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# SOFTWARE DEVELOPMENT LAB

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**CSE-4510**



**MEDKIT**

**TEAM MEMBERS**

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## *Contents*

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	<b>Topic</b>	<b>Page</b>
1.	Project overview	2
2.	Motivation and goal of the project	2
3.	Scope of the work	2
3(a).	Project area or context of the work	2
3(b).	Work planning	2
4.	Project stakeholders or users	2
5.	Project models.	3-9
5.(a)	UML diagrams and descriptions	3-9
6.	Requirements.	10
6.(a)	Functional requirements.	10
6.(b)	Data requirements.	10
6.(c)	Usability requirements.	10
6.(d)	Non-functional requirements	10
6.(d)(i)	Performance.	10
6.(d)(ii)	Portability.	10
7.	Prototype and design.	10-11
7.(a)	Prototypes and sketches	10
7.(b)	UI designs	11
8.	Software process model followed	11
9.	Software test planning and evaluation	11
10.	Conclusion and future work	12

## Overview

To ensure sound healthcare we provide targeted nutrition plan for everyone using age, sex and BMI index as constraint. We suggest Bangladeshi foods with suggested intake amount. If the user has a change in health condition, the diet also updates. Also if the user needs a change in the diet, there is an option to look for alternative food suggestion with the same calorie count. Our system also has medicine reminder system that can be helpful for the elderly people. And another reminder is there to remind the user to take meals on time. To make this sustainable, there is a medicine delivery system in the app where the user can order medicine through the app. We intend make an admin side app and a doctor side app in the future to make the prescription paperless and creating a medical history database for each users which will help diagnose future diseases and ensure fast and better treatment.

## Motivation

Currently there is no single app available in the play store with diet plan for Bangladeshi cuisine. Even there is no app that provides targeted nutrition plan. Again, there are few medicine delivery services but none of them are yet reliable. We added all these features to make our app useful to people who are concerned about their health. We are also making a database for each users with their medical history which help them in future diagnosis.

## Scope of Work

### Project Area:

Ours is an android application. We made the project in Android Studio using MySQL and firebase database

The diet plan and all user data except the prescription is saved locally in the MySQL. The prescription and the security details were implemented in firebase database.

### Work Planning:

We planned to make the app in two phases, first making the nutrition plan part and then the purchase medicine options. We used java on Android Studio which has MySQL and Firebase built in.

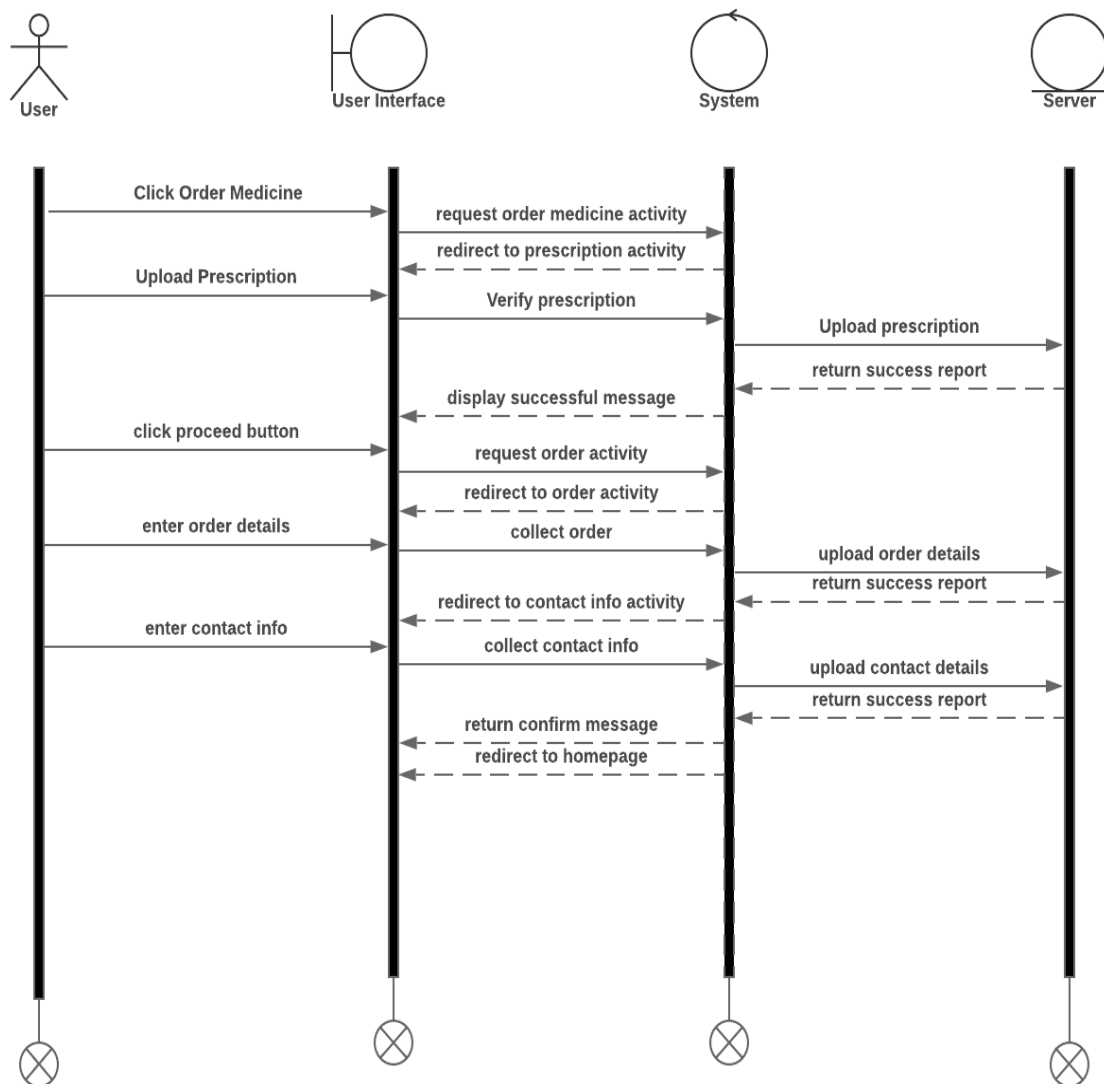
## Project Users

The main stakeholders of the project are normal people who wants to maintain a healthy life. The app aims to provide all kinds of services from nutrition chart to medicine purchase and reminders. It aims to create a complete health care partner for the user. The users can skip going to nutritionist or going to drug stores – this app provides an easier, faster and more elegant solution.

# UML Diagrams

## Sequence Diagram:

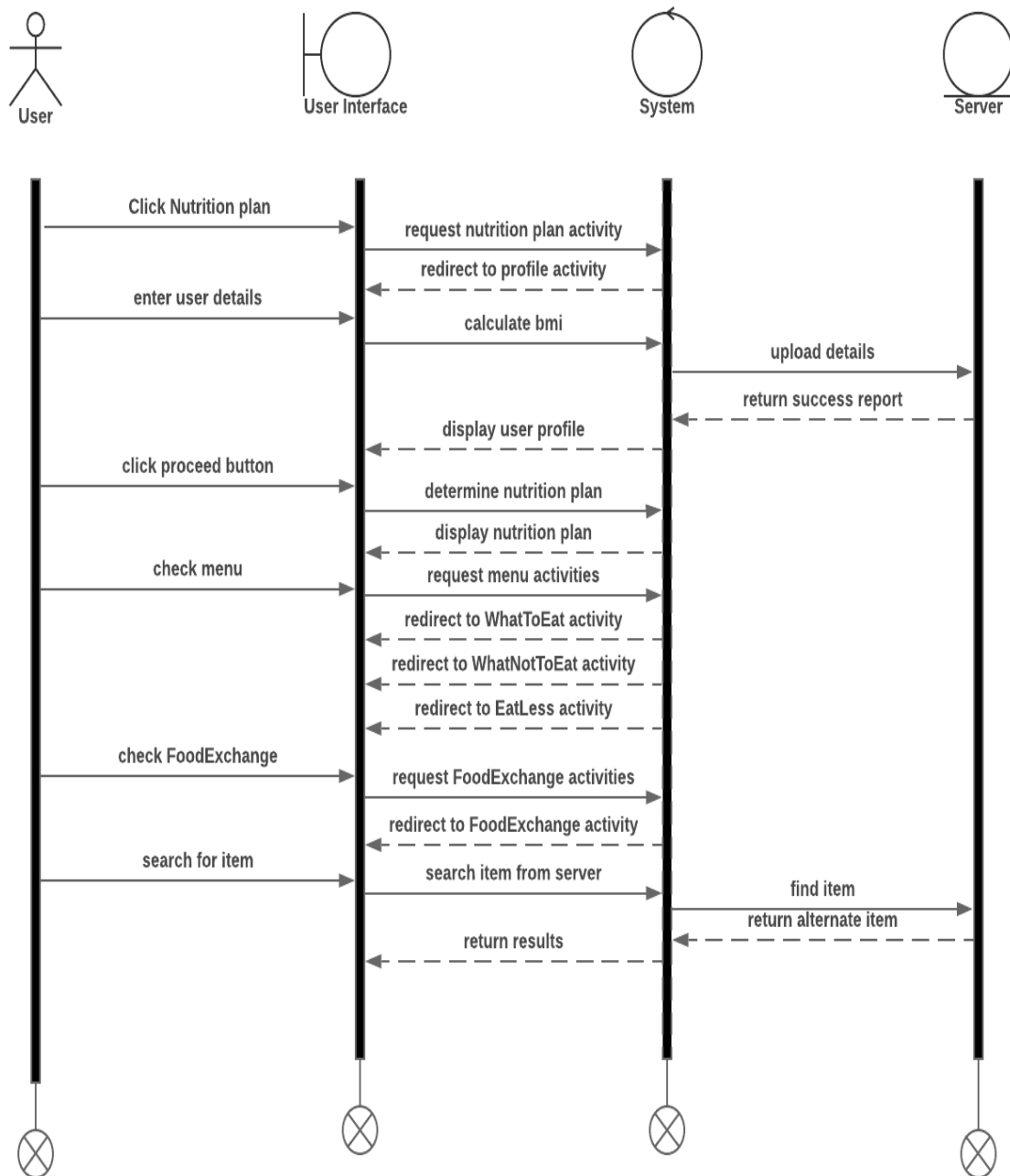
### *Order Medicine*



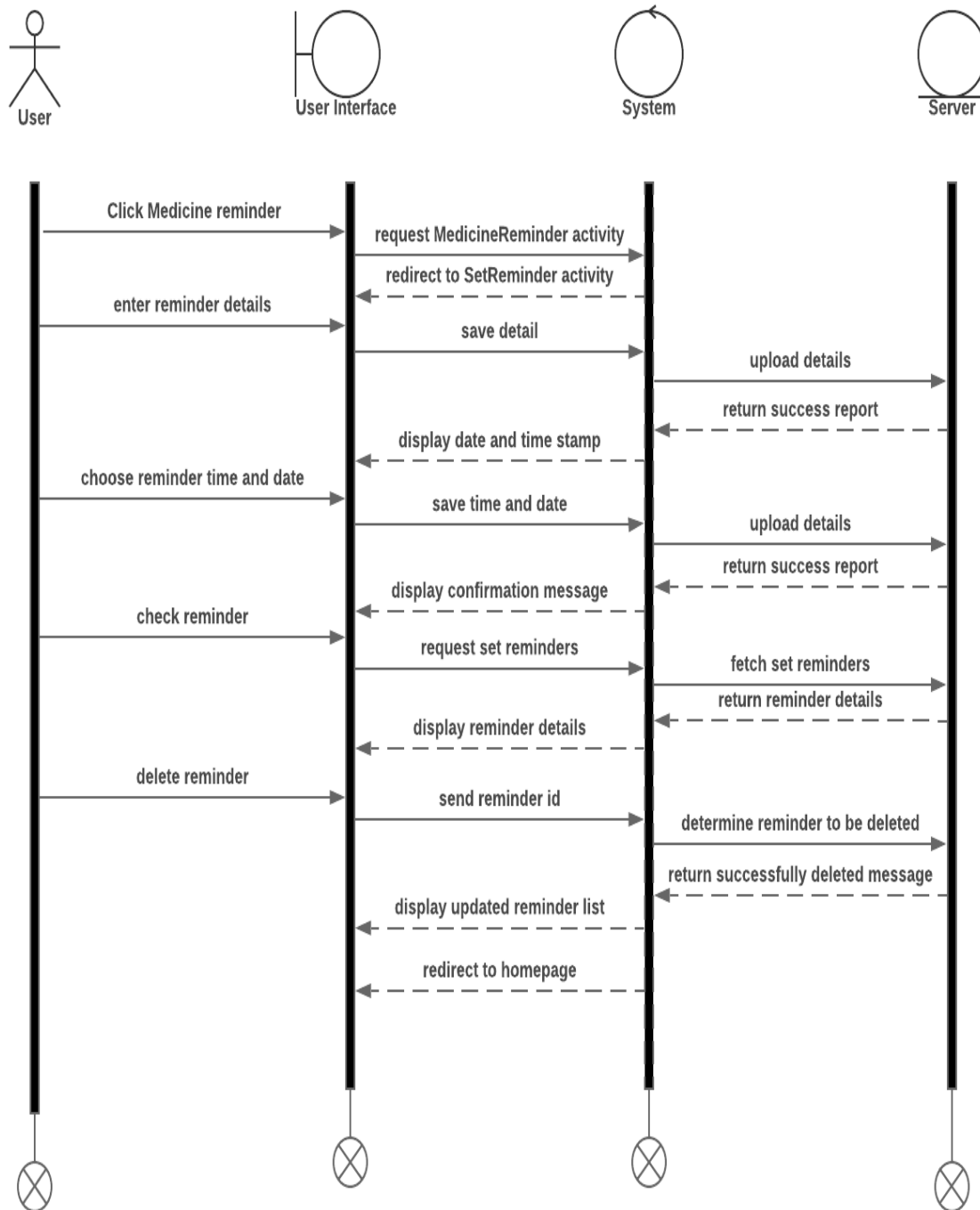
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## *Nutrition Plan*

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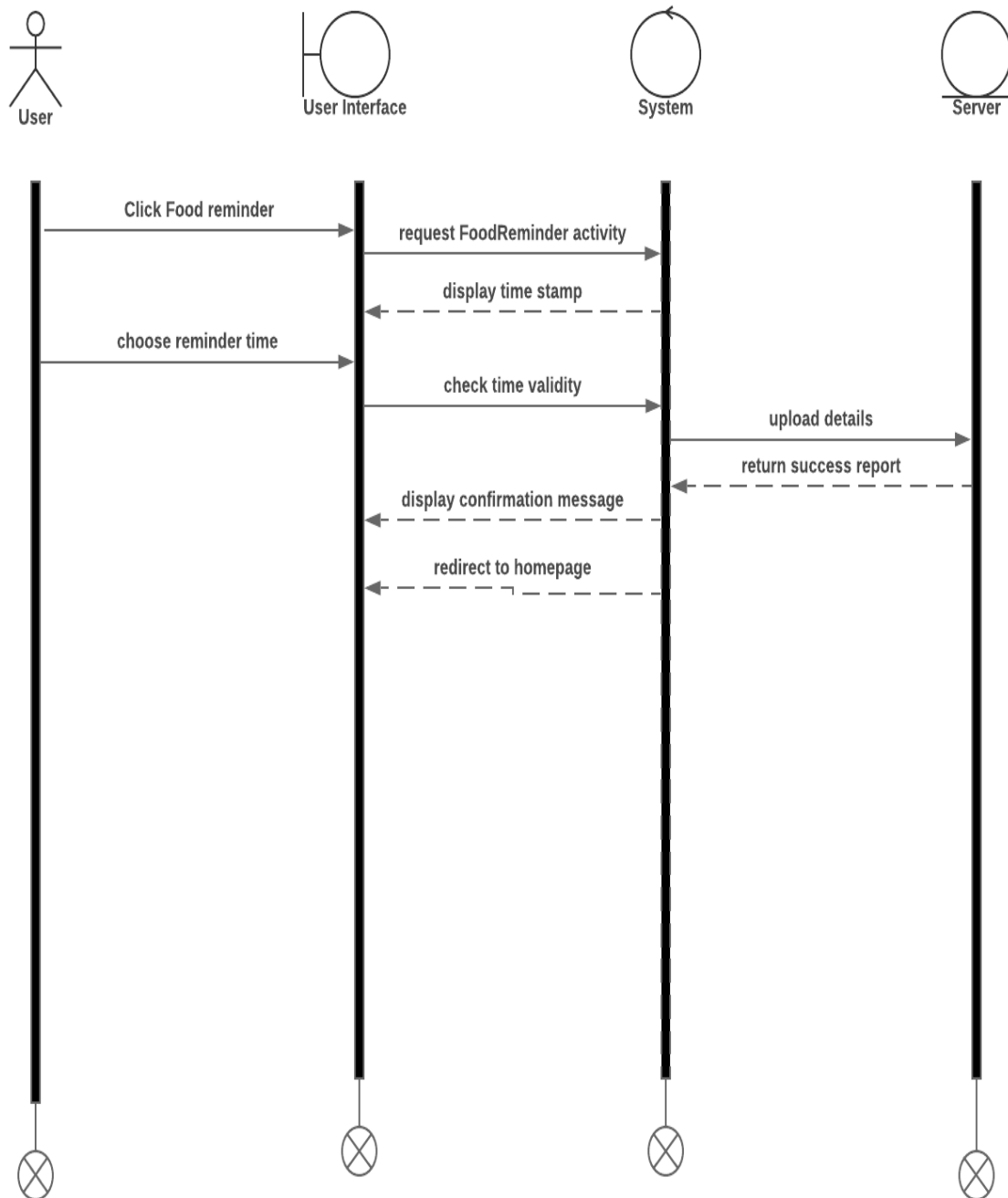
## *Medicine Reminder*



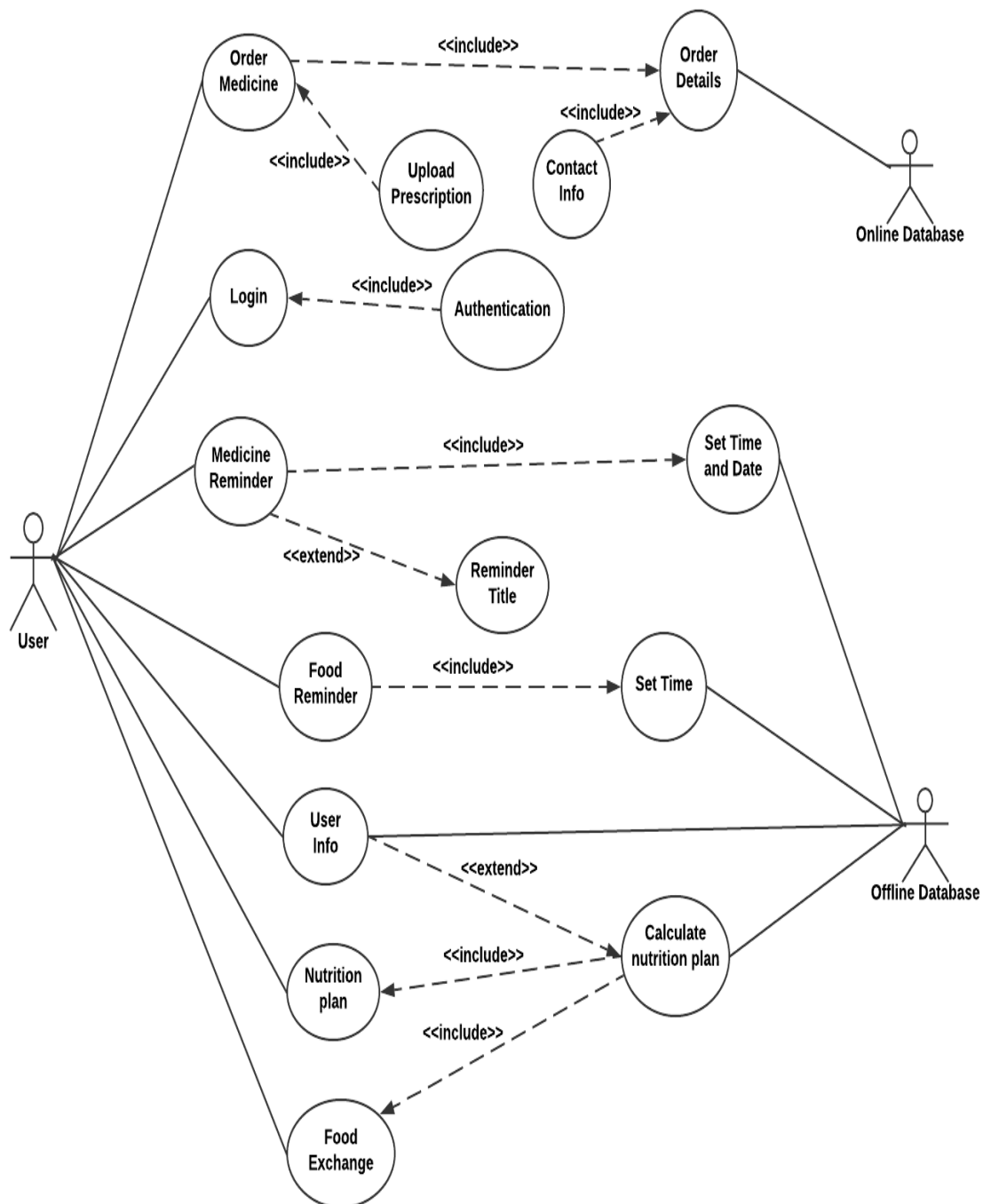
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## *Food Reminder*

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## Use Case Diagram:





**Data Flow:**

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*Context Diagram*

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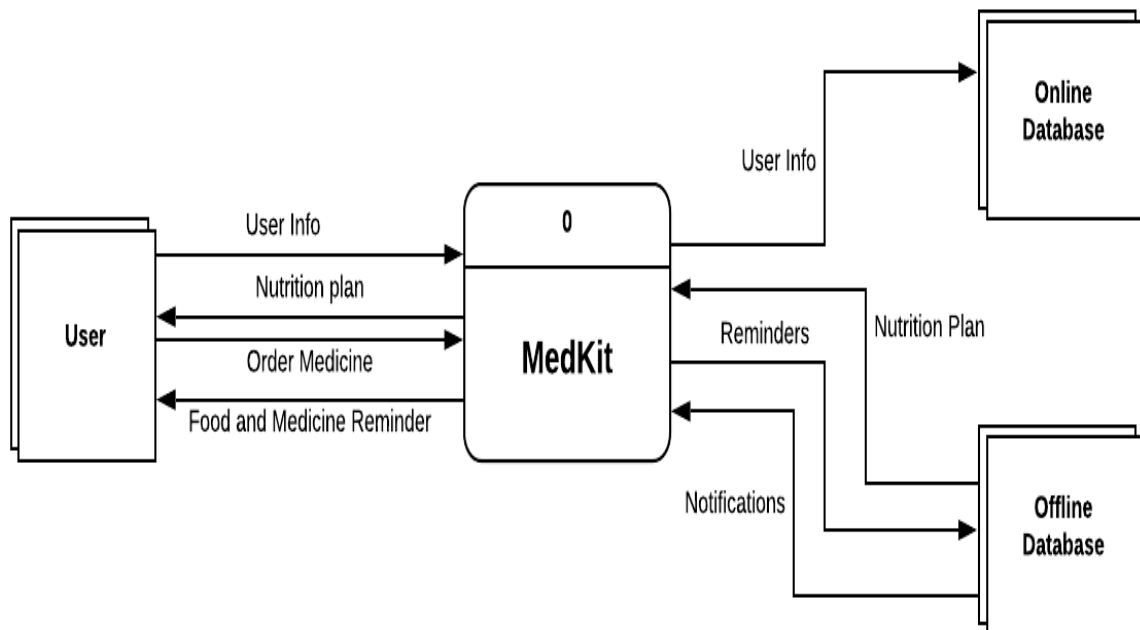
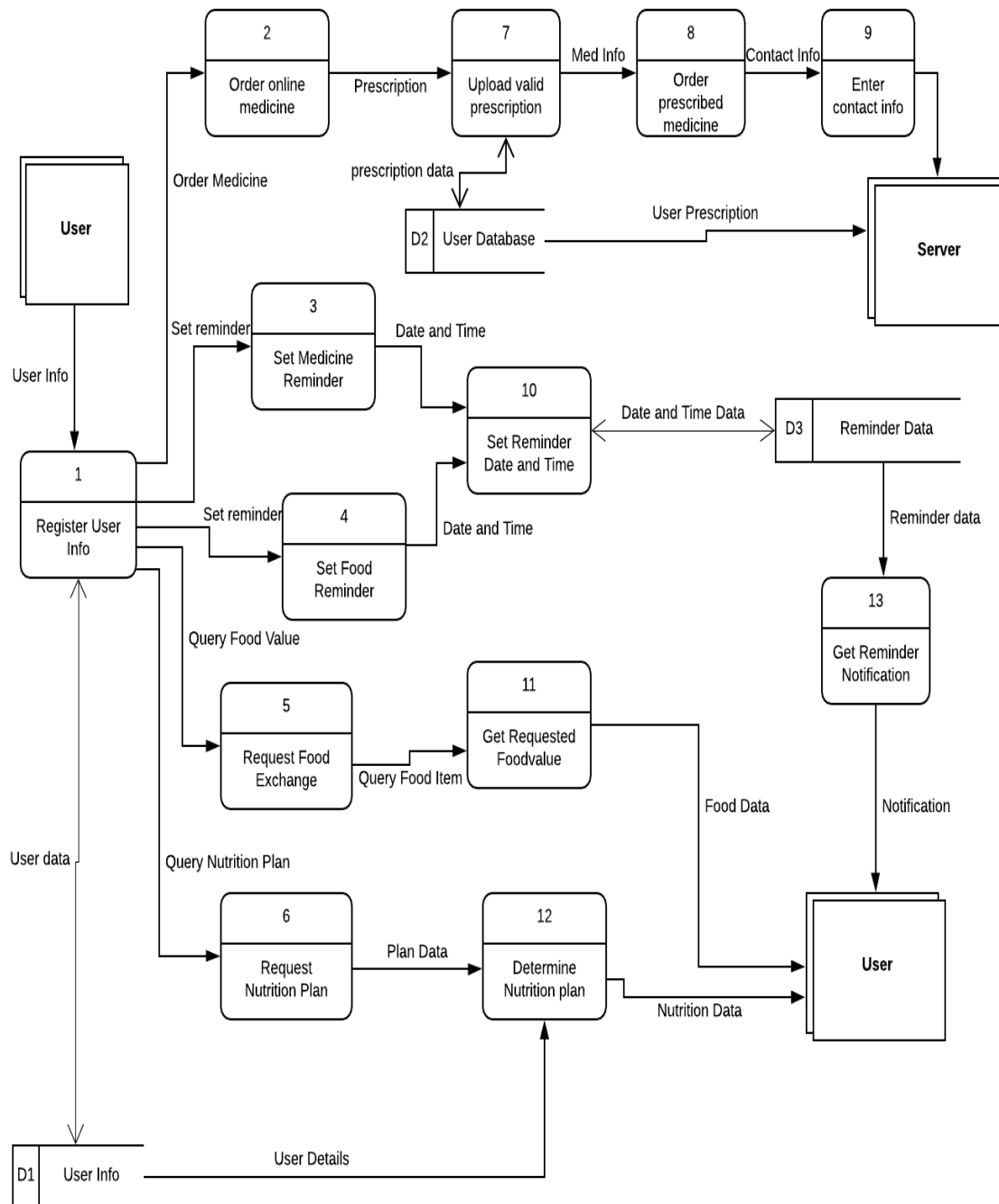


Diagram 0



## Functional Requirements

1. Install the app
2. Turn on notification for the app
3. Turn on internet connection to order medicine

## Non-functional requirements

### Performance:

The app will run smoothly on devices with Android 4.4 KitKat or higher which is basically 99% of all android phones.

### Portability:

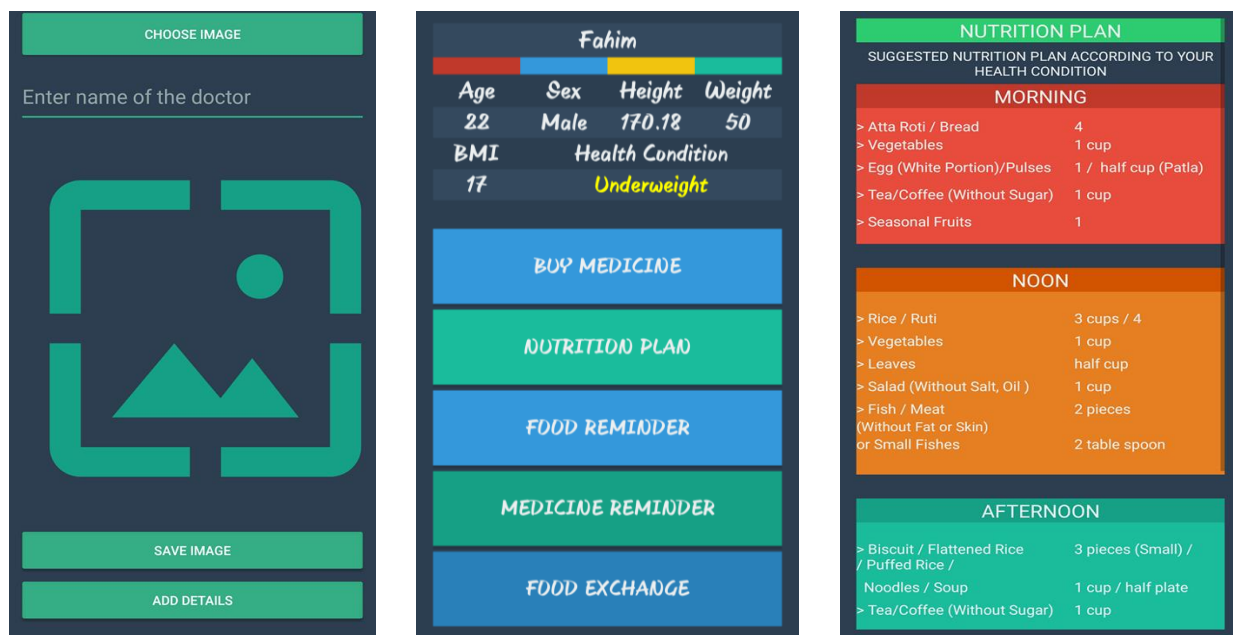
The app runs in android. In future, we plan to make a website for this so that medicines can be ordered from the web too.

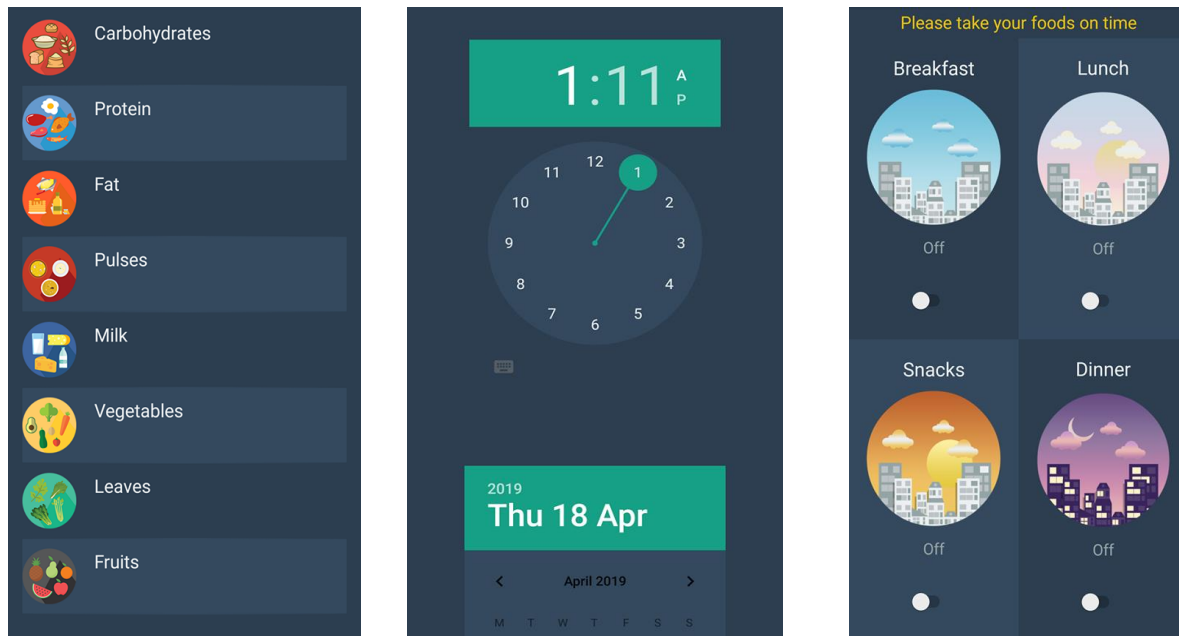
## Prototypes and Designs

Our project is a fully functional prototype of some selective features. We implemented most of the features of the client side app. Due to shortage of time other features couldn't be implemented.

The UI design was also done in Java in Android Studio. The xml file was created alongside the java file.

### Screenshots:





## Proposed System Architecture

### Software Process Model:

We used spiral model as our software process model. In the first increment, we implemented the purchase medicine options. In the next increment, the nutrition plan was added. In the third increment, the reminders were added. In the fourth and final increment we added sign in, sign up and forgot password feature. The UI was designed along with the features. The debugging went alongside the increments. We plan to implement more features in future increments.

## Software Test, Planning and Evaluation

Due to shortage of time, rigorous and controlled testing of the software could not be carried out. Primary tests of the software were carried out by the developers to remove bugs and hardware related issues. In future, we plan to continue this project and in that case, we wish to add more features.

## Conclusion and Future work

At this moment, most of the features of the client side app is working fine. We plan to add a map to the client side app that shows nearest hospitals, ambulance and drug store, a database of all available medicine and their prices so the order process can be done seamlessly, a feature to add prescription and reports to create medical histories and an chatroom for patients to talk to their doctors.

A admin side app to collect orders directly on phone, which can be also forwarded to the deliveryman. So the delivery method gets easier.

A doctor side app will be made for direct communication between patient and doctor.

A doctor can directly write prescription in the app, view medical history of the patient and also chat with patient if need be.