Project Name: NeighborCare

Date: 3rd November

Software Requirement Specification

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Document Revisions

Date	Version	Description	Author
Not applicable			

Document Approval

District level medical officer reviewed this document and hereby agree that the contents herein are accurate. Any changes to this document must be communicated in writing and signed off by both parties.

Signature: Signed document attached in Appendix	Signature
Date: 30.10.2022	Date:
Name: Dr. A. Arul chelvan	Name: Mr. Lahiru Fernando
Customer: Estate Medical officer of Kotagala.	

1 Introduction

1.1 Purpose

The purpose of this online pharmacy system. we can get medicines through this online pharmacy system using doctor prescription. this digital pharmacy can provide the medicines on time at your home door.

And the system is designed to benefit the elderly people and those who seek medical care and services from home through this online pharmacy system

this project has been established with the aim of "getting medicines at home quickly and with the social responsibility of saving our life".

1.2 Summary

It is difficult to get transportation facilities during the current threatening period and it is difficult for quarantined patients and people with serious illness to go to pharmacies and get medicines. Also, many lives were lost due to inability to get medicines in a timely manner.

Then, nowadays we spend lot of times with our mobile and internet. we are do our shopping in online shops what we want. for the example dress, food, mobiles, and accessories. but if we want a medicine, we need to spend lot of time for the local pharmacies. elder people also need to travel some kilometer for the medicine, and we can't get medicine in the correct time.

Thus, the software is designed with the social objective of saving many lives. The aim of making the software most critical patients get medicines easily and quickly to avoid transportation problems. our product creates a new way forget a medicine in correct time. we are proposing an online pharmacy system to solve the traveling issue and time shortage. it surely helps for the elderly people and workers. They can get medicine what they want in the home on time.

1.3Company Overview

This group program is established with the aim of saving time and making it easy to get medicines from home.
Project works are shared among team members and is being done very well.

1.4Project Overview

This is an online pharmacy system provide medicine from your cities. pharmacies can register into the system. after the registration pharmacies display in the system. if people need any medicine form the pharmacy, they can select the pharmacy and they can add the doctor prescription and they can select the service method also (emergency or normal). after the ordering prosses medicines will distribute to them from the selected pharmacy.

Product Functions

- User can buy medicines using Doctor prescription
- User can buy other pharmacy items also
- User can choose the pharmacy
- User can choose service method (ex- emergency/ Normal)

User Classes and Characteristics

There are 3 classes in developing system: Orders, Clients, Medicine.

Orders is main class in our system because it give all needed details about Medicine, clients, and charges. For example, user can get to know what client take what Medicine. Thanks to it system will work without any mistakes.

Clients is a class which give a full information about client such as name, pharmacy name, Id, address, phone. So different clients will never be mixed in tables, and they can be initialized by all these characteristics.

Medicine are class with information about all Medicine, that are categorize by dosage, Company, status.

1.5Scope

we are providing best medicines on time at your home. this system helps for older people and work people. they can add the doctor prescription and get medicine and we are planned to add some existing features in upcoming years.

1.6Assumptions

Fraudulent medical charge slips have been avoided from entering the system.

1.7Definitions, Acronyms and Terminology

- Only medicines prescribed by the doctor will be dispensed to the customers with the doctor prescription.
- The customer who has received the medicine can pay for the medicine only at the delivery boy.
- Children and unauthorized customers are prohibited from using this system.

1.8References (Optional)

- *https://www.techtarget.com/searchcio/definition/project-scope*
- *https://www.perforce.com/blog/alm/how-write-software-requirements-specification-srs-document*
- *https://relevant.software/blog/software-requirements-specification-srs-document/*
- *https://enisinanaj.medium.com/writing-a-software-requirements-specification-document-97d622805aef*
- *https://www.geeksforgeeks.org/how-to-write-a-good-srs-for-your-project/*
- *https://www.perforce.com/blog/alm/how-write-software-requirements-specification-srs-document*

2 Project Scope and Impact

Project Goals:

- The purpose of this online pharmacy system. we can get medicines through this online pharmacy system using doctor prescription. this digital pharmacy can provide the medicines on time at your home door.
- And the system is designed to benefit the elderly people and those who seek medical care and services from home through this online pharmacy system
- this project has been established with the aim of "getting medicines at home quickly and with the social responsibility of saving our life".

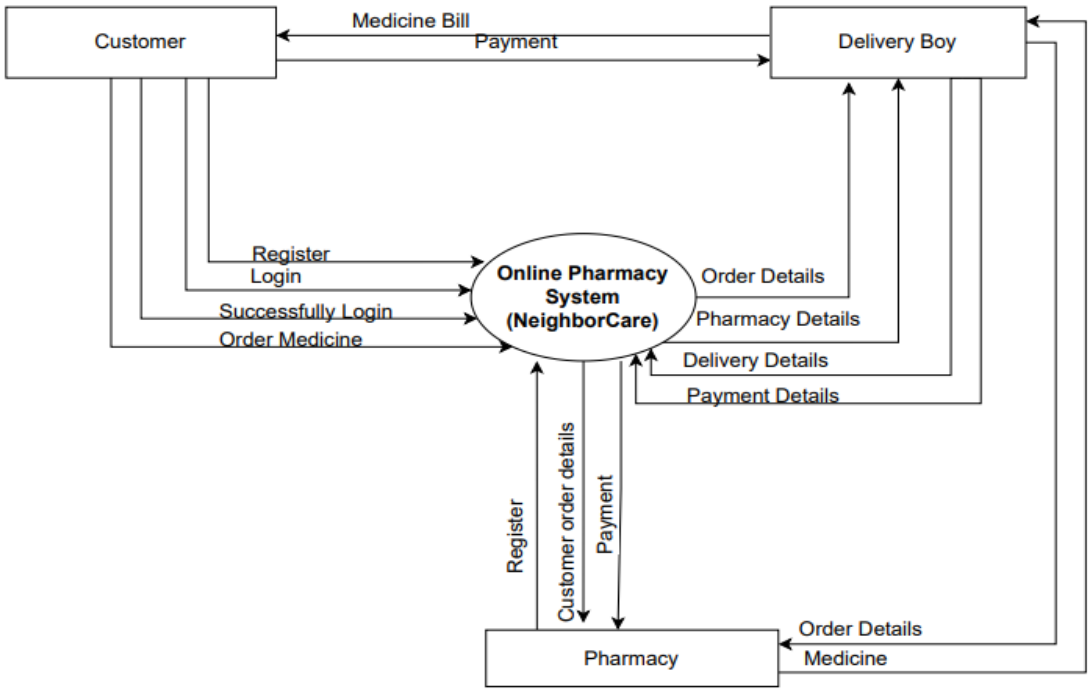
Deliverable:

- This online pharmacy system is designed to be useful for the elderly people and those who need to get medicines and services for their ailments from home.

2.1 Scope Inclusions

A list of features/functionality and issues, in the current system:

1. User can register with email.
2. User can login with Username and Password.
3. User can choose pharmacy if they want.
4. User can add doctor prescription.
5. User can choose delivery option



2.2 Scope Exclusions

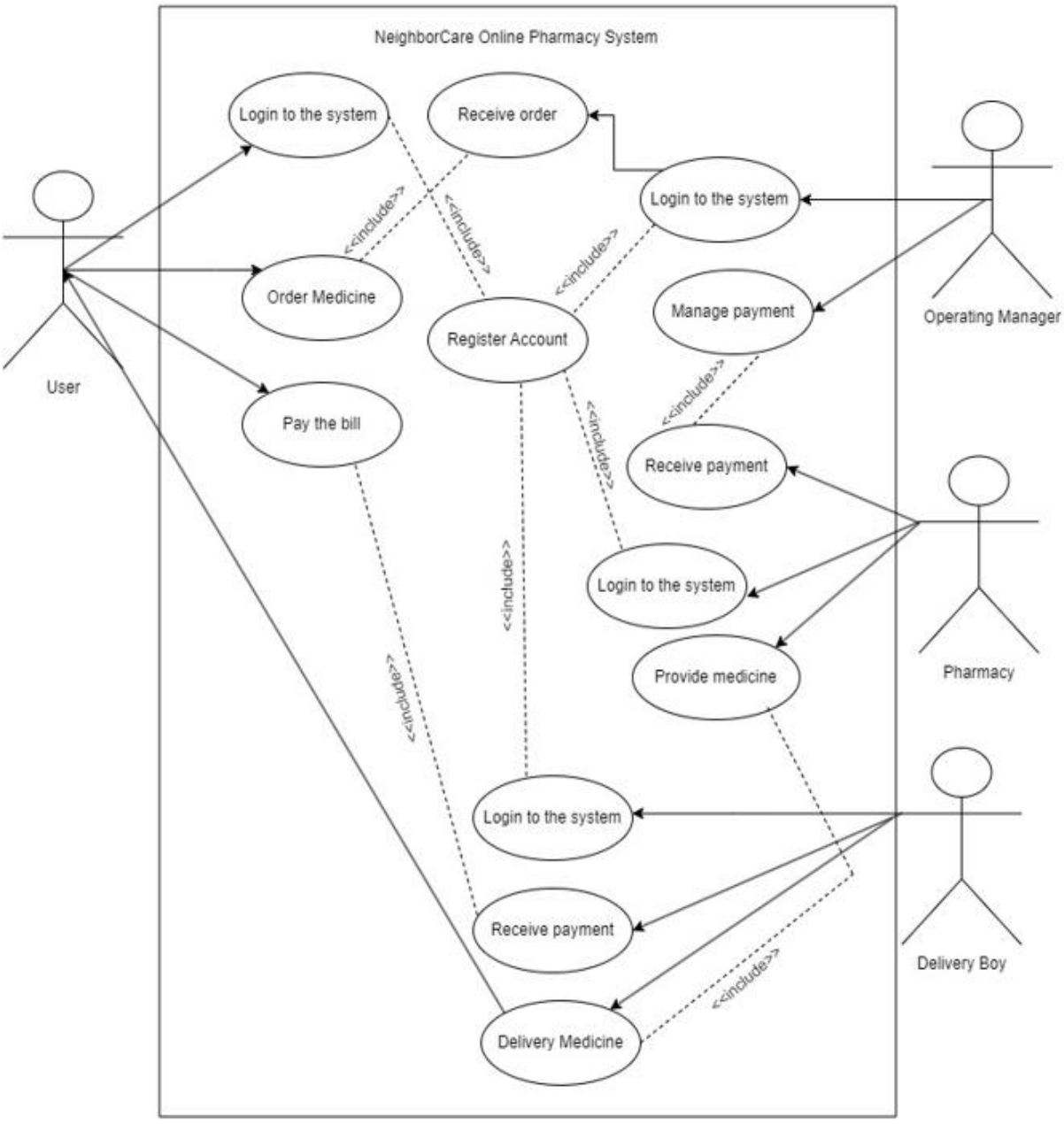
- Medicines will not be dispensed in this online system without medical authorization
- Medicinal products that are harmful to the body and intended to cause harm are prohibited.

2.2 Impact on other systems

- It can be difficult for users to find the best system as there are few systems in use like our online pharmacy system.

	Health x	OsuSala Online	pack pill	Neighborecare (Our Software)
Features				
Commercial version	**Yes**	**Yes**	**Yes**	**Yes**
Upload doctor prescription	**Yes**	**Yes**	**Yes**	**Yes**
Register pharmacies	**No**	**No**	**No**	**Yes**
Capability to use offline	**No**	**No**	**No**	**No**
Suggest pharmacies	**No**	**No**	**No**	**Yes**
Emergency Delivery	**No**	**No**	**No**	**Yes**
Technology & Infrastructure				
IOS Compatible	**Yes**	**Yes**	**Yes**	**Yes**
Android Compatible	**Yes**	**Yes**	**Yes**	**Yes**
Windows compatible	**Yes**	**Yes**	**Yes**	**Yes**

3 Functional Requirements and Use Case Diagram



3.1.1 Functions

Functional Requirements

1. User must register to log in to the system.
2. Registered customer login the system.
3. The user must insert the doctor prescription and order the medicine.
4. District based pharmacies must log into the system and register to provide services.
5. The system sends the doctor's prescription for the medicine ordered by the customer to the pharmacy.
6. The system will provide the delivery boy with information about the pharmacy receiving the medicine.
7. The system will provide customer detail and customer order detail to the delivery boy.
8. The delivery boy collects the medicines from the specified pharmacy by presenting the details of the customer's order.
9. The delivery boy will deliver the medicines to the customer.
10. The user receives the medicines and pays the money to the delivery boy.
11. The delivery boy enters the delivery details and money into the system.

3.1.2 Data Archival and Retention

- store pharmacy details
- store customer details
- store payment details
- store delivery details

3.1.3 User Profiles, Roles, and Privileges

Our Online pharmacy system Users and their privileges are:

1. User-
    - The user can register in this system and then use the services of the system easily from home.

2. Operation manager-
    - The user plays an important role in our system
    - He is responsible for managing and controlling system related activities.
    - Also involved in financial related activities and managed these activities.

3. Delivery Boy-
    - He is the medium between the system and the user of the system.
    - Log into the system and get the user's requirement directly to them.

3.1.4 Reporting Requirements

- subproject - online pharmacy system
- participants - customer, admin, pharmacy, delivery person
- hardware - Pc is preferred, if not smart mobile phone
- software - visual studio code, php my admin
- data - Pharmacy details, customer details

4 Non-Functional Requirements

4.1.1 Performance and Load Requirements

Current User Load	The user must first register the system to enter the system While they cannot get their medicines without a proper doctor prescription.
Expected Growth	Currently, this system is medicines are given to the user at home. In the future, it is expected to be a platform their own treatments registered in online.
Number of concurrent users	There are mainly three users involved in this system. • User • Operating Manager • Delivery boy
Maximum Average medicine delivery Time Acceptable	The system is designed to deliver the medicine to the user's home almost an hour in advance as much as possible.

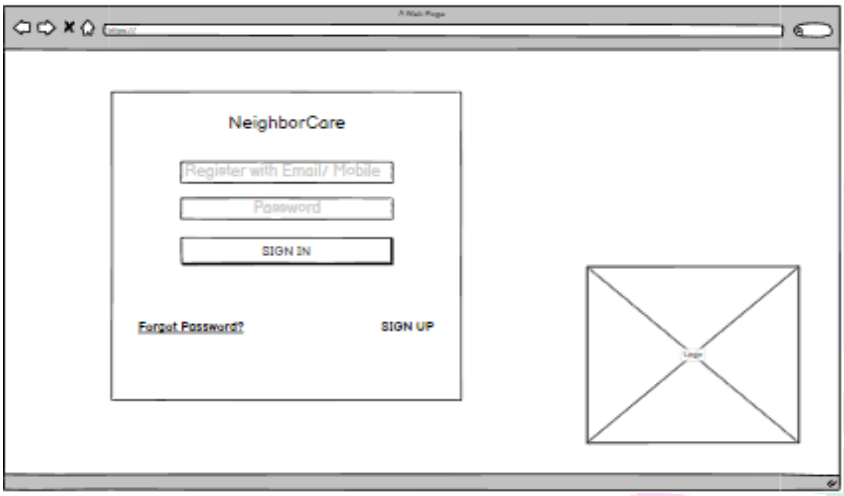
4.1.2 Compatibility Requirements

HTML Versions to be supported	Up to versions 3.0
Browser Versions to be supported	Latest version (Chrome, Microsoft Edge, Firefox)
Database Versions to be supported	SQL Server
Communication Protocol	WWW

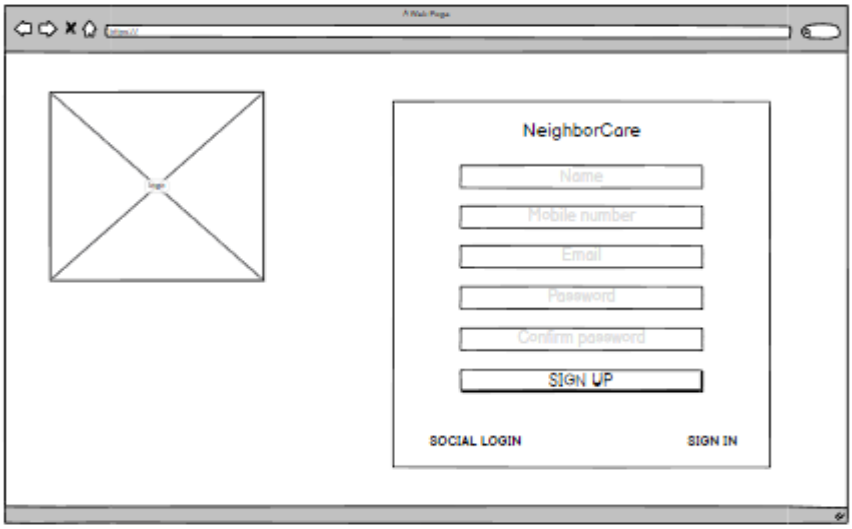
4.1.1 External Interface Requirements

4.1.1.1 User Interfaces

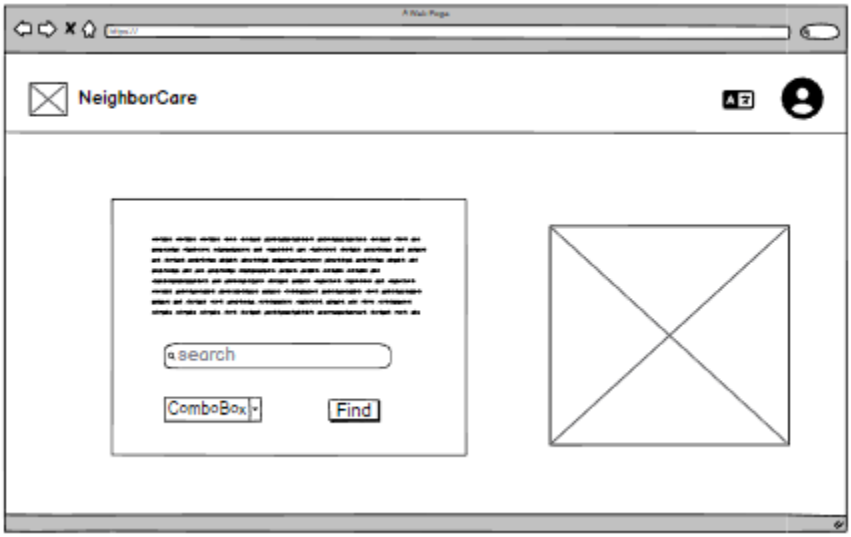
To log in to our NeighborCare Pharmacy system, the user must first enter his email address and password and sign in.



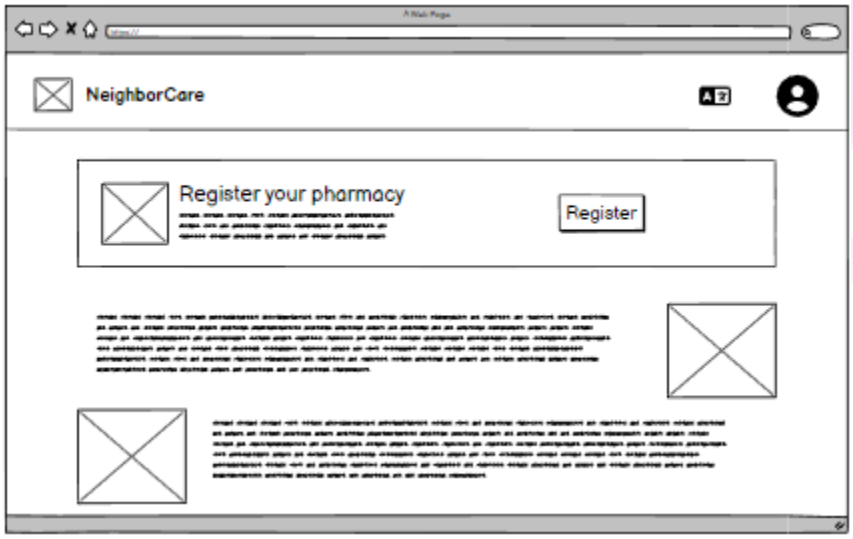
This wireframe contains a visual system for login and signup. where the user first enters his/her personal information.



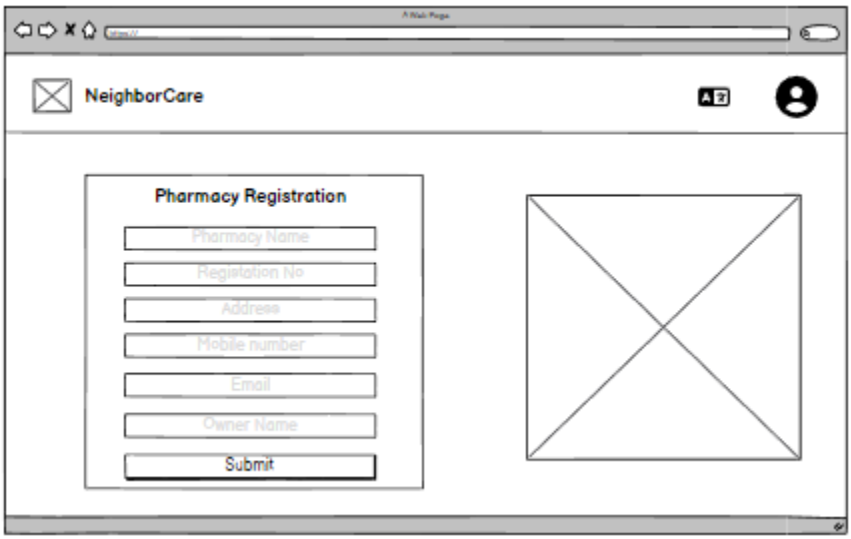
The customer can search and select the registered pharmacies in the system.



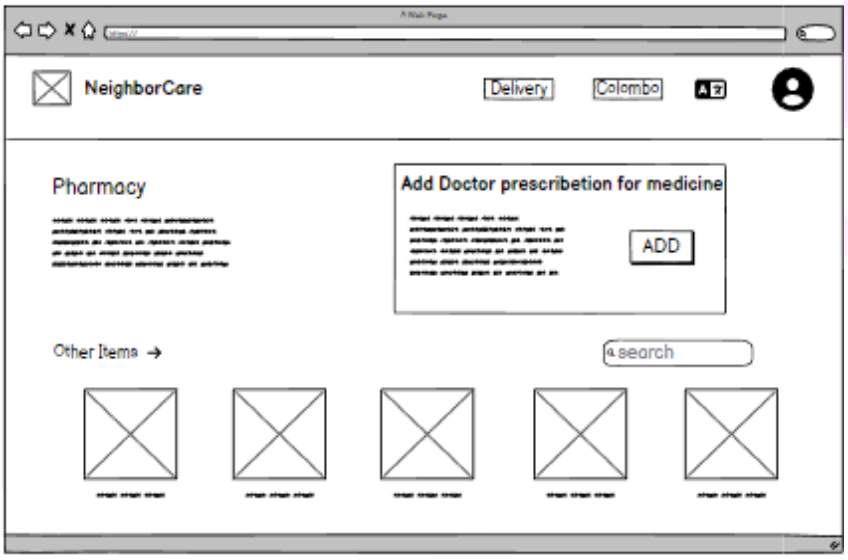
In this wireframe, pharmacies can register our system



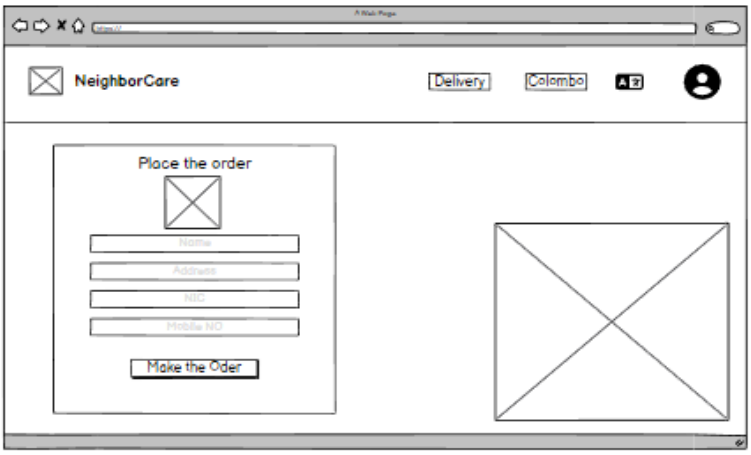
Registration of pharmacies can be done by providing Registration Number Address Mobile Number and Pharmacy related information's.



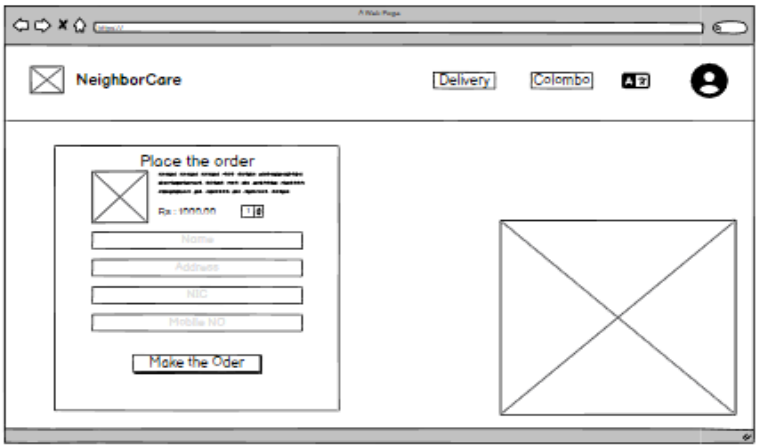
The user can input the doctor prescription after selecting the pharmacy that suits him.

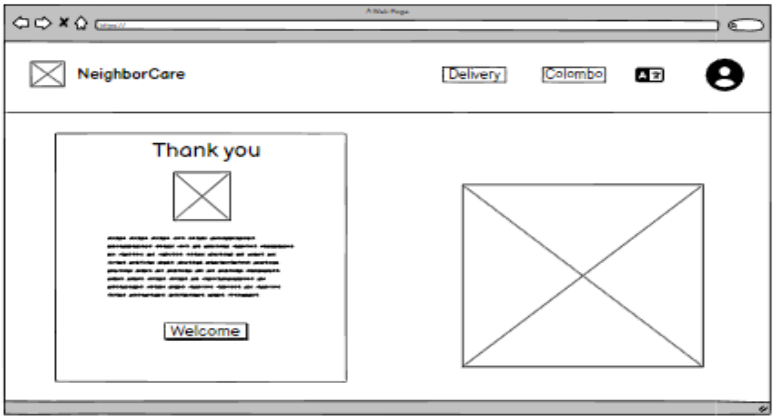


After ordering the medicines for him, the user gives his personal address and provides delivery information.



After you provide your personal details for delivery, the medicines prices will be displayed, and the order will be confirmed.





4.1.1.2 Hardware Interfaces

- this NeighborCare system is a web application. this application support for all windows and mobiles
- this system requires a mobile camera or scanner to add the doctor prescription into the system.

4.1.1.3 Software Interfaces

- the software is developed for android, windows 7, windows 8, windows 10, etc.

4.1.1.4 Communications Interfaces

Email is the communication medium used to confirm the user's use of the system and confirm the password.
Also, if the user's order is confirmed in the system, a message will be sent from the system to the user.

- E-mail
- WhatsApp

4.1.2 Security and Authentication requirements

- Our online pharmacy system is designed only registered users can log into the system and avoid unauthorized users.
- And it is designed only on upload of proper doctor prescription to obtain medicines.
- Harmful medicines are eliminated in this system.

4.1.2.1 Data Storage Security

- WhatsApp's android app used end-to-end encryption during the chat. End-to-end encryption is a technique
- to ensure that only the real desired sender and receiver can read or listen message.
- Anyone including WhatsApp is not allowed to read your messages.

4.1.2.2 Data Communication Security

- The user's email address is used for the purpose of confirming their personal information in access the system.
- Customer related information and order related information will be exchanged only if the delivery boy is registered in the system.

4.1.3 Quality Assurance Requirements

4.1.3.1 QA Test Scope

- Unit testing

Individual units/ components of a software are tested during the unit testing. The main purpose of unit testing is to validate each unit of the system to check whether the system is working as designed and implemented

- Black box testing

Black box Testing also known as Behavioral testing is a software testing method only based on the functionalities of the system without considering its internal structure or processing. Blackbox testing can be carried out for each functionality individually and for the full application when its complete.

Black box testing was useful to identify the below issues in the developed system.

- Incorrect or missing function
- Interface errors
- Errors in data structures

4.1.3.2 QA Environment

Recommended Hardware Requirements:	
Processor	Intel Core i3 or higher
RAM	8 GB or higher
HDD	Space 15 GB free hard disk space or higher
Internet	Dedicated connection to the internet.

Recommended Software Requirements:	
Operating system	Windows OS
Eclipse IDE	Visual Studio 2017 or higher
Database	MySQL 8.0 with MySQL workbench 8.0.19 or higher
Web browser	Google Chrome, Mozilla Firefox

4.1.3.3 QA Data

Example of data generation tools:

Generatedata.com

t is an open-source tool. It is written in PHP, JavaScript, and MySQL. While installing, it will give you three options, out of which you must select one. Those options include a Single user account, a single user account with a login, and multiple accounts.

Features:

- Easy to use.
- As server requirements, it needs PHP 5.3 and above and MySQL 4 and above.
- You can customize data types as per the requirements.
- You can also change the Export types.
- Countries plug-ins are available.

Databene Benerator

It was first released in 2006. It supports many databases and operating systems. It can be used for performance testing.

Features

- It supports Data synthetization and Data Anonymization.
- It provides some open-source JDBC drivers.
- It assists almost all SQL data types.
- It supports four operating systems, Windows, Linux, UNIX, and MAC.

4.1.4 Development Requirements

4.1.4.1 Development Environment

Language-centered environments

- support one programming language and related tools.
- Example: Microsoft's Visual Studio .NET, Android studio

Structure-oriented environments

- enable developers to manipulate structures directly.

Toolkit environments

- offer a collection of tools, including language-independent support, configuration management and version control.

4.1.4.2 Development Data

- Customer- Customer is most important entity of system. He/she will use the system properly and reap its rewards.
- Delivery Boy-Acts as a communication medium between system and user during system development.
- Operation manager- An entity that plays key roles in system development and management.

4.1.4.3 Implementation Packaging Requirements

Example of implementation package: java package

Key Features

- Effective and efficient Forcepoint security solution implementation
- Optimized security policies to ensure the protection and performance you need
- Resources and deliverables aligned to your deployment needs and timeline

Customer Benefits

- Increase protection for your business
- Reduce implementation risks associated with non-certified service provide

4.1.5 Deployment Requirements

4.1.5.1 Installation Packaging Requirements

Installation packaging tools:

InstallShield:

is a proprietary software tool for creating installers or software packages.

InstallShield is primarily used for installing software for Microsoft Windows desktop and server platforms, though it can also be used to manage software applications and packages on a variety of handheld and mobile devices.

4.1.5.2 Deployment Requirements

- After the requirements have been finalized and operational data migrated, the development team builds the platform and tests it to check for bugs.
- The final product must meet client requirements and ensure seamless functionality.
- Furthermore, the pharmacy software systems company must offer periodic support and updates for smooth operations.

4.1.5.3 Documentation requirements

Document preparation requirements of our online pharmacy system:

- User Requirements and their activities.
- Effects of the system.
- Technical requirements

4.1.6 Applicable Standards

- Legal and regulatory: FDA

In June 2013, the US Food and Drug Administration (FDA) shut down 1,677 Web sites for selling counterfeit or substandard medications or for selling medications to consumers without appropriate safeguards

- Communications standards: TCP/IP, ISDN
- Platform compliance standards: Windows, UNIX
- Quality and safety standards:

In November 2019, Quality Use of Medicines and Medicines Safety was announced as Australia's 10th National Health Priority by the Council of Australian Governments (COAG) Health Council.

4.1.7 On-line User Documentation and Help System Requirements

- How to register and get medicines through our online system will be notified to the user through Helpdesk.

4.1.8 Usability Requirements

Log Events

- The user must be able to enter personal information concerning a login into the application. These events may be:
- The appropriate user must be able to input Email Address
- The appropriate user must be able to input password.
- The appropriate user must be able to input Personal information.

Application Set-up

- The system software must be tailored for the needs of the individual user.
- The appropriate user must be able to locate and upload the app on a smart phone
- The appropriate user must be able to input doctor prescription as directed.
- The appropriate user must be able to input pharmacy as directed.

5 Future Requirements (Optional)

- In this software can easily log and make booking for blood tests from home.
- Also, blood pressure monitoring causes can be registered, and treatments can be done from home.
- Also, insulins for diabetic patients will be registered and delivered at home.
- Insulins for dog bites can be booked and delivered from home and treatments can be done from home.

6 Appendix(A) –

OPEN UNIVERSITY OF SRI LANKA

Center For Education (CITES)

Bachelor of Software Engineering Degree Program

Project Title: Online Pharmacy System

Project Group: Stack warriors (6.4)

Requirement Elicitation Method: Interview Method

Interviewer: T. Udhayaranjan

(Student of OUSL)

1. From your point of view as a medical officer what are the problems faced by the patients during the current corona and fuel shortage situation in our country how did they get medicines and treatment?
2. Are there any alternative practices or recommendations made by regional medical societies to correct these problems?
3. Are there immediate treatment centers or systems for blood tests and blood pressure tests district wise?
4. So, is there any solution to these problems from your point of view?
5. What are your views and opinions about this online pharmacy system of ours?
6. Will this system be acceptable to people? What are the benefits from this in your view?
7. What are your suggestions for further development of the online pharmacy system?

Interviewing Details

Name. A. ARUL CHELVAN

Address: DRAYTON ESTATE, KOTAGALA

Signature with office stamp

A. Arul Chelvan

Estate Medical Practitioner

SLMC Reg No - 5813

Answers obtained during the interview of the medical officer:

Contact Number: 0779333444

1. From your point of view as a medical officer what are the problems faced by the patients during the current corona and fuel shortage situation in our country how did they get medicines and treatment?
    - Regionally people mostly depended on the government hospitals to get their medicines and treatments. But during this corona and fuel shortage situation, getting medicines was a huge problem for them.
    - As a solution to these problems, clinic medicines were brought home to the patients through the district hospital.
    - People could not get medicines for sudden illness.

2. Are there any alternative practices or recommendations made by regional medical societies to correct these problems?
    - Thus, as alternative procedures for these problems,
    - A workshop on empowerment of medical officers and how to bring medicines to people was conducted by the medical association.

3. Are there immediate treatment centers or systems for blood tests and blood pressure tests district wise?
    - Although blood testing centers were not set up regionally during the Corona and fuel shortage, PCR centers were set up as a solution to the Corona problems.

4. So, is there any solution to these problems from your point of view?
    - Regional dispensaries should function efficiently, and the government should take charge of those dispensaries and provide suitable facilities to the people.

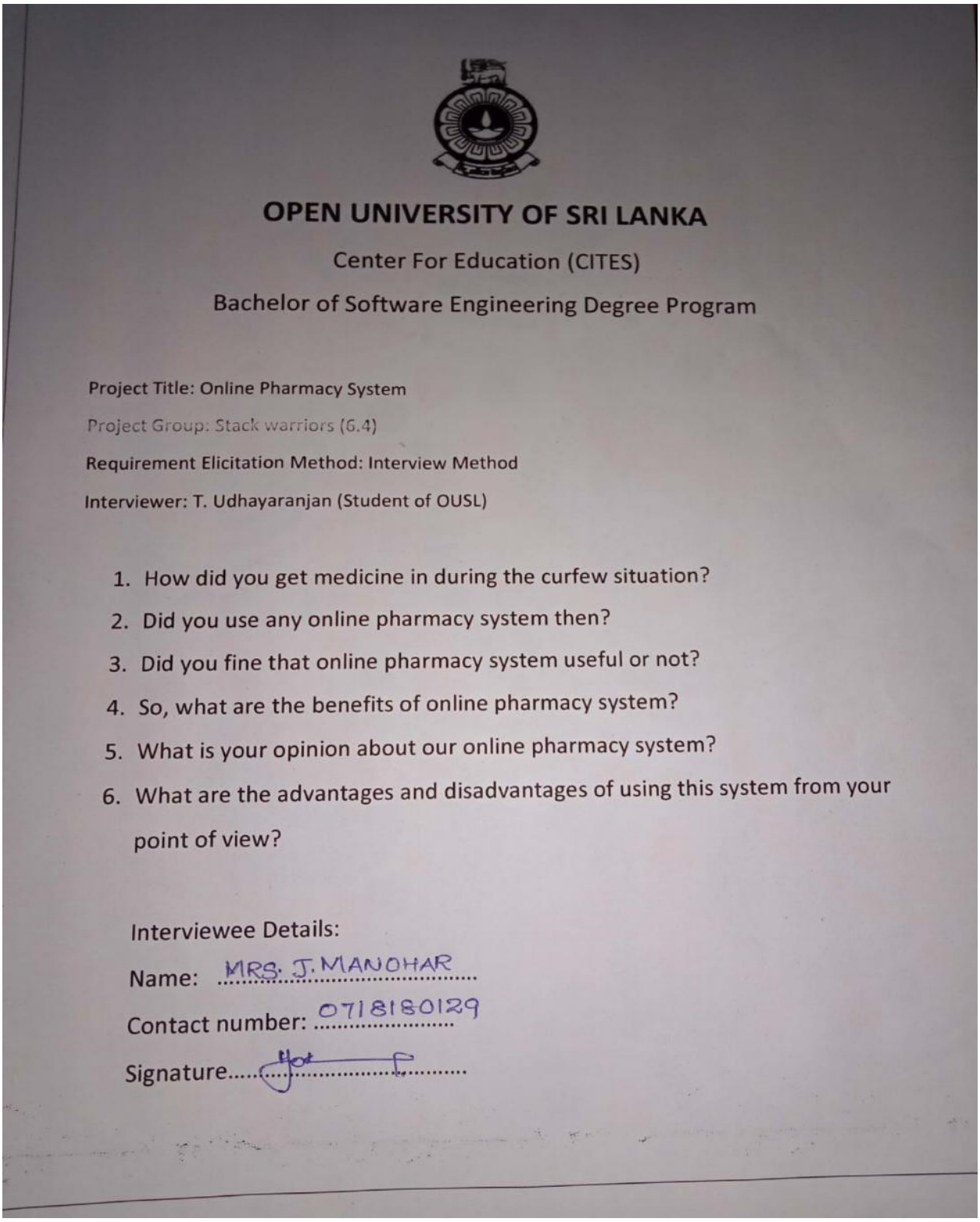
5. What are your views and opinions about this online pharmacy system of ours?
    - It is a necessary system that people need during the Corona and fuel scarcity situation.
    - The system has many advantages such as no transportation problems and easy access to medicines at home.

6. Will this system be acceptable to people? What are the benefits from this in your view?
    - Yes.
    - The system has many advantages such as no transportation problems and easy access to medicines at home.

7. What are your suggestions for further development of the online pharmacy system?
    - Although this online pharmacy system is popular for people, it is prone to many fraud problems, so it is better to consider these problems while managing and developing.

Appendix(B) –

Client-Side Interviews-



OPEN UNIVERSITY OF SRI LANKA

Center For Education (CITES)

Bachelor of Software Engineering Degree Program

Project Title: Online Pharmacy System

Project Group: Stack warriors (G.4)

Requirement Elicitation Method: Interview Method

Interviewer: T. Udhayaranjan (Student of OUSL)

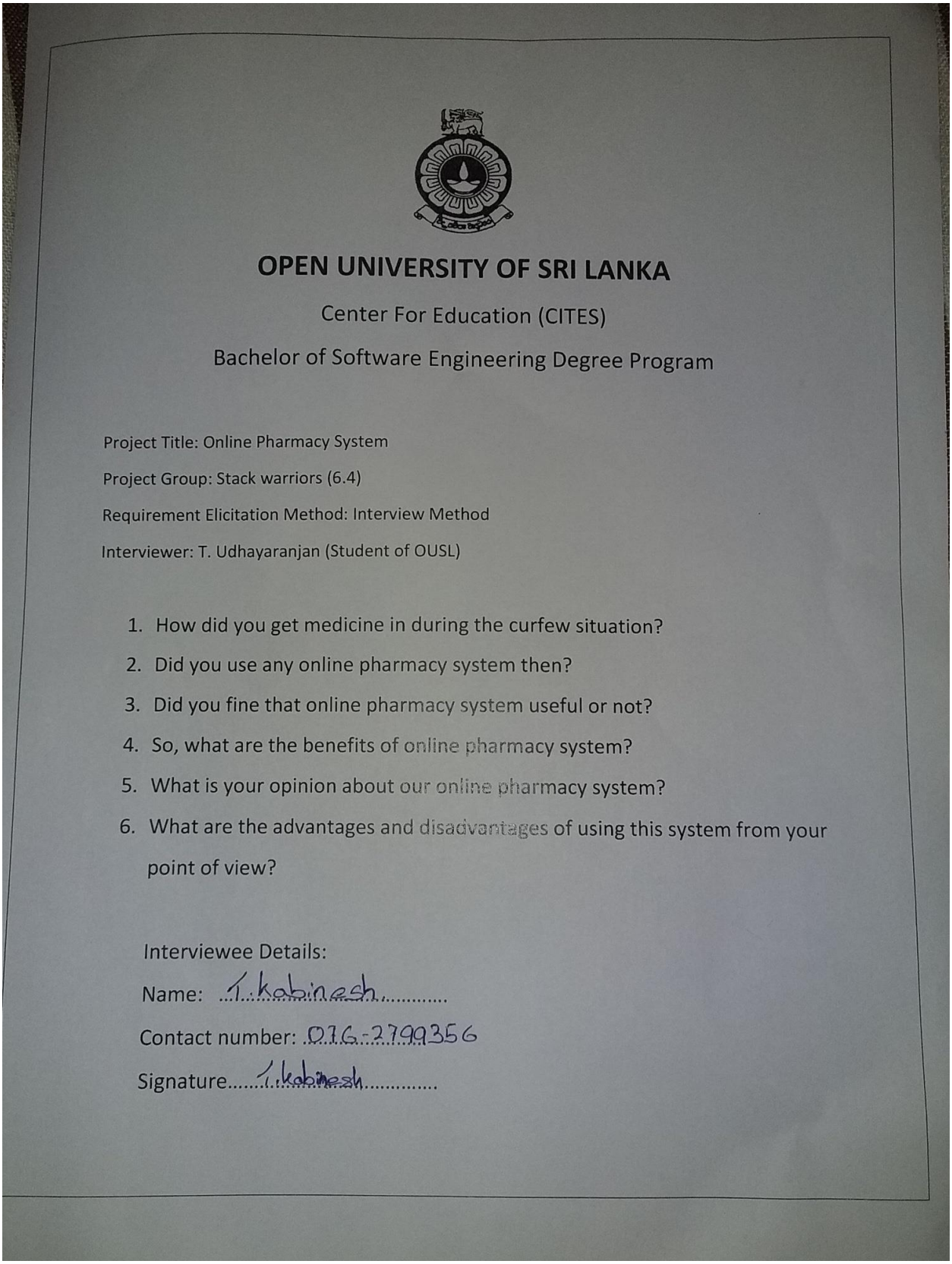
1. How did you get medicine in during the curfew situation?
2. Did you use any online pharmacy system then?
3. Did you fine that online pharmacy system useful or not?
4. So, what are the benefits of online pharmacy system?
5. What is your opinion about our online pharmacy system?
6. What are the advantages and disadvantages of using this system from your point of view?

Interviewee Details:

Name: MRS. J. MANOHAR

Contact number: 0718180129

Signature.....



OPEN UNIVERSITY OF SRI LANKA

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Bachelor of Software Engineering Degree Program

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3. Did you fine that online pharmacy system useful or not?
4. So, what are the benefits of online pharmacy system?
5. What is your opinion about our online pharmacy system?
6. What are the advantages and disadvantages of using this system from your point of view?

Interviewee Details:

Name: T. kabinesh

Contact number: 076-2799356

Signature: T. kabinesh

Answers obtained during the interview of the Client:

Name: Mrs. Manohar

1. How did you get medicine in during the curfew situation?
    - I used online pharmacy system during the curfew situation and get medicine at home.
2. Did you use any online pharmacy system then?
    - Yes.
    - Its Health guard online pharmacy system.
3. Did you fine that online pharmacy system useful or not?
    - Yeah, it's very useful for me.
4. So, what are the benefits of online pharmacy system?
    - Travelling problems will be reduced.
    - No time wastage.
    - You can easily get medicine from home.
5. What is your opinion about our online pharmacy system?
    - This system will be very useful for people in future.
6. What are the advantages and disadvantages of using this system from your point of view?

    Advantages
    - Travelling problems will be reduced.
    - No time wastage.
    - You can easily get medicine from home.

    Disadvantages
    - This system cannot be used by non-technical people.

Name: Mr. Kabinesh

1. How did you get medicine in during the curfew situation?
    - In the curfew situation we are faced lot of struggles to get medicine. Because some Pharmacies are closed, very afraid to go out that kind of covid situation. So, we were not got medicine.

2. Did you use any online pharmacy system then?
    - No, because there are no online pharmacy services.

3. Did you fine that online pharmacy system useful or not?
    - No, I am not used yet.

4. So, what are the benefits of online pharmacy system?
    - it could be useful in some unusual situation, and we can reduce traveling expense also.

5. What is your opinion about our online pharmacy system?
    - I think, this online pharmacy system will be helpful for the elderly people.

6. What are the advantages and disadvantages of using this system from your point of view?
    - traveling time can be reduced, easy way to get medicine.

THANK YOU