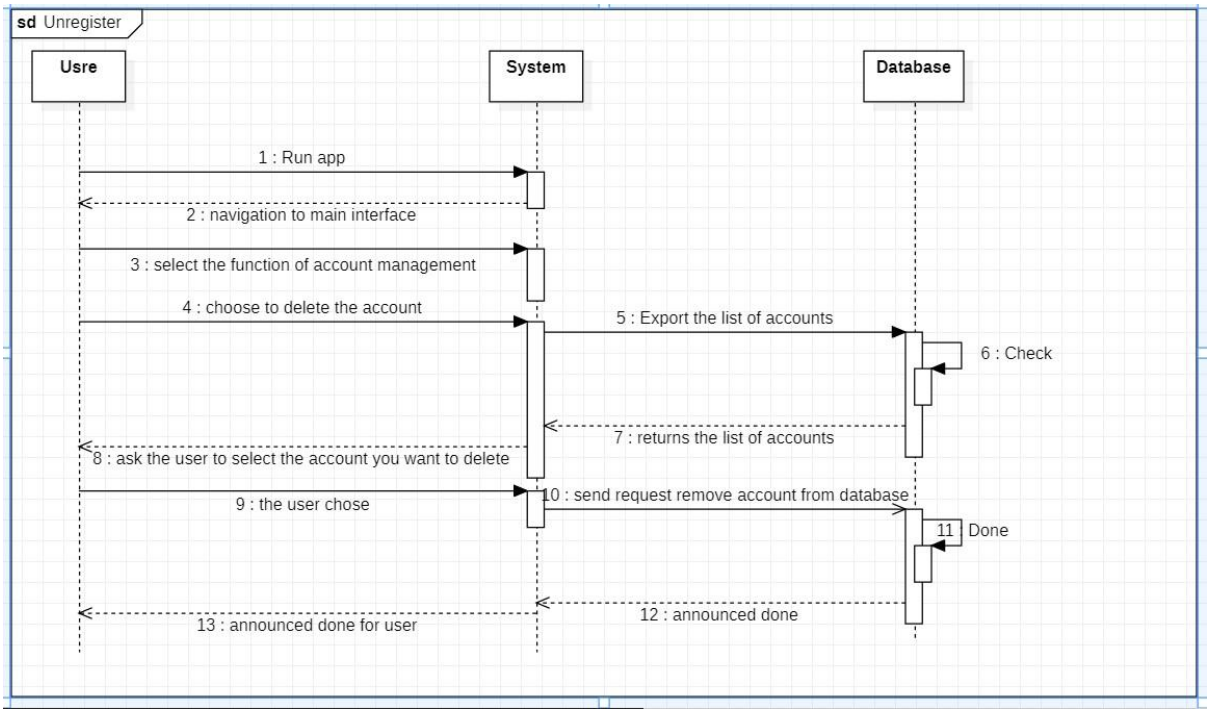

sd register
Usre
Registeration Page
Database
Main Page
1 : register(Input)
2 : Verifyinput
3 : verificationresult
4 : AddNewUser
5 : Redirection
6 : DisplayError


sd Login
User
Database
Main Page
1 : checkinfor(user, pass)
2 : CheckUser
3 : allow login
4 : redirect to

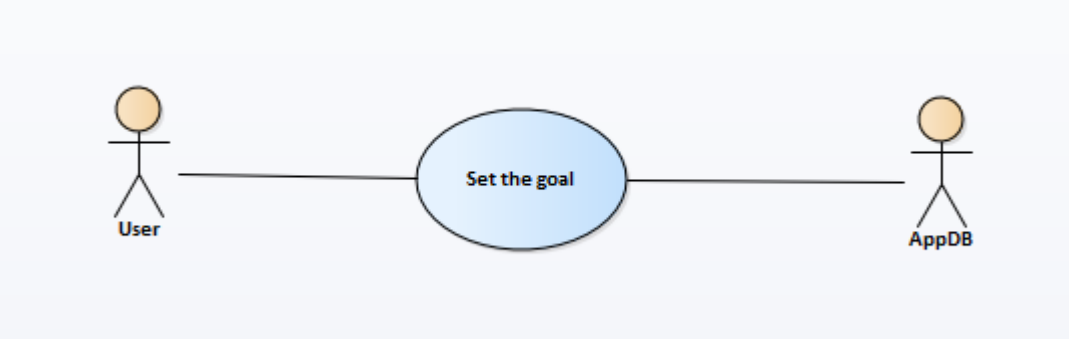
Unregister



Unregister user	
Actors	Nutrition App User, Nutrition App System
Description	A user may unregister the application to Nutrition App System collecting the customers database.
Data	Users who are not logged in personal information
Stimulus	User command issued by application system
Response	Confirmation that the application has been updated
Comments	The application owners must have certain security permissions to access the information of users not logging in.

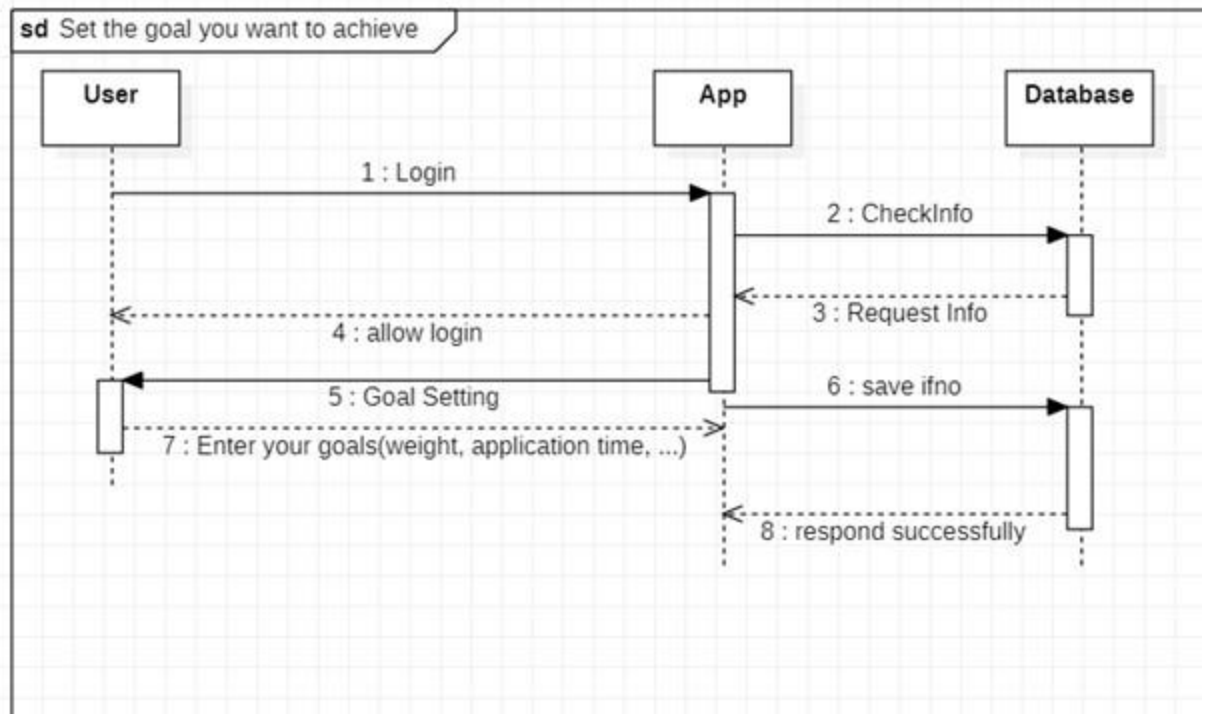


Set the goal

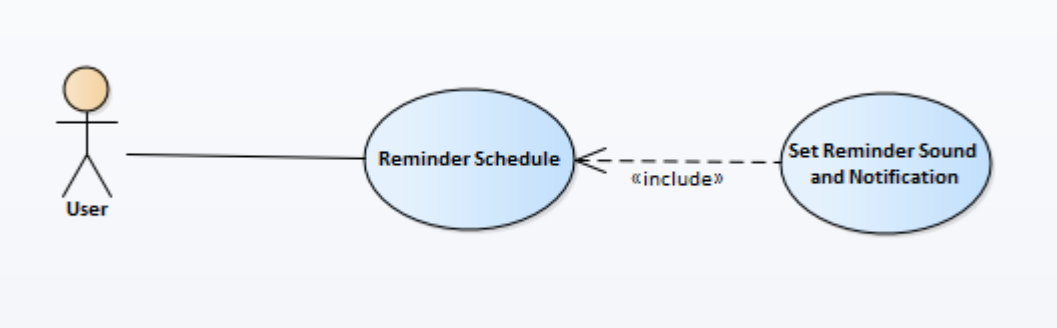


Set the goal you want to achieve	
Actors	Nutrition App User, Nutrition App System
Description	A user may set their own goal: to track eating habits, track physical activities or lose weight.

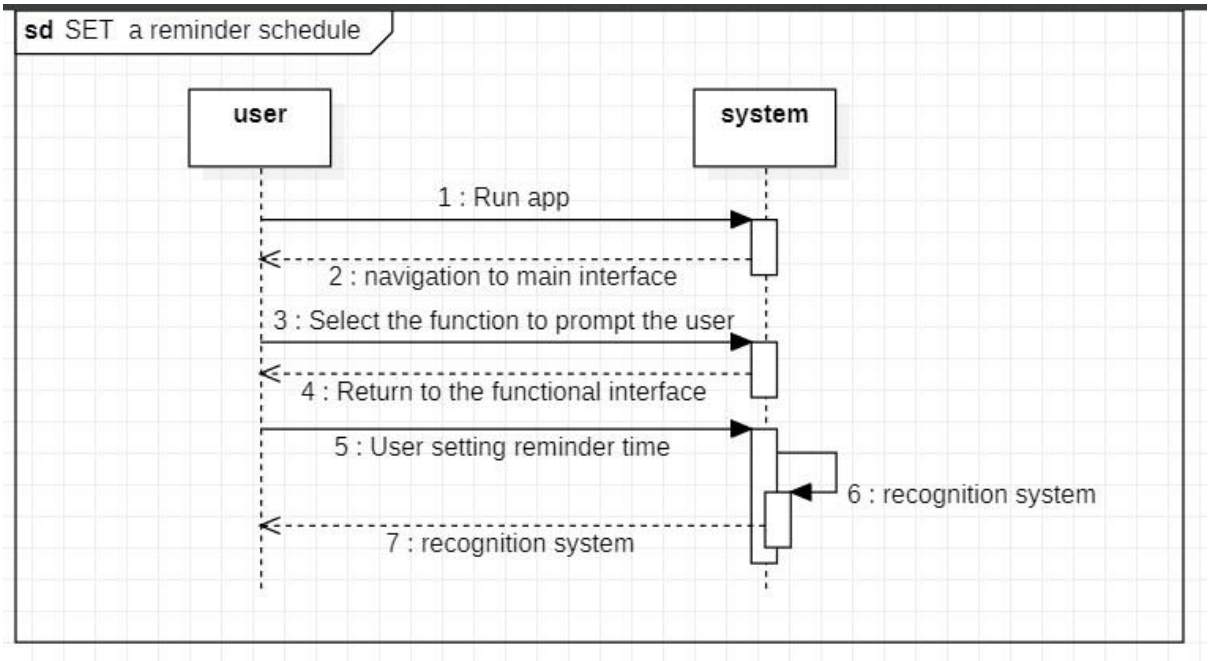
Data	Users’ goals of diet
Stimulus	User command issued by application system
Response	Confirmation that the application has been updated
Comments	The application owners must have certain security permissions to access users’ goals, from that, help them achieve that.



Set a reminder schedule



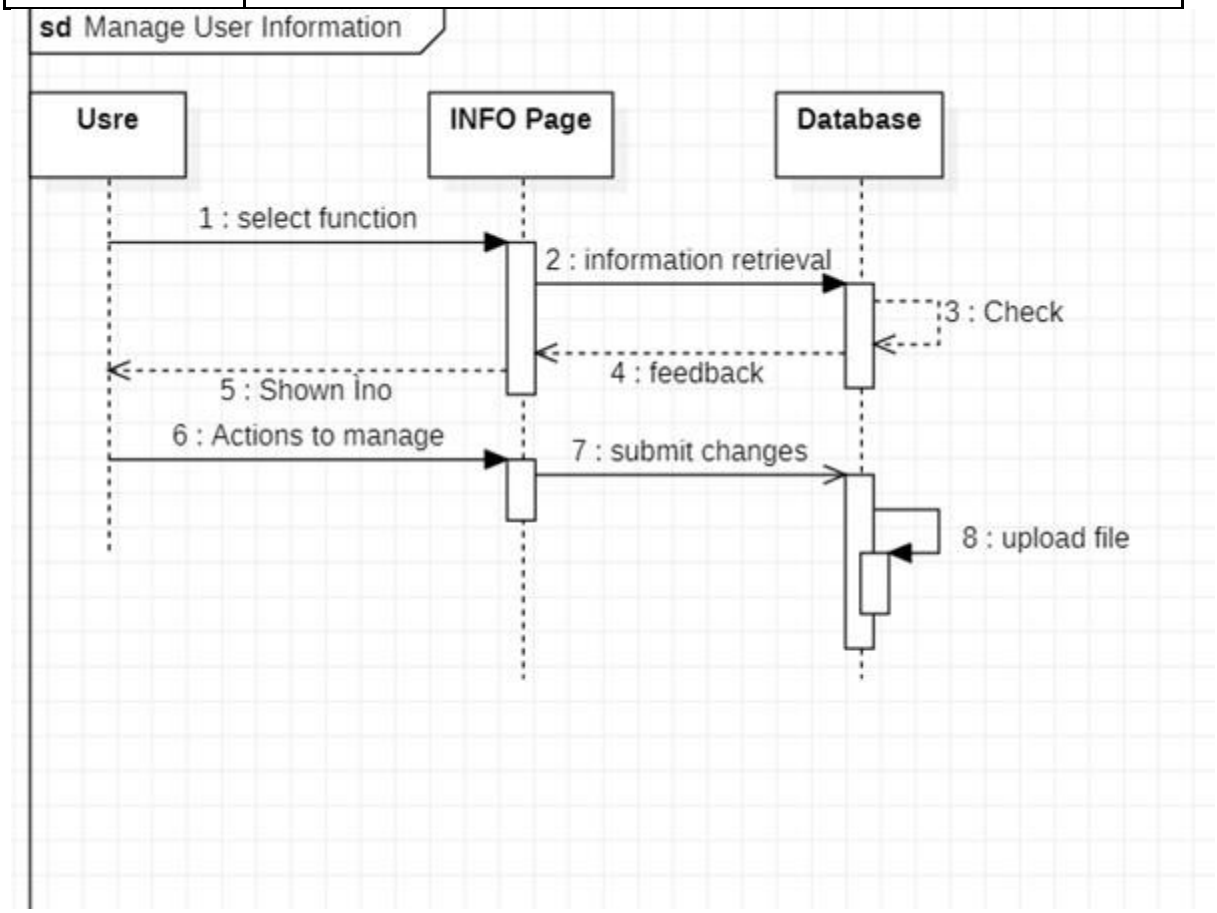
Set a reminder schedule	
Actors	Nutrition App User, Nutrition App System
Description	A user may set a reminder schedule about eating or starting a workout.
Data	Users' meal reminders
Stimulus	User command issued by application system
Response	Confirmation that the application has been updated
Comments	The application owners must have certain security permissions to access each user's diet schedules.



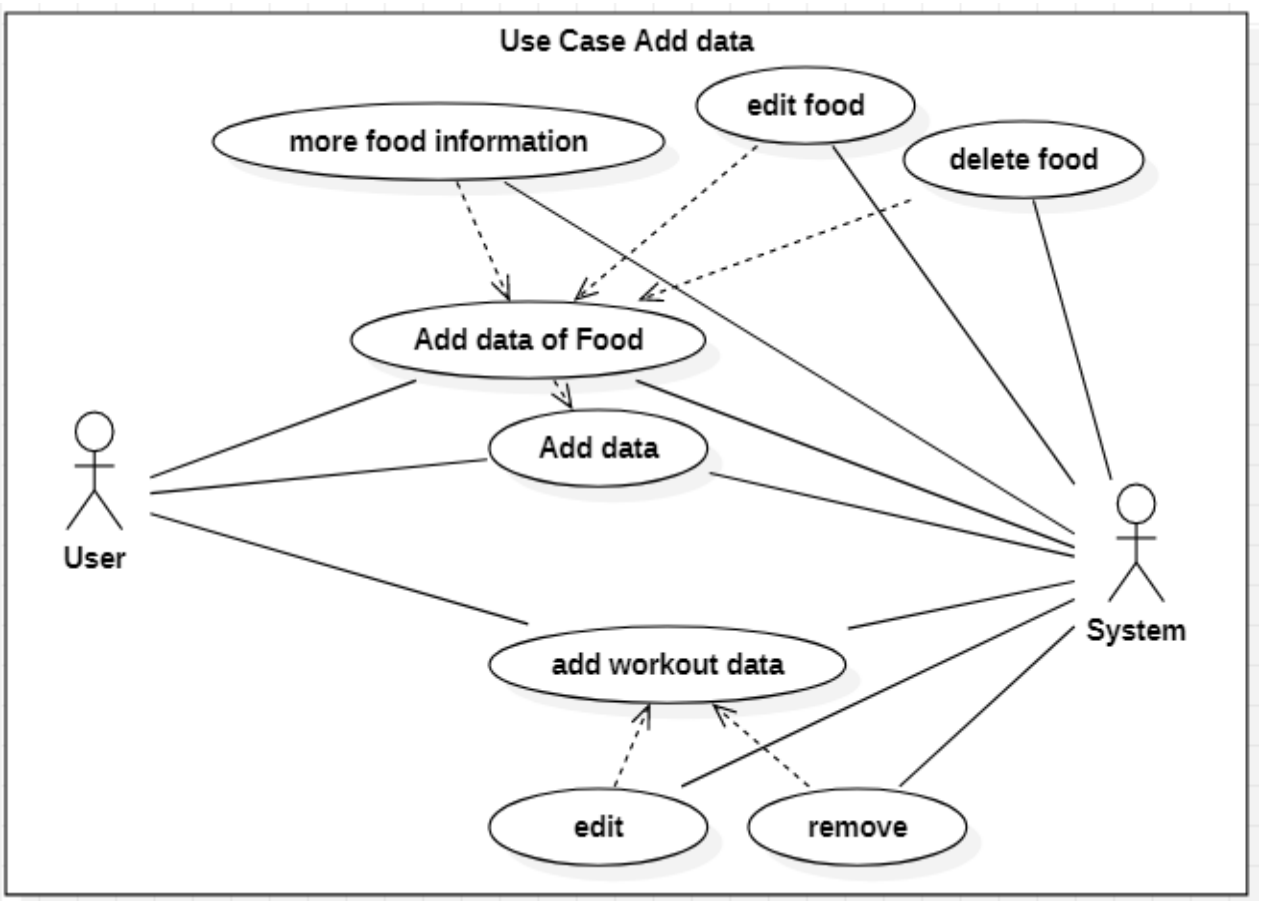
Manage user information

Manage User Information	
Actors	Nutrition App System
Description	The app system may manage user information and collect the customers database. The information shown includes name, sex, age, weight, height and summary of their daily food.
Data	Users' personal information, diet summary
Stimulus	User command issued by application system

Response	Confirmation that the application has been updated
Comments	The application owners must have certain security permissions to access users information.

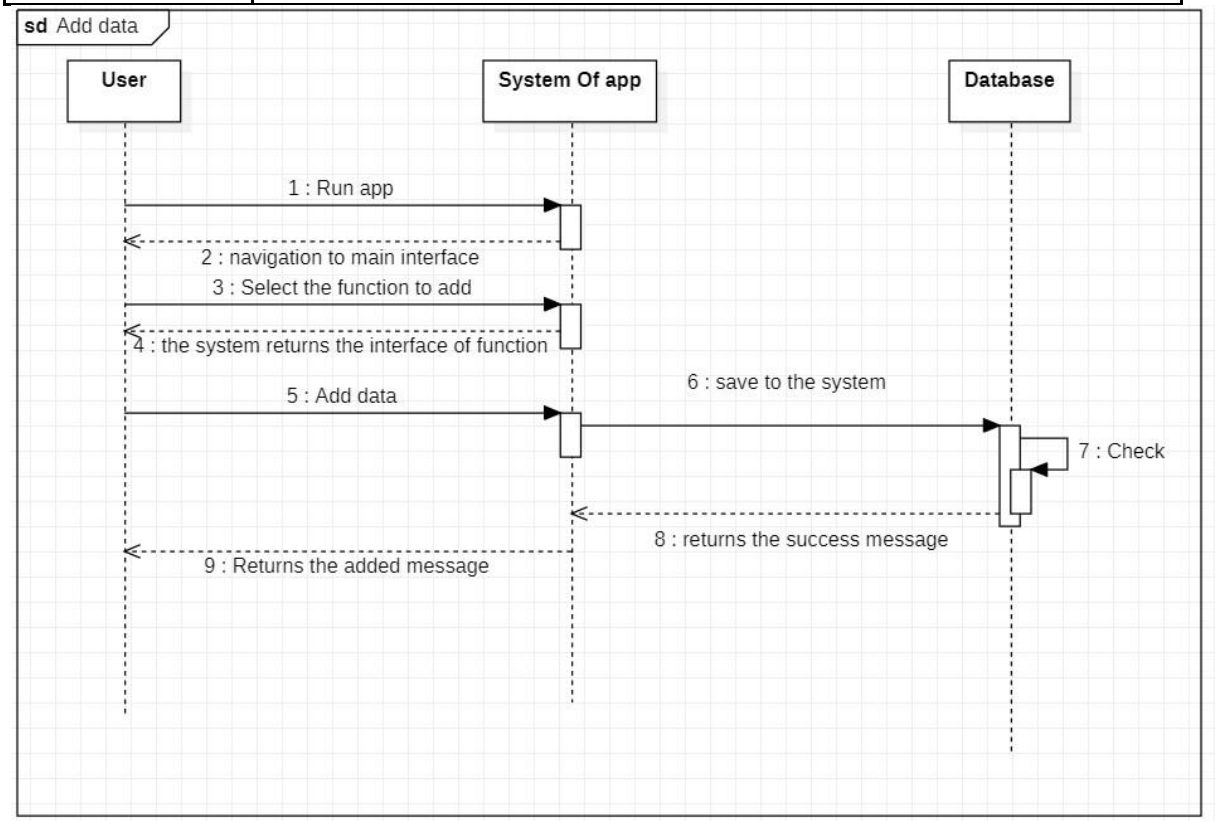


Add data



Add data	
Actors	User
Description	Users add food consumed and activities during the day, the system will calculate the total kcal intake and consumption in the day.
Data	The data will be picked up from the user

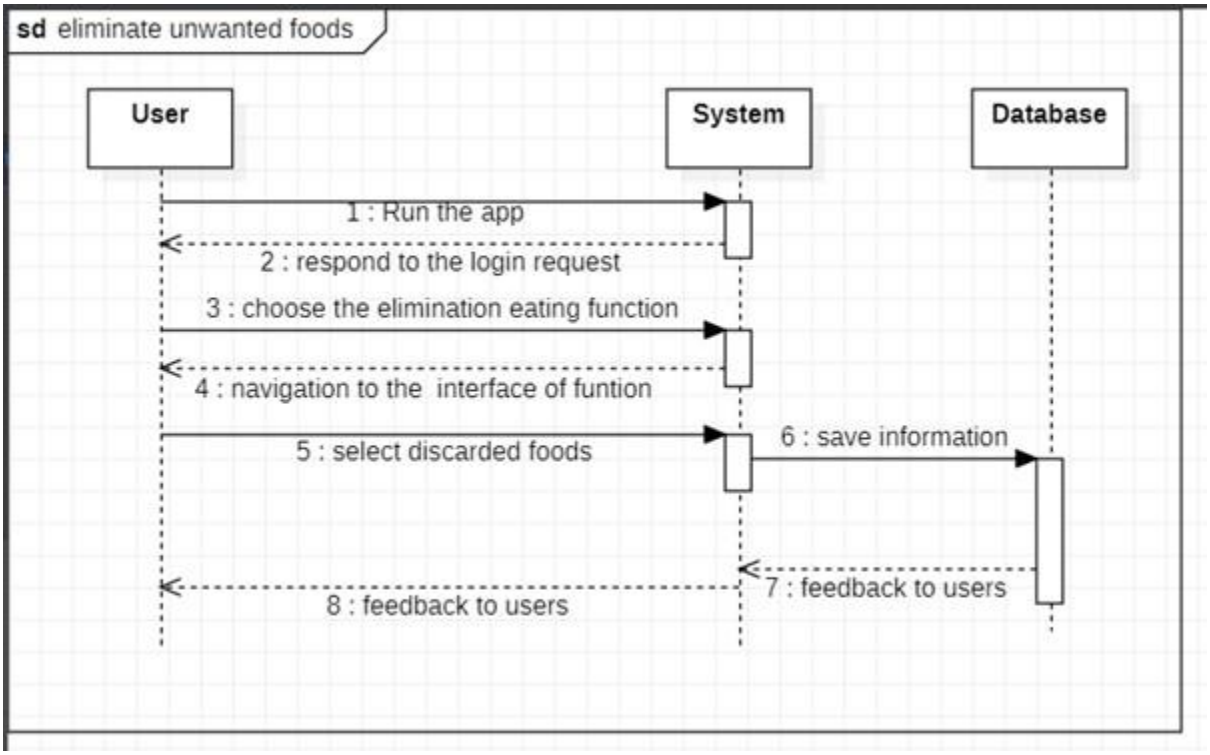
Stimulus	The interface to choose activities user do during the day
Response	The total kcal of each activity
Comments	List all the activities they do during the day. Show the correct activities



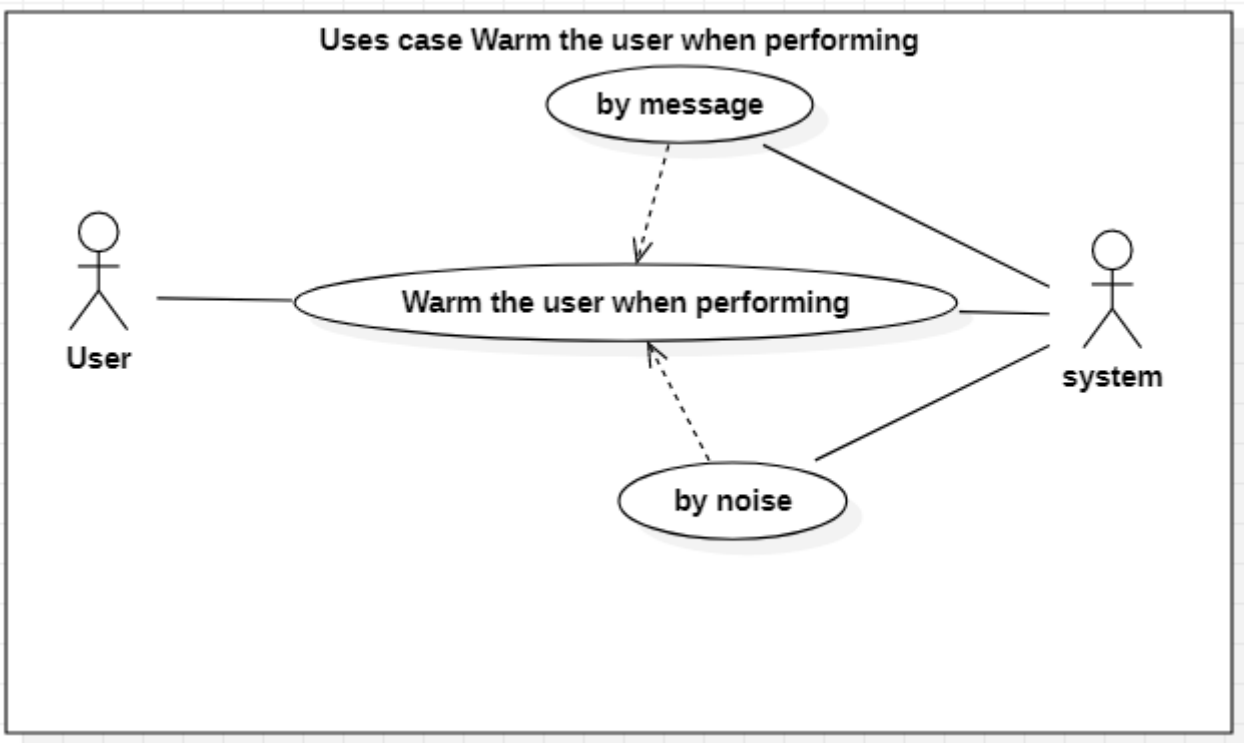
Eliminate unwanted foods

Eliminate unwanted foods

Actors	User, system
Description	Lists foods and activities the user has to eliminate during the process
Data	The list from the system
Stimulus	List of excluded activities and foods, not good for the user
Response	The list of things we should avoid
Comments	Do not eat and operate the things listed on the list

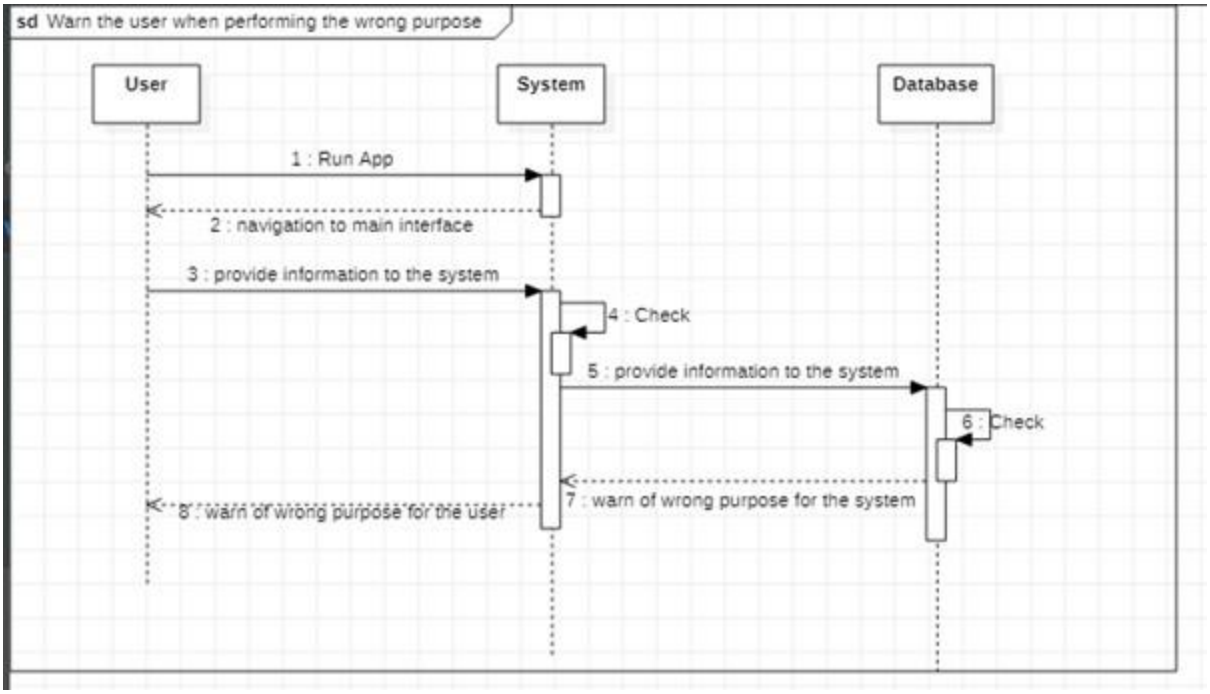


Warn

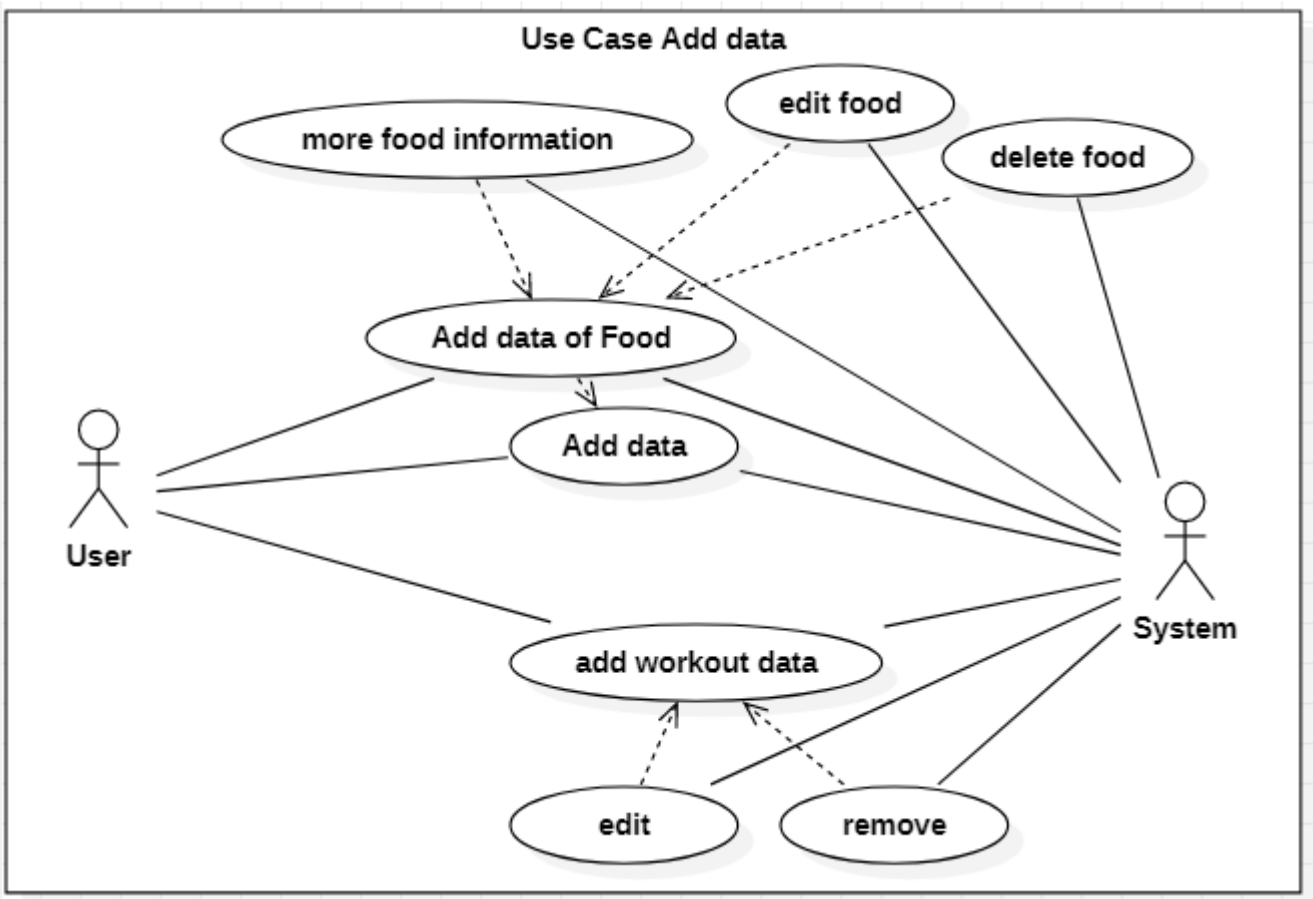


Warn the user when performing the wrong purpose

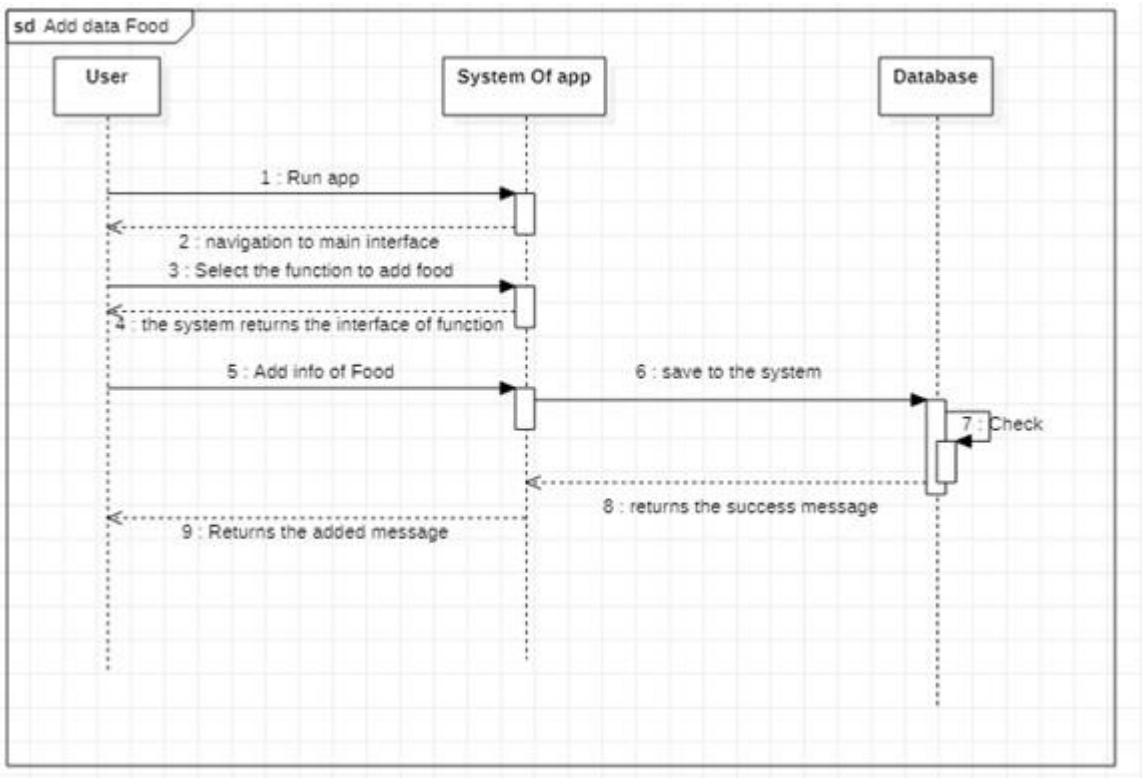
Actors	User, System
Description	If the amount of kcal is less than or exceeds the target, the system will notify the user
Data	A notification from the system
Stimulus	Notifications that remind users to eat and stay on schedule
Response	Notifications are sent when a user is eating and drinking not on schedule
Comments	Read the notice and comply with the request



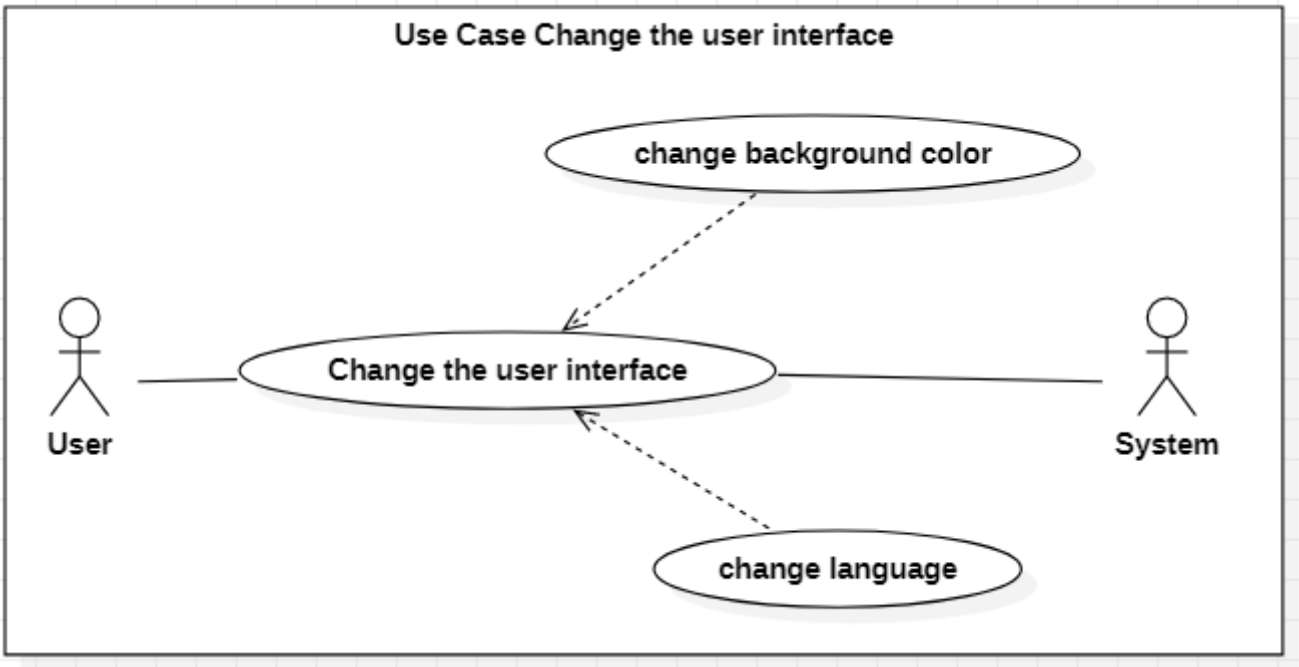
Input information of food



Input information of food	
Actors	System
Description	Provide and synchronize images in the system and help improve user satisfaction, help users distinguish foods
Data	photos that the system supports
Response	increase the accessibility of users and help the system become complete
Comments	the Images need regular updating and diversification of options

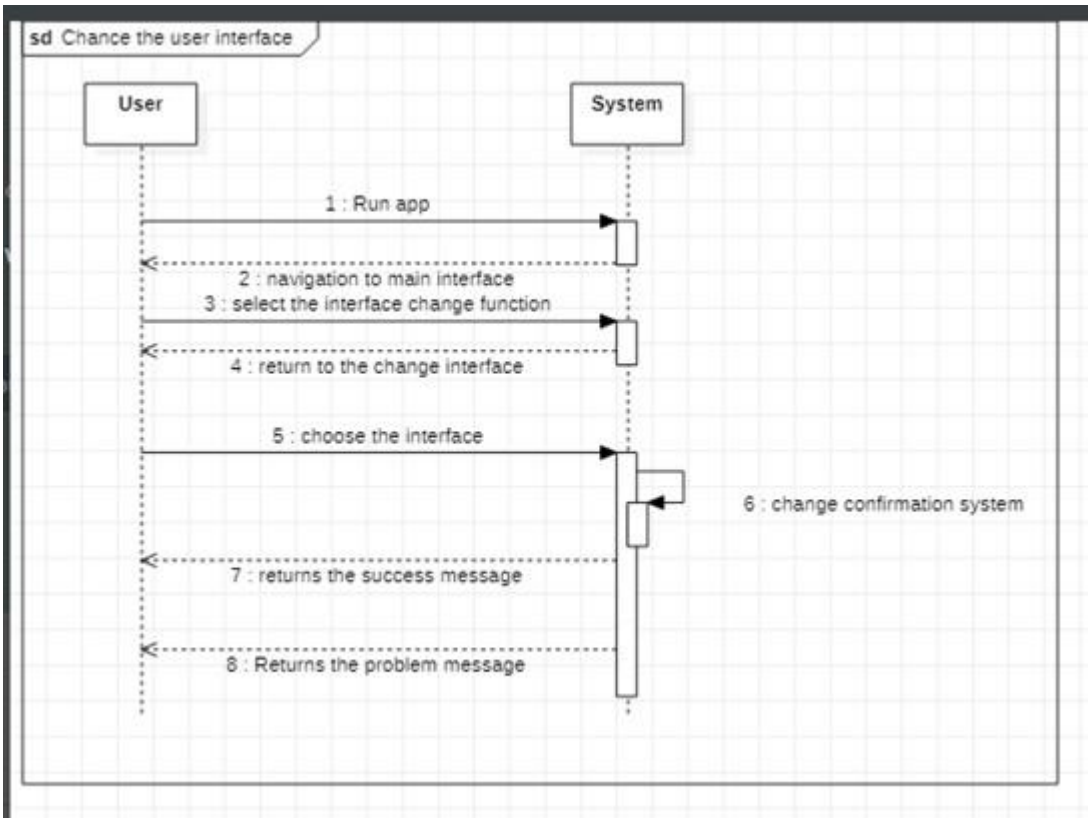


Chance the user interface

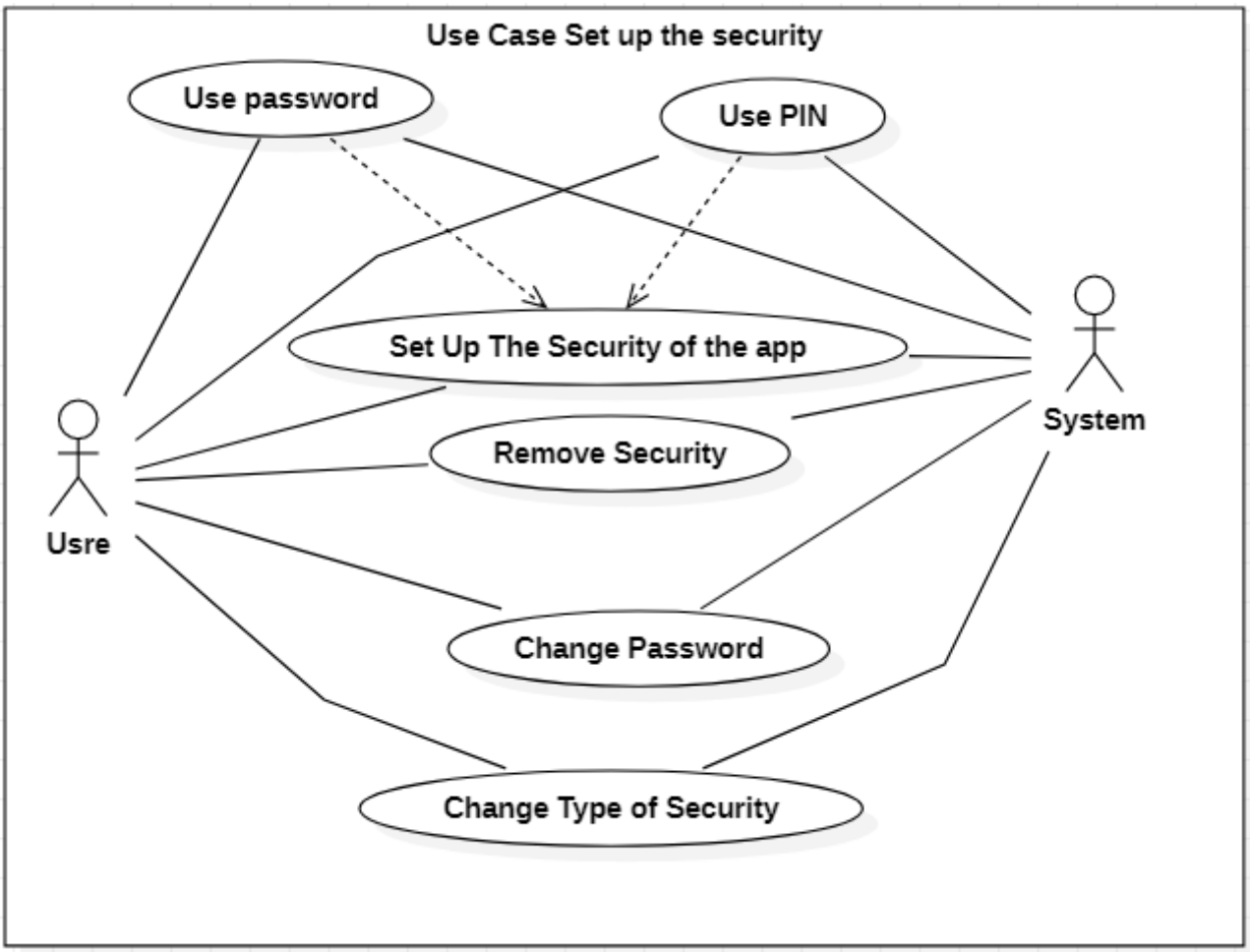


Change the user interface

Actors	System
Description	Creates diverse user options to drive downloads and optimize usage
Data	Pre-configured options in the app
Response	Pre-configured options in the app

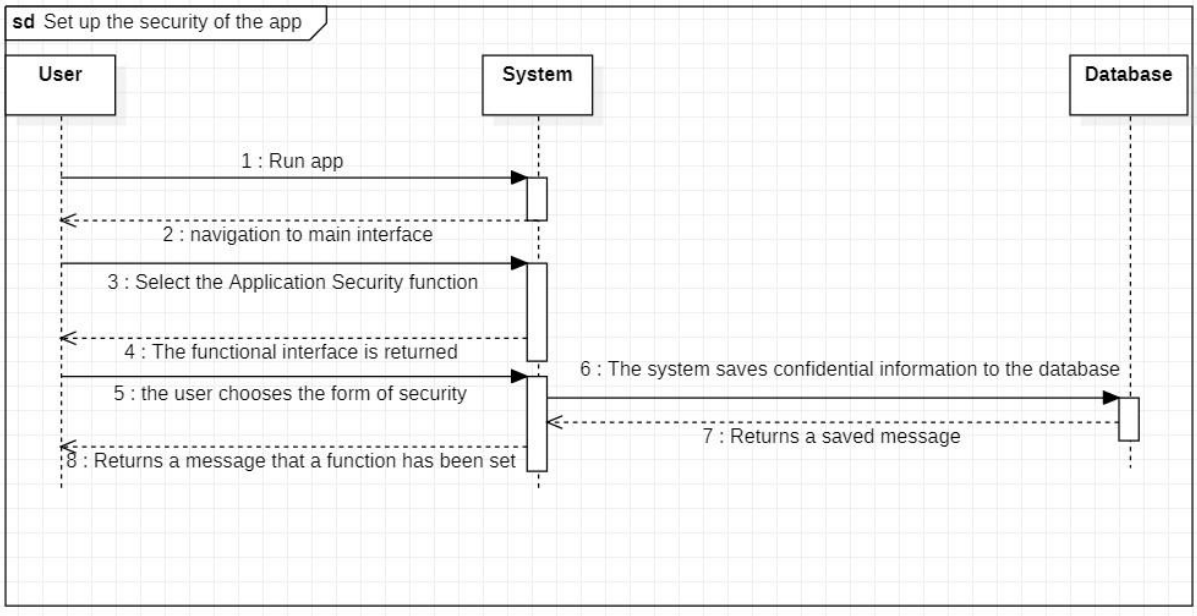


Set up security

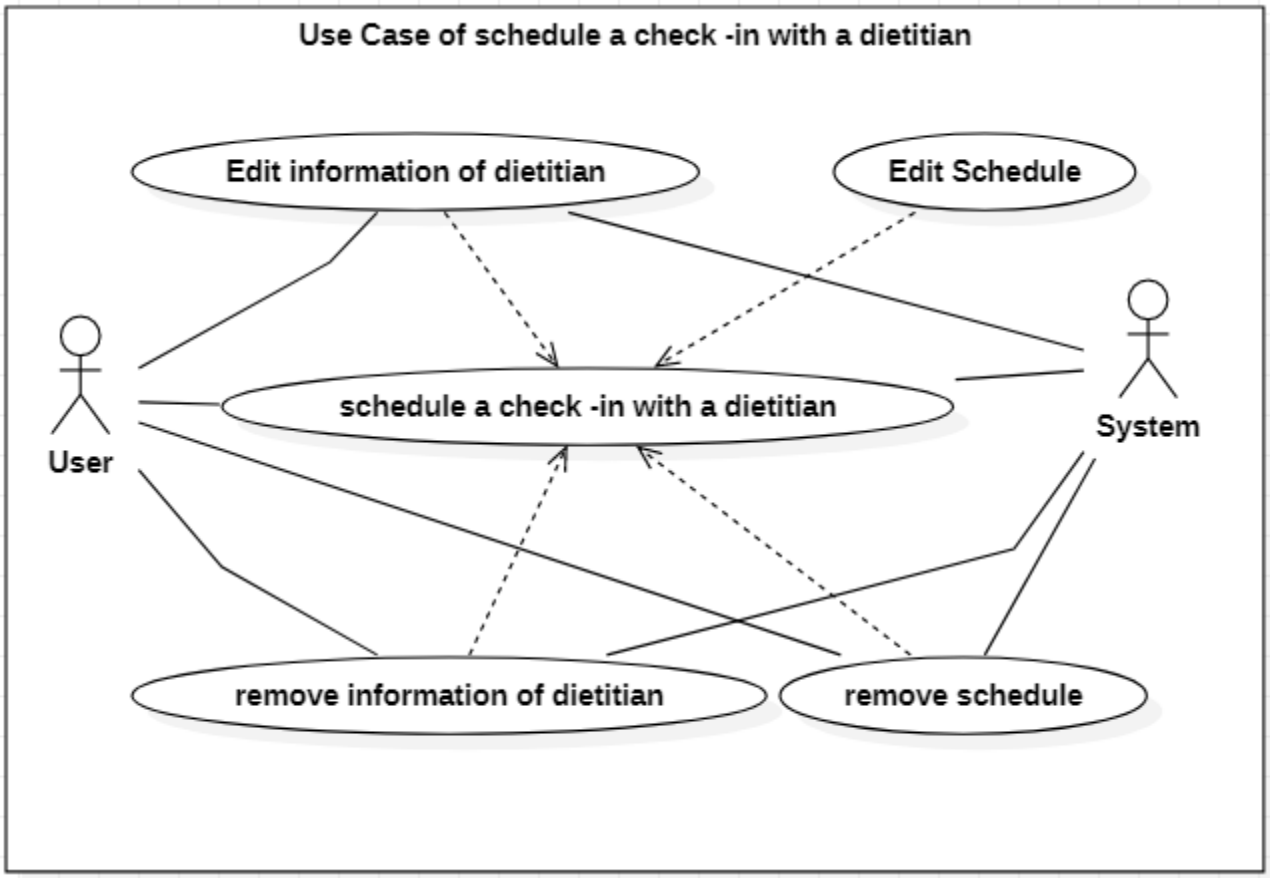


Set up the security of the app	
Actors	system and user information
Description	it is an essential element of every app and helps increase the app's security to drive downloads

Data	passwords and login names of different users
Stimulus	user privacy
Response	The result is to ensure the privacy of each user. If there is use of many different users and then need a password and username to use.
Comments	Recommended to use

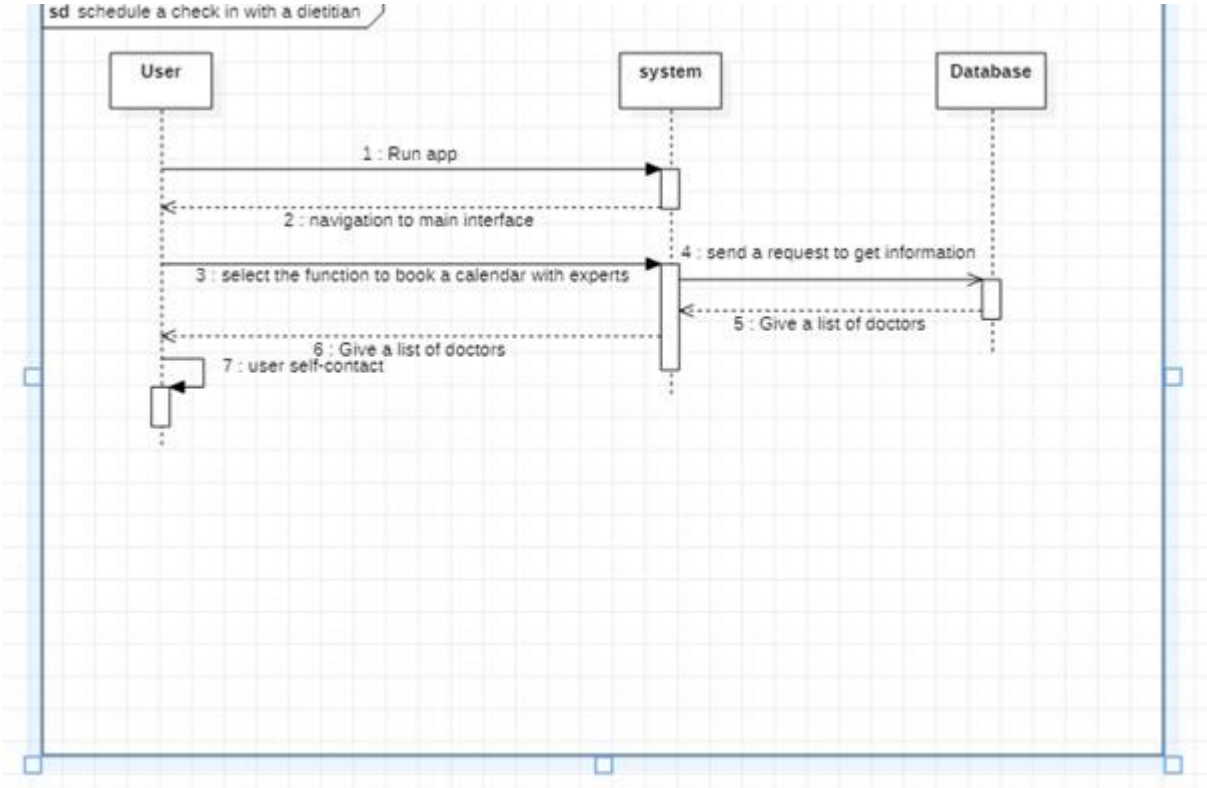


Schedule with dietitian



Schedule a check-in with a dietitian	
Actors	System, user , nutritionist
Description	As part of the system that helps to systematically maintain the food chain, improve the efficiency of health monitoring and understand user health.
Data	user information on contact information

Stimulus	is the give the a khuyên mang tính thuyết phục
Response	The results help to improve nutritional cycle age and monitor health status
Comments	It is necessary to set up this feature to contribute to the correct implementation of the original purpose



Chapter 7: System evolution

System evolution Our project is mobile application that provides summary various function about nutritional therapy. Depending on which function that user choose, our application will respond user interaction such as:

- Registration

- Meal Planning

- Notification

- Diet plan /User goal

- Diet suggestion

We will add some effective function and make friendlier user interface to bring user the best experience when using our application.