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# ONLINE PHARMACY MANAGEMENT SYSTEM

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(OPMS)



APRIL 21, 2021

OPMS  
Team 07

**IN  
PARTNERSHIP  
WITH  
PLYMOUTH  
UNIVERSITY**

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Module Code: CNET343SL	Module Name: Distributed Systems		
Coursework Title: Online Pharmacy Management System (OPMS)			
Deadline Date: 2021.04.21	Member of staff responsible for coursework: Mrs. Rasika Alahakoon		
Programme: BSc (Hons) Software Engineering			
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Signed on behalf of the group: Kely			
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Overall mark	%	Assessors Initials	Date

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# Declaration

When forwarding this submission, we claim that our work contains no examples of abuses such as plagiarism or paraphrase. All content has been properly processed in accordance with Plymouth guidelines. Below is the list of members of the group.

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# Table of Content

## Contents

<b>1. Introduction .....</b>	4
<b>2. System Scope .....</b>	5
<b>3. Requirements .....</b>	6
<b>4. Business Focus.....</b>	7
<b>4.1 User-friendly system .....</b>	7
<b>4.2 Enhance customer satisfaction.....</b>	7
<b>4.3 Supplier benefits .....</b>	8
<b>4.4 A trustful and convenient service.....</b>	8
<b>5. System process hierarchy .....</b>	9
<b>6. Architectural plan.....</b>	10
<b>7. Methodology.....</b>	11
<b>7.1 Technical approach.....</b>	11
<b>7.2 Web Application .....</b>	13
<b>7.3 Mobile Application .....</b>	23
<b>8. Distributed Technology.....</b>	38
<b>8.1 Openness .....</b>	38
<b>8.2 Heterogeneity .....</b>	38
<b>8.3 Security.....</b>	39
<b>8.4 Transparency .....</b>	39
<b>8.5 Database Connection.....</b>	40
<b>9. Conclusion.....</b>	42
<b>10. References .....</b>	43
<b>11. Individual Contribution.....</b>	44

# 1. Introduction

Medication is one of the basic human needs. As human always tends to get sick, maintaining good health is being one of the most important factors in the present society. If our health condition is not in a state, we should get medicine to get back to normal to get involved with our day-to-day activities. As this is the 21<sup>st</sup> century, people are busy with their day-to-day life routine which they even don't have a single second to worry about their health and get medicine from pharmacies. With this situation, the Covid-19 pandemic has become a major issue for people to reach pharmacies and other places to buy medicine and other essentials.

Due to this issue we the team has developed a system to purchase medicine online for the people named as **ONLINE PHARMACY MANAGEMENT SYSTEM (OPMS)**. Through this system, people can order their medicine according to their prescriptions through an online basis. So, the relevant pharmacy would check the medicine and deliver them to the doorstep of the customer. This system is very convenient for both the customer and the pharmacy owner.

The process of this system is that the customer can find a pharmacy according to their preference and send the medical prescription to the relevant pharmacy through the system via online, after the medicine is ready the customer will receive an email with the bill, once the bill is paid through the system. The medicine will be received at the doorstep of the customer.

This system is very helpful for people to buy their medicine. As benefits, people will reduce wasting their time on waiting in a quest to buy medicine, stop spreading some diseases and another important part is that any aged human can operate the system easily.

## 2. System Scope

This system has three main parts. There is,

- ★ Customer
- ★ Supplier
- ★ Admin

This system is online pharmacy management system. There main given facility to order online medicine and supply online pharmacies. Mostly this is very useful and helpful on this covid-19 pandemic situation. Here I mention below what task doing these main rolls.

Customer – customer is the one of the major roll in our system. In this system, if customer need to order medicine firstly they have to register with our system. After create their account they can have chance to login their account. After they can see what available pharmacies in this system. After they can add to order with uploading their prescription. After they doing the payment they will receive their medicine to doorstep.

Supplier – supplier is one of the major roll in our system. In this system, if supplier need to selling their medicine, firstly they have to register with our system. After register their pharmacy they can have facility to login their account and supplier can check order status, view order, send invoice, watch their order history. In this system supplier task is, after receive order, they can send to invoice for the customer. After customer did the online payment, supplier have to deliver for their location.

Admin – admin is on of the major roll in our system. Admin have to permission for control suppliers' accounts and manage contact request. If the supplier doing some illegal or selling some bad medicine, admin can deactivate their account. This action taken for system security and keep the medicine quality. Also admin can watch customers' or suppliers' or anyone contact request. So admin can see their messages.

## **3. Requirements**

Online Pharmacy Management main requirements

### **Customer part**

- Create account for customer
- Showing the available pharmacies
- Medicine order option
- Prescription upload option
- View the invoice
- Do the online transaction
- Update customer account details i

### **Supplier part**

- Create account for supplier
- View the customer orders
- View order status
- Send invoice
- Deliver the medicine
- Update supplier profile details

### **Admin part**

- Login the admin account
- View the contact request
- Deactivate the supplier account

## **4. Business Focus**

### **4.1 User-friendly system**

- The online pharmacy system is very useful during this covid-19 pandemic period, using this system allows the patient to buy their medicine through online basis, and it is very convenient for the suppliers. Any aged person can order medicine through this system because the system is developed using simple interfaces to identify quickly.

### **4.2 Enhance customer satisfaction**

#### **☞ Delivery**

- Delivery is one of the main things of this system, once the order is ready, the relevant pharmacy arrange to deliver the ordered medicine to the customer doorstep. This method saves time for the customer and this is very convenient for the customer and the supplier.

#### **☞ Location Services**

- The customer can choose any pharmacy according to their preference from the search list of the system and send the prescription to the pharmacy via online through the system.

#### **☞ Old records management**

- When a customer buys medicine from the same pharmacy continually the pharmacy records all the products and the dates which the customer has ordered and purchased the medicine. The importance of this process is the pharmacy can view the records of the customer to check when medicine is missing or if a name is unclear in the prescription.

#### **Online payment method**

- People who use to order the medicine through the system can pay the bills via online using the system with PayPal or another convenient payment method. This specific feature saves time for people going to pay bills from banks.

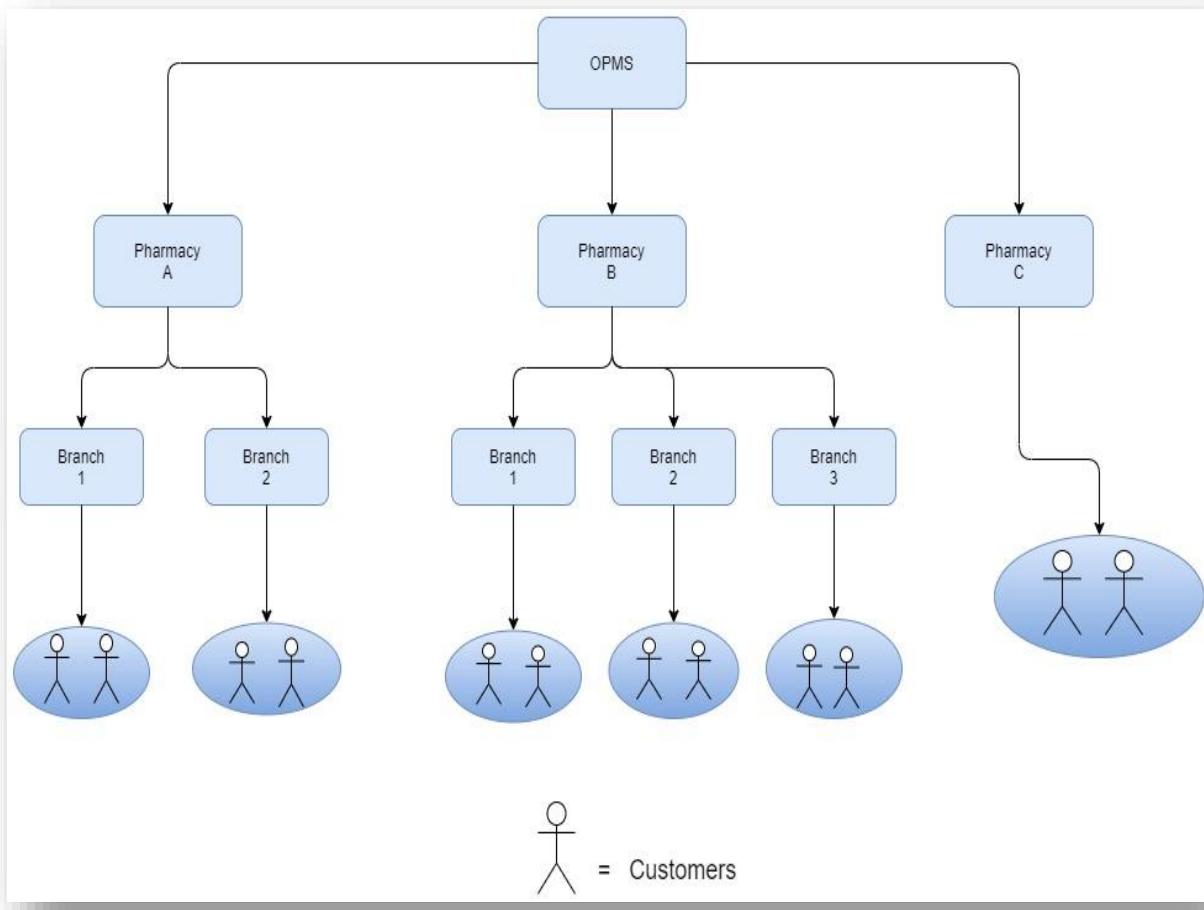
### **4.3 Supplier benefits**

- When the customer order medicine they keep records and invoices of each customer, so they can check over them if an issue has occurred.
- The suppliers who register through the system can increase their profits because in the 21st century people tend to use online methods because of their busy life, so this a good opportunity for all the suppliers who enrol with this system.

### **4.4 A trustful and convenient service**

- A trustful can be obtained by the customer by entering all the true information into the system when enrolling.
- Both the customer and the supplier should enter their NIC number and an image copy of the NIC to the system, so if fraud happens, the customer or the supplier can make a complaint to the responsible party. So then the admin can have the power to deactivate the user account from the system.
- This system is convenient because the layout is very simple to use and catch insight to function quickly.

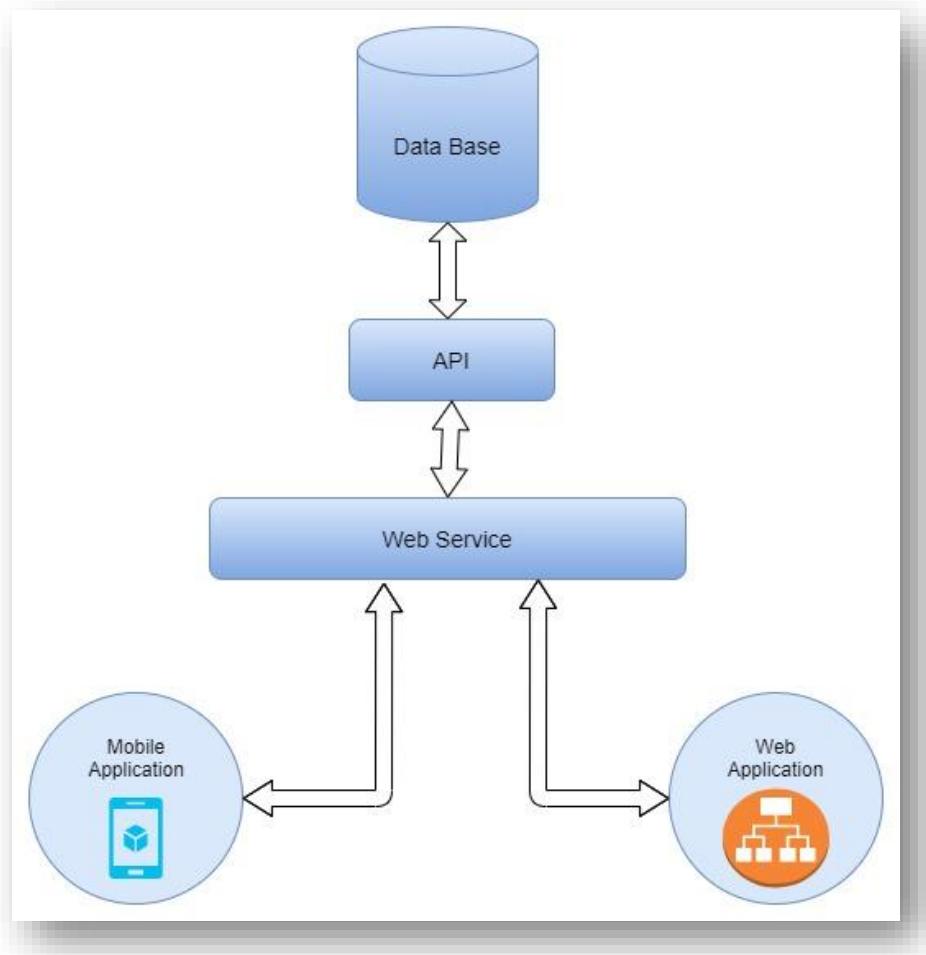
## 5. System process hierarchy



- This is a summary of this proposed system and this helps to get a good understand of the system. Here you can see pharmacies have sub-branches and customers can order medicines from these pharmacies main branches as well as from sub-branches.

## 6. Architectural plan

- This is the basic technical architecture plan of the OPMS proposed system.



## 7. Methodology

Two main parties are using this OPMS.

1. Suppliers/ system clients (pharmacies)
  - The customers who use our OPMS as ERP and CRM system for their day to day process. Ex- transactions, customer management.
2. Customer
  - Customer is the people who actively relates with our OPMS and buy the service.

### 7.1 Technical approach

There are three main principal components in our online pharmacy management system, each of the components have a major technical approach in developing in OPMS.

#### Technologies that are used to develop OPMS

We created a web application and a mobile application with an API.

- **Web Application**

We created the web application of OPMS, by using HTML, CSS, JavaScript, bootstrap and we used PHP to connect the API with the web application.

- **Mobile Application**

1. We created the mobile application using flutter with dart language.
2. In flutter everything is a widget, widgets are used to create the frontend of a mobile application. As the OPMS uses a WebAPI to communicate between the server and the other applications. Therefore, flutter http package and flutter covert library were used as libraries.
3. The mobile applications which are developed using flutter will run on both Android and IOS. So using one application is satisfied for both operating systems.
4. Hot reloading is a main function in flutter.
5. Simple platform and attractive UI design.

- **API (Application Programming Interface)**

Application Programming Interface (API) provide data/ information gateway that permits to communicate with backend of the software or the application with each other. Through this API application will be interconnected and become suitable and provide up-to-date digital experience or we can tell that two applications can communicate each other using the API. Interact and can access information/ data with operating systems, external software components and API can give response to user and can send response back to a user.

These are the middleware used in node js to develop the API.

➤ **Express. Js**

Express js is an open source and free web application framework for node.js. This gives speed processing and it is reliable.

Express use to provide server-side logic for web and mobile application, it is used for up robust APIS.

➤ **Bcrypt. Js**

Bcrypt.js is used for password hash () and password verify ().

Brypt.js is a true way to hash and store passwords.

➤ **Core.js**

Core js is a client-side JS library.

It uses for creating event -driven JS codes and object-oriented codes.

Core.js helps to enable the web access.

➤ **Body-parser**

This body-parser object exposes various kind of factories to create middleware. This is used to read HTTP POST data, and this read a form's input and stores it as a JavaScript object.

**Json web token**

This is an open standard for passing claims in web application environments. Also, this is an internet proposed standard in creating data through optional signature or optional encryption which the payload holds JSON which asserts some amount of the claims.

**Mongoose**

This is a type of Mongo DB object which is designed to work in an asynchronous environment. This provides a direct schema based to model the user's application data.

**Multer**

This is a node.js middleware. This is mainly used for uploading files and also this would never process any form which is not multipart.

**Node mailer**

This is a module in Node.js to send e-mails and this is licensed under MIT license.

## XML

This is a mark-up language which can be read by human language and machine language. This is designed commonly to be user friendly and also to emphasize simplicity and usability through the internet. This language is widely used for the representation of data structures.

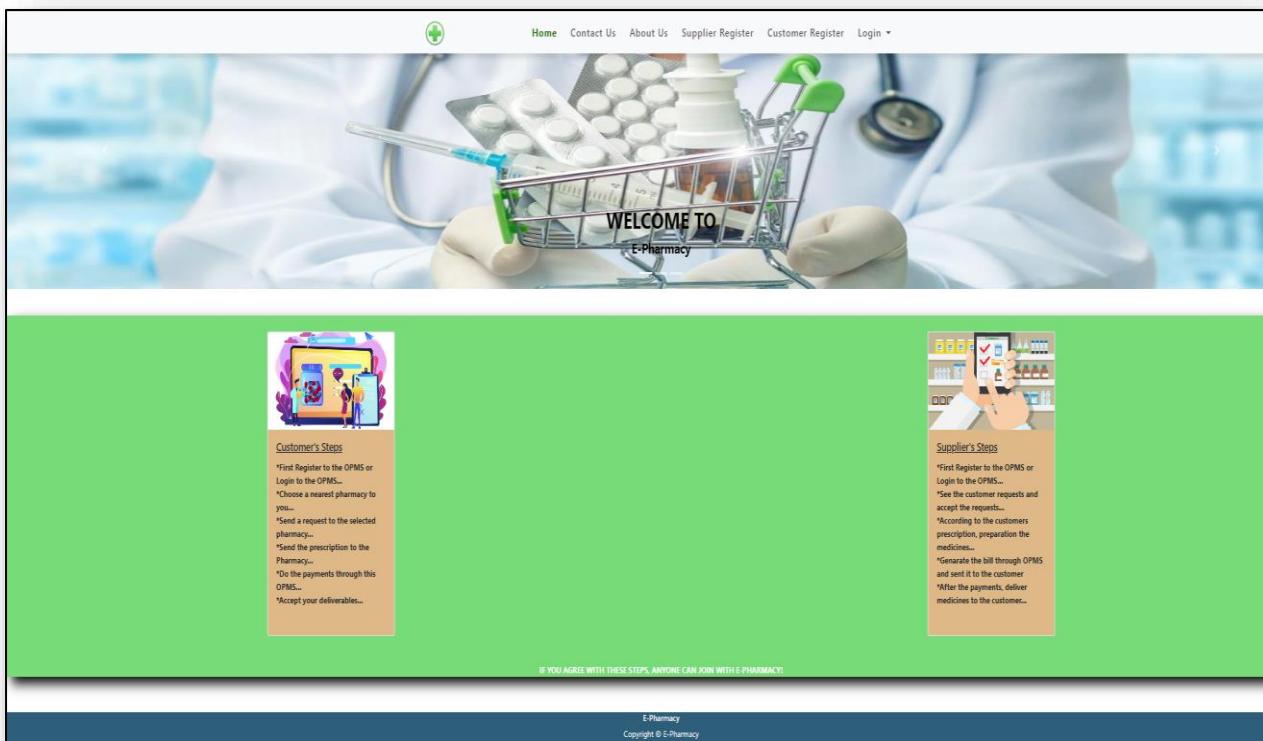
## 7.2 Web Application

We developed this web application using html,css,bootstrap,php and node js. This particular part refers to the OPMS web application, the technologies which are used to develop the system are mentioned above. There are four main areas that should be given a special focus on our OPMS system. They are,

- Customer Management
- Supplier Management
- Transaction Management
- Supplier account and customer request management.

Web pages have been created by covering all these areas, the pages which are attached below gives a clear idea of each section which are mentioned above. Here mentioned below screenshots of web application interfaces.

### Home page



## Contact us page

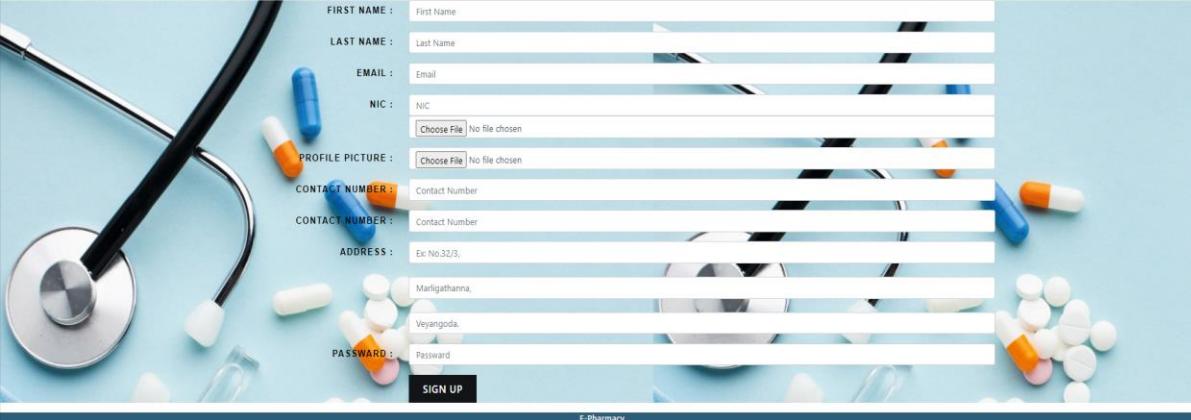
The screenshot shows a contact form on a website. At the top, there is a navigation bar with links for Home, Contact Us (which is highlighted in green), About Us, Supplier Register, Customer Register, and Login. A green cross icon is in the top left corner. The main content area features a background image of a hand holding a smartphone. On the left, there's a decorative graphic of three wooden blocks with icons for email, message, and phone, and the text "CONTACT US". Below this, a message says: "If you have Questions or just want to get in touch, use the form below. We look forward to hearing from you!". It includes fields for "Your Name", "E-mail:", and "Message", each with an input box. A "Submit" button is at the bottom right of the form. At the bottom of the page, it says "E-Pharmacy Copyright © E-Pharmacy".

## About us page

The screenshot shows the about us page of the website. At the top, there is a navigation bar with links for Home, Contact Us, About Us (which is highlighted in green), Supplier Register, Customer Register, and Login. A green cross icon is in the top left corner. The main content area features a background image of a doctor's gloved hands. To the right of the hands is a graphic of several blue hexagons containing medical icons such as a battery, a eye, a wheelchair, a water drop, a medical cross, and the word "MEDICAL". Below this graphic, the text "The Complete Pharmacy Management System" is displayed. A detailed paragraph explains the system's purpose and how it facilitates secure prescription delivery. Below this, two sections are shown: "The Mission" and "The Technology". The "Mission" section states the goal of developing a useful and practical healthcare information system. The "Technology" section describes the project's components and infrastructure. At the bottom, it says "E-Pharmacy Copyright © E-Pharmacy".

## Supplier Register

### Supplier Registration



**FIRST NAME :**

**LAST NAME :**

**EMAIL :**

**NIC :**

**PROFILE PICTURE :**  No file chosen

**CONTACT NUMBER :**

**CONTACT NUMBER :**

**ADDRESS :**  
Ex No.32/3,  
Marligathanna,  
Veyangoda.

**PASSWORD :**

**SIGN UP**

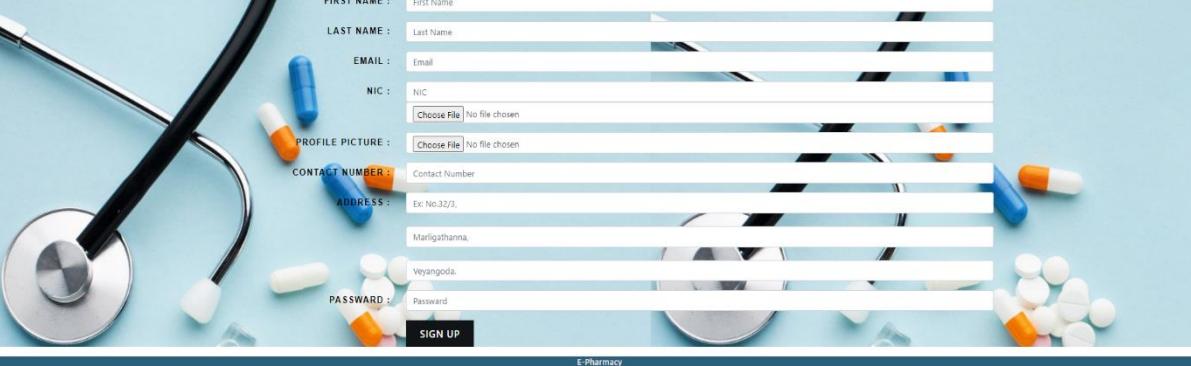
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Copyright © E-Pharmacy

## Customer Register page



Home Contact Us About Us Supplier Register **Customer Register** Login ▾

### Customer Registration



**FIRST NAME :**

**LAST NAME :**

**EMAIL :**

**NIC :**

**PROFILE PICTURE :**  No file chosen

**CONTACT NUMBER :**

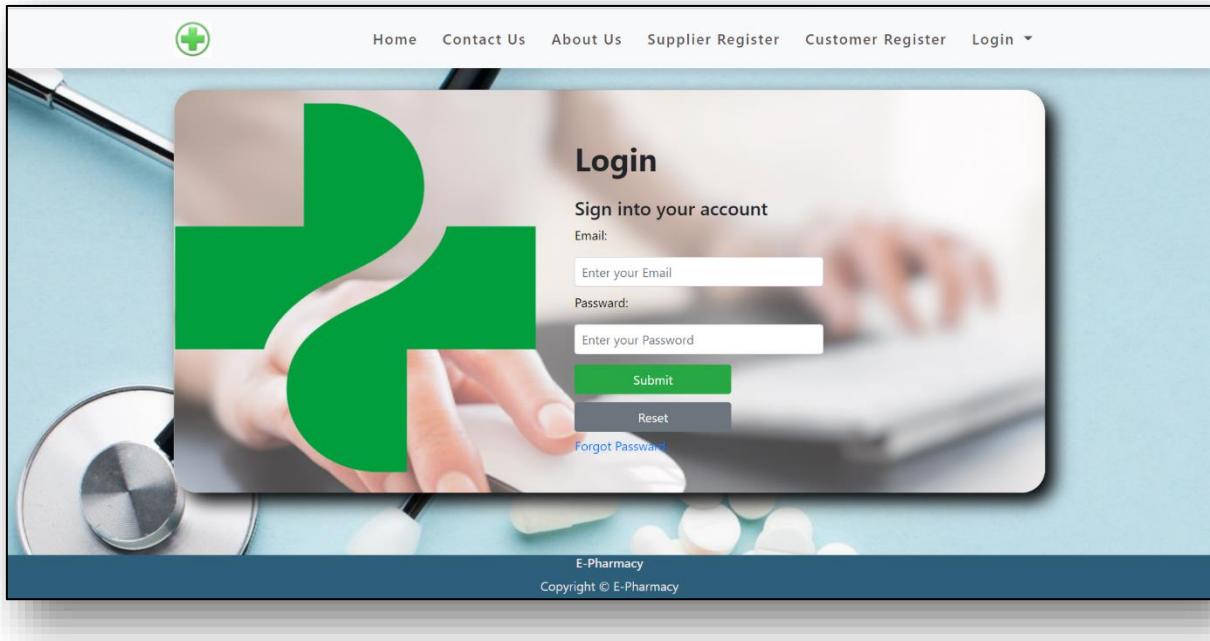
**ADDRESS :**  
Ex No.32/3,  
Marligathanna,  
Veyangoda.

**PASSWORD :**

**SIGN UP**

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## Login Page



## Customer Dashboard (Customer part)

The screenshot displays the customer dashboard. On the left, a sidebar menu includes a profile picture of 'Kavi', and links for Dashboard, Pharmacies, Medicine History, About Us, and Settings. The main content area is titled 'Last Five Order Details' and shows a table with the following data:

Invoice Number	Date	Supplier Contact	Total	Order status	Payments	Make Payment
607f2974be27c154b628fa	2021-04-20	0764598421	700.00	Completed	pending	<a href="#">Make payment</a>
607f28e44be27c15f4b626f8	2021-04-20	0764598421	650.00	Canceled	pending	<a href="#">Make payment</a>
607f289b4be27c15f4b626f6	2021-04-20	0764598421	590.00	Completed	pending	<a href="#">Make payment</a>
607f1543d3208232f47b164	2021-04-19	+1 (648) 534-2423	pending	pending	pending	<a href="#">Payment is pending</a>
607f152cd3208232f47b162	2021-04-19	+89 456 123 564	pending	pending	pending	<a href="#">Payment is pending</a>

The footer of the dashboard also displays the text 'E-Pharmacy © 2021'.

## Pharmacies (Customer part)

The screenshot shows a list of pharmacists with their first name, last name, contact number, email, city, and a 'Make Order' button. The data is as follows:

Firstname	Lastname	Contact	Email	City	Order Medicine
aa	aa	12121	dd@gmail.com	ww	<button>Make Order</button>
bb	bb	dsd	bb@gmail.com	sd	<button>Make Order</button>
Boris	Moran	+1 (708) 386-1122	s@s.com	Dolorem lorem sapero	<button>Make Order</button>
cc	cv	21132	yy@gmail.com	ss	<button>Make Order</button>
Ezekiel Berry	Kylynn Ratliff	+1 (648) 534-2423	k@k.com	Laborum Quis sequi	<button>Make Order</button>
geeg	ergg	4	m@m.com	City	<button>Make Order</button>
Herly	Quean	324324242	h@h.com	kandy	<button>Make Order</button>
John	Doe	+89 456 123 564	johm@gmail.com	kottawa	<button>Make Order</button>
John	Dev	07123646823	joe@gmail.com	negombo	<button>Make Order</button>
Kevyn Nielsen	Jocelyn Maynard	+1 (899) 772-6185	weso@mailinator.com	Molestias non ducimus	<button>Make Order</button>

Showing 1 to 10 of 15 entries  
Previous | Next

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## Medicine history (Customer part)

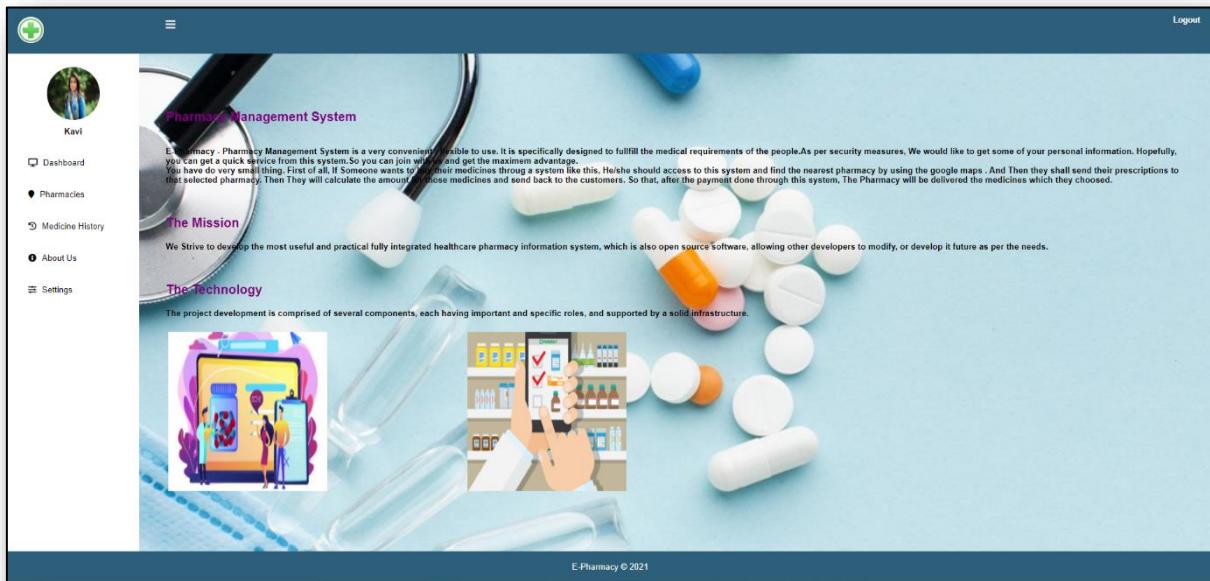
The screenshot shows a list of medicine invoices with their invoice number, date, supplier contact, total, order status, and a 'Download Invoice' button. The data is as follows:

Invoice Number	Date	Supplier Contact	Total	Order status	Invoice
607f152cd3208232f4f7b162	2021-04-19	+89 456 123 564	pending	pending	<button>Download Invoice</button>
607f1543d3208232f4f7b164	2021-04-19	+1 (648) 534-2423	pending	pending	<button>Download Invoice</button>

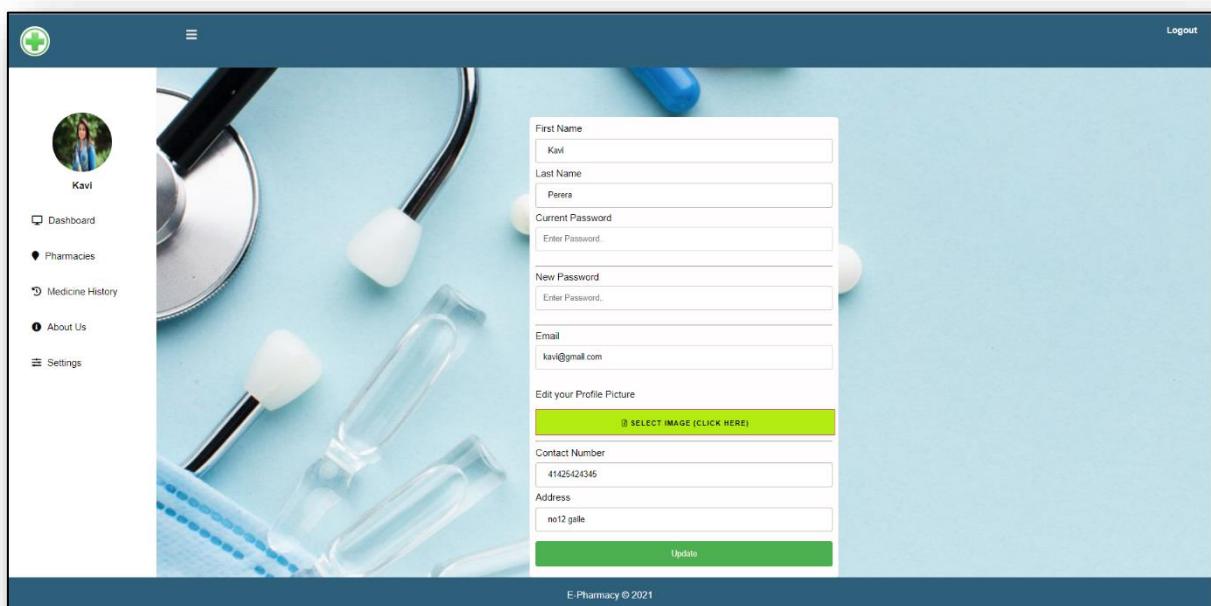
Showing 1 to 2 of 2 entries  
Previous | 1 | Next

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## About us (Customer part)



## Profile Settings Page (Customer part)



## Supplier dashboard (Supplier part)

The dashboard features a sidebar with a user profile (Karl) and navigation links (Dashboard, View Order, About Us, Settings). The main area displays 'Last Five Order Details' with a table:

Date	Order ID	Total	Payment Details	Order Status	View Order	Send Invoice
2021-04-20	607f297f4be27c15f4b626fa	pending	pending	pending	<a href="#">View Order</a>	<a href="#">Email</a>
2021-04-20	607f28e44be27c15f4b626f8	650.00	pending	Canceled	<a href="#">View Order</a>	<a href="#">Email</a>
2021-04-20	607f289b4be27c15f4b626f6	590.00	pending	Completed	<a href="#">View Order</a>	<a href="#">Email</a>

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## View Order (Supplier part)

The view order page shows 'Order Details' with a table:

Date	Order ID	Total	Payment Details	Order Status	View Order	Send Invoice
2021-04-20	607f289b4be27c15f4b626f6	590.00	pending	Completed	<a href="#">View Order</a>	<a href="#">Email</a>
2021-04-20	607f28e44be27c15f4b626f8	650.00	pending	Canceled	<a href="#">View Order</a>	<a href="#">Email</a>
2021-04-20	607f297f4be27c15f4b626fa	pending	pending	pending	<a href="#">View Order</a>	<a href="#">Email</a>

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## About Us (Supplier Part)

The screenshot shows the 'About Us' section of the Pharmacy Management System. On the left, there is a sidebar with a user profile picture of Karl, a dashboard link, a view order link, an about us link (which is currently active), and a settings link. The main content area features a large background image of medical supplies like tablets and a stethoscope. Overlaid on this image are several sections of text and images:

- Pharmacy Management System**: A brief introduction stating the system is convenient, secure, and designed to fulfill medical requirements.
- The Mission**: A statement about developing a useful and practical fully integrated healthcare pharmacy information system.
- The Technology**: A description of the project development components and infrastructure.
- Two small images: one showing a smartphone displaying a prescription app interface, and another showing a computer monitor displaying a similar interface.

At the bottom right of the main content area, it says "E-Pharmacy © 2021".

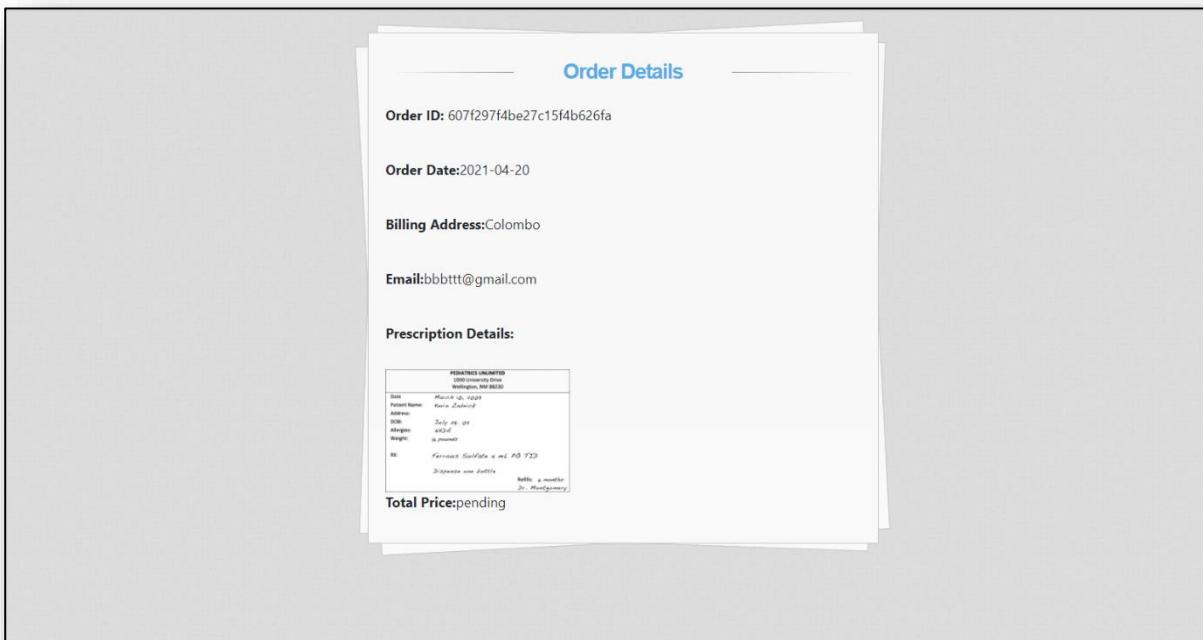
## Profile Settings (Supplier part)

The screenshot shows the 'Profile Settings' page for the supplier part. The sidebar on the left is identical to the 'About Us' page, showing a profile picture of Karl, a dashboard link, a view order link, an about us link, and a settings link. The main content area has a background image of medical supplies. On the right side, there is a form for updating profile information:

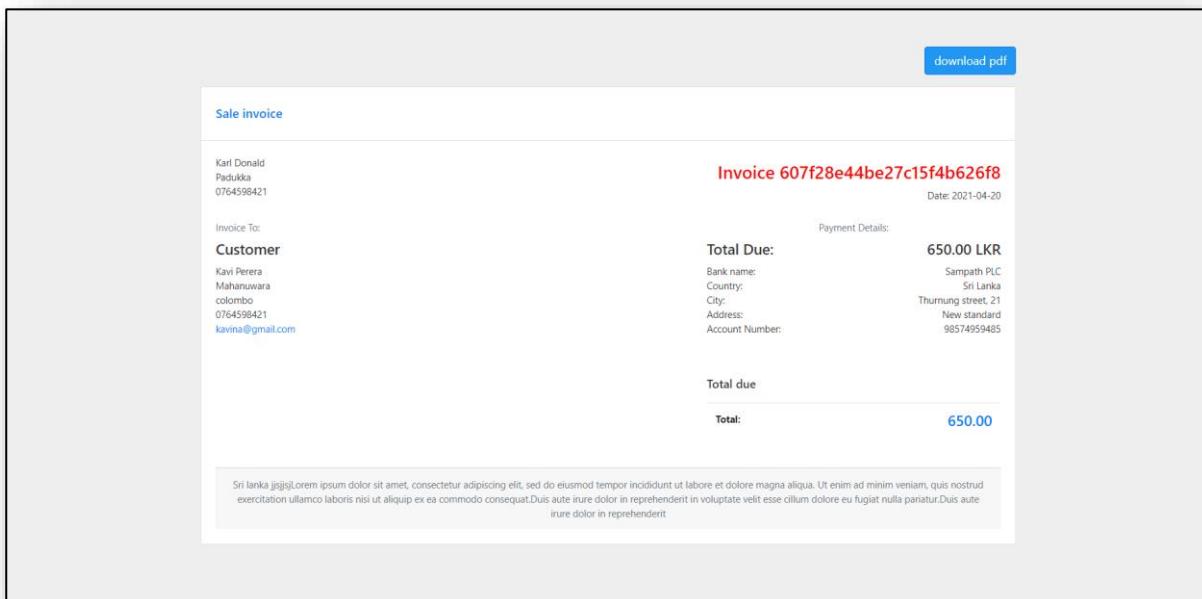
First Name	<input type="text" value="Karl"/>
Last Name	<input type="text" value="Donald"/>
Current Password	<input type="password" value="Enter current Password.."/>
New Password	<input type="password" value="Enter New Password.."/>
Email	<input type="text" value="kid@gmail.com"/>
Edit your Profile Picture	<input type="file" value="Choose File   No file chosen"/>
Contact Number	<input type="text" value="0764598421"/>
Address	<input type="text" value="no 32 Meesha"/>

A green 'Update' button is located at the bottom right of the form. At the very bottom center, it says "E-Pharmacy © 2021".

## View Order Details (Supplier part)



## Invoice (Customer part)



## Payment Page (Customer Part)

The screenshot shows a user profile for "Kavi" on the left. The main content area has a background image of medical pills and a stethoscope. A message at the top says "Please add your payment details here to continue your order". Below it is a "Billing Address" form with fields for Full Name (John M. Doe), Email (john@example.com), Address (542 W. 15th Street), City (New York), State (NY), and Zip (10001). A "PayPal Checkout" button is at the bottom.

## Contact request/message Page (Admin part)

The screenshot shows a user profile for "Admin" on the left. The main content area has a background image of medical pills and a stethoscope. A table lists contact requests:

Name	E-mail	Message
Rahim Graves	dezyhop@mailinator.com	Evenet tempora aut
Hamish Barton	kugo@mailinator.com	Do a libero minima a
regeg	gigerg	ergergerg
54y	Sy4y4y	S4y4S4y
yyy	YYYYYY	YYYYYYYYYYYYYY
sss	sss	ssssss
Thanu	thanu@gmail.com	my password was forgotten. I need to reset it. how I reset my password?
Kasun	kasun@gmail.com	Hi. How many days take for medicine delivery?

## Supplier Details View & account control (Admin part)

The screenshot shows a web-based administration interface for a pharmaceutical system. At the top right is a green circular icon with a white cross and the word 'Logout'. On the left, there's a sidebar with a user profile icon labeled 'Admin' and three menu items: 'Contact Us', 'Supplier Details View', and 'Log out'. The main content area displays a table of supplier information. The columns are: First Name, Last Name, E-mail, NIC, Contact Number, Address, and Option. The data in the table is as follows:

First Name	Last Name	E-mail	NIC	Contact Number	Address	Option
Kevyn Nielsen	Jocelyn Maynard	weso@mailinator.com	Debitis incididunt e	+1 (899) 772-6185	Officia unde cupidit Unde consequatur a	<button>deactivate</button>
Ezekiel Berry	Kylynn Ratiiff	k@k.com	Amet quisquam alias	+1 (648) 534-2423	Exercitationem impedit Lorem voluptatibus i	<button>deactivate</button>
tyn	rt	l@l.com	5464646	erg	erge	<button>deactivate</button>
Herily	Quean	h@h.com	3242444	324324242	colombo maligawaththa	<button>deactivate</button>
geeg	ergg	m@m.com	4354	4	tgj	<button>deactivate</button>
bb	bb	bb@gmail.com	121321	dsd	dsd sd	<button>deactivate</button>
aa	aa	dd@gmail.com	ddddd	12121	112 ww	<button>deactivate</button>
z	z	z@gmail.com	z	z	zz	<button>deactivate</button>

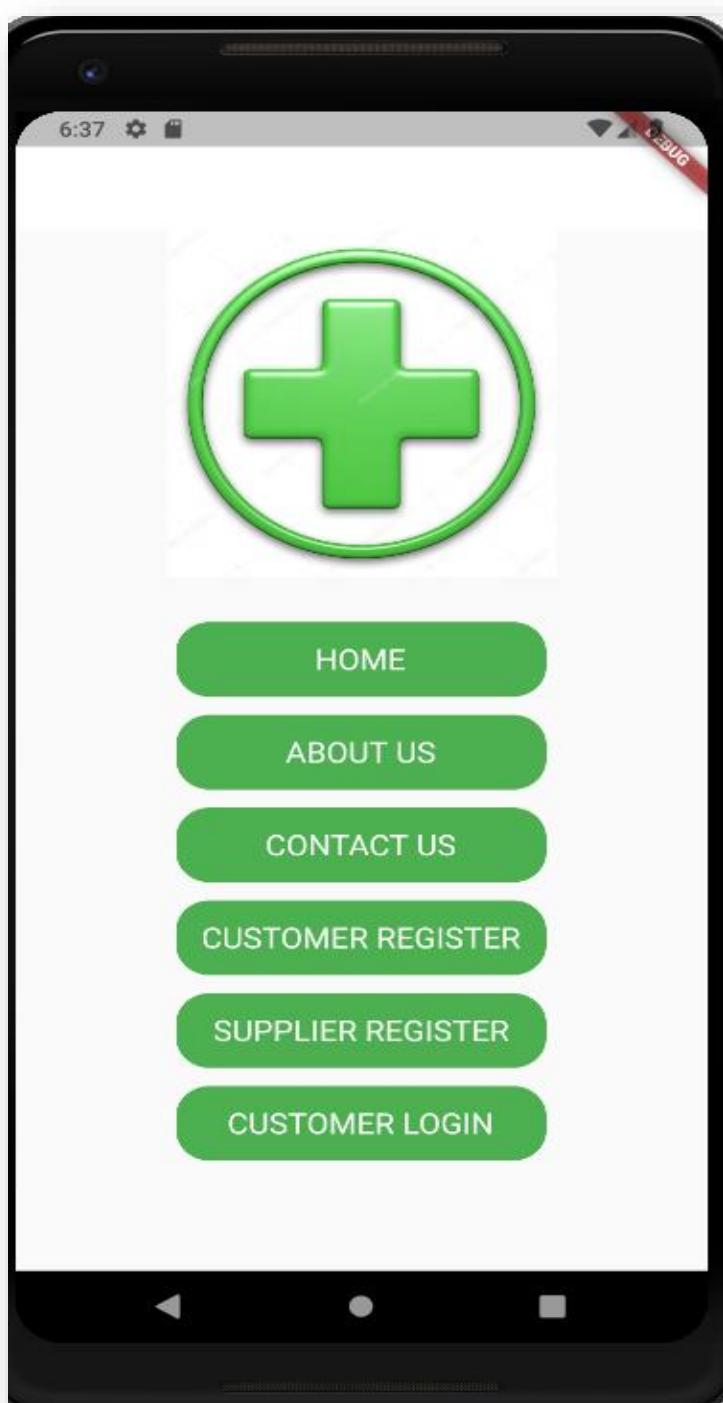
At the bottom center of the page is the text 'E-Pharmacy © 2021'.

### 7.3 Mobile Application

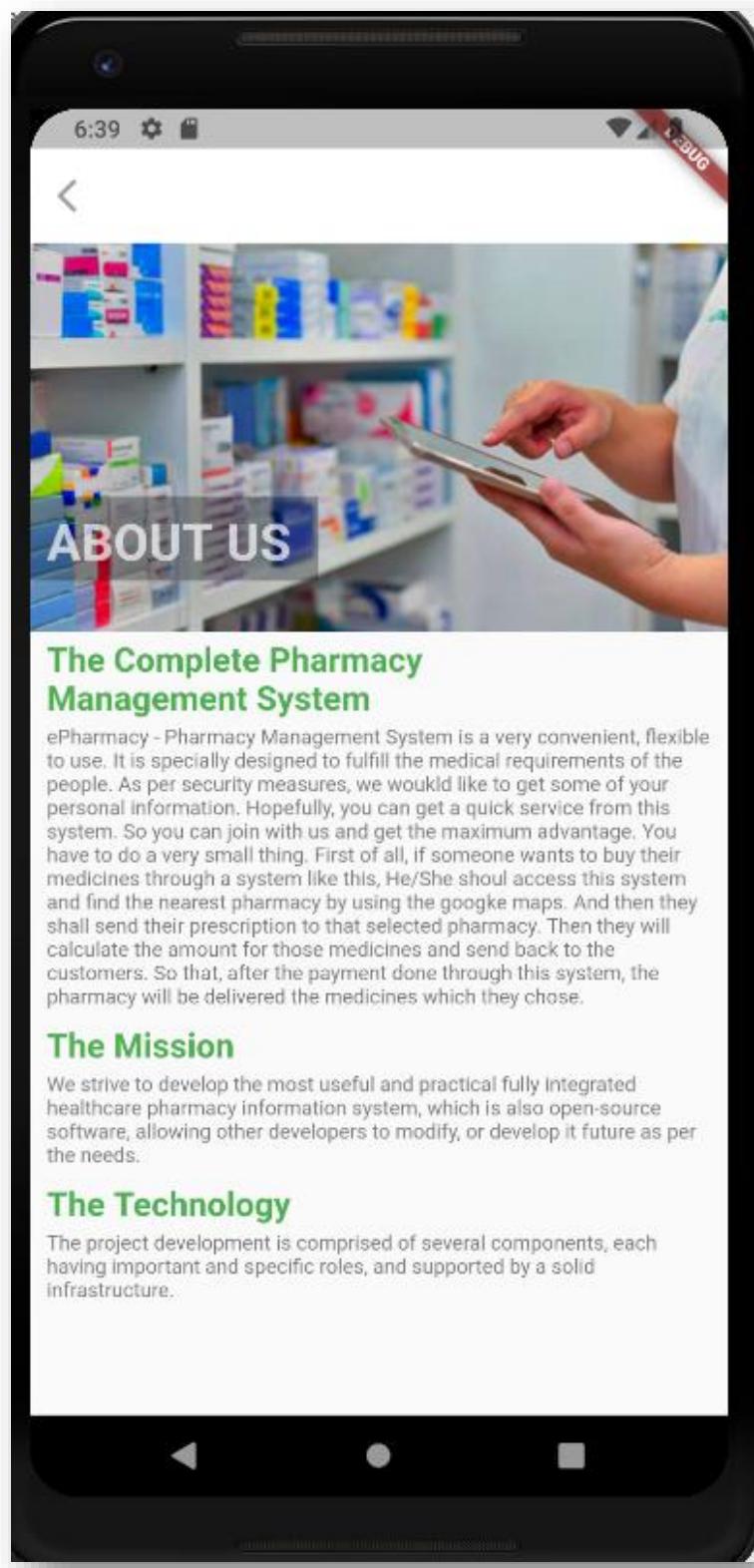
The Online Pharmacy Management System (OPMS) mobile application was developed using flutter using dart language. That are running IOS and android platform too. As our web application includes a mobile application, we have added screenshots below to get a good understanding of each part clearly. This particular application is developed using dart language in flutter. Also, we have mentioned the technologies above which are used to create this application. The main usage of the mobile application is that the user can do the same work in the mobile application which is done in the web application.

## Screenshots of mobile application

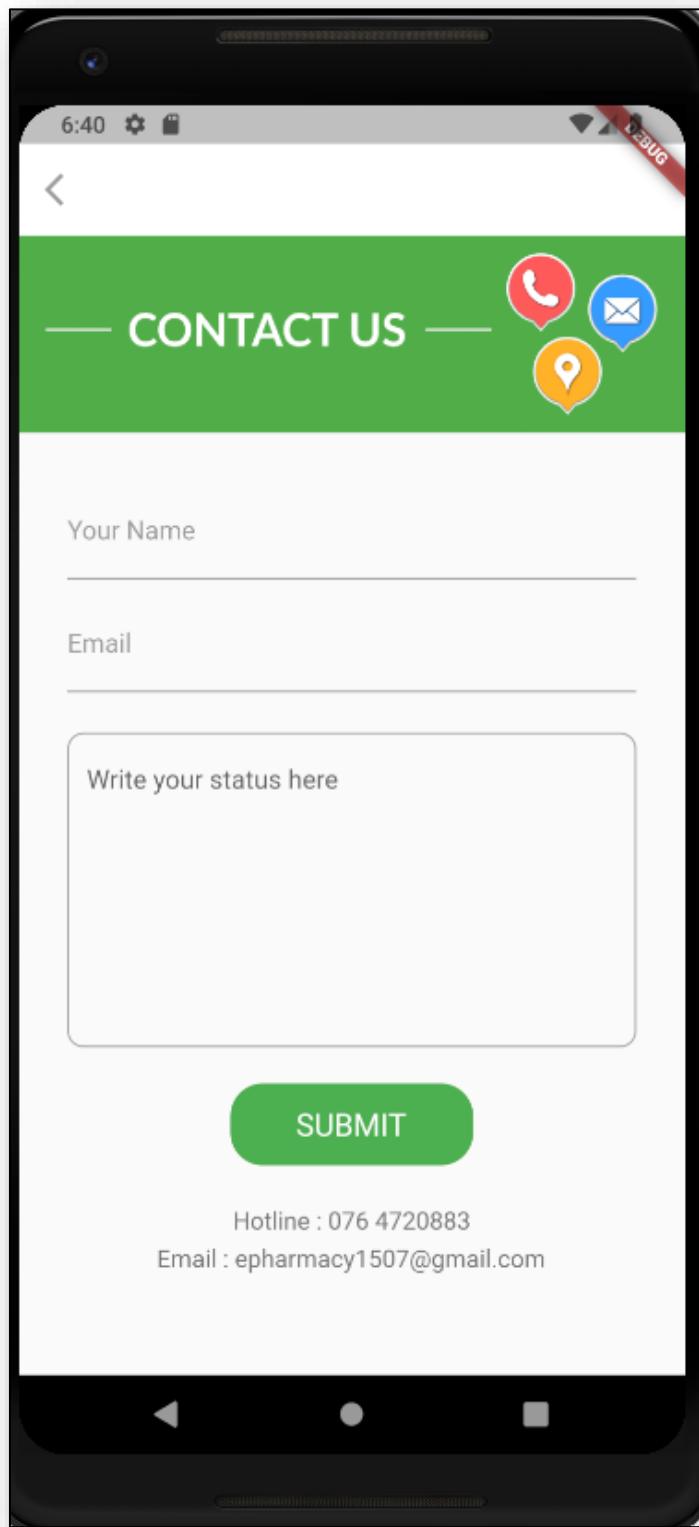
### Home Page



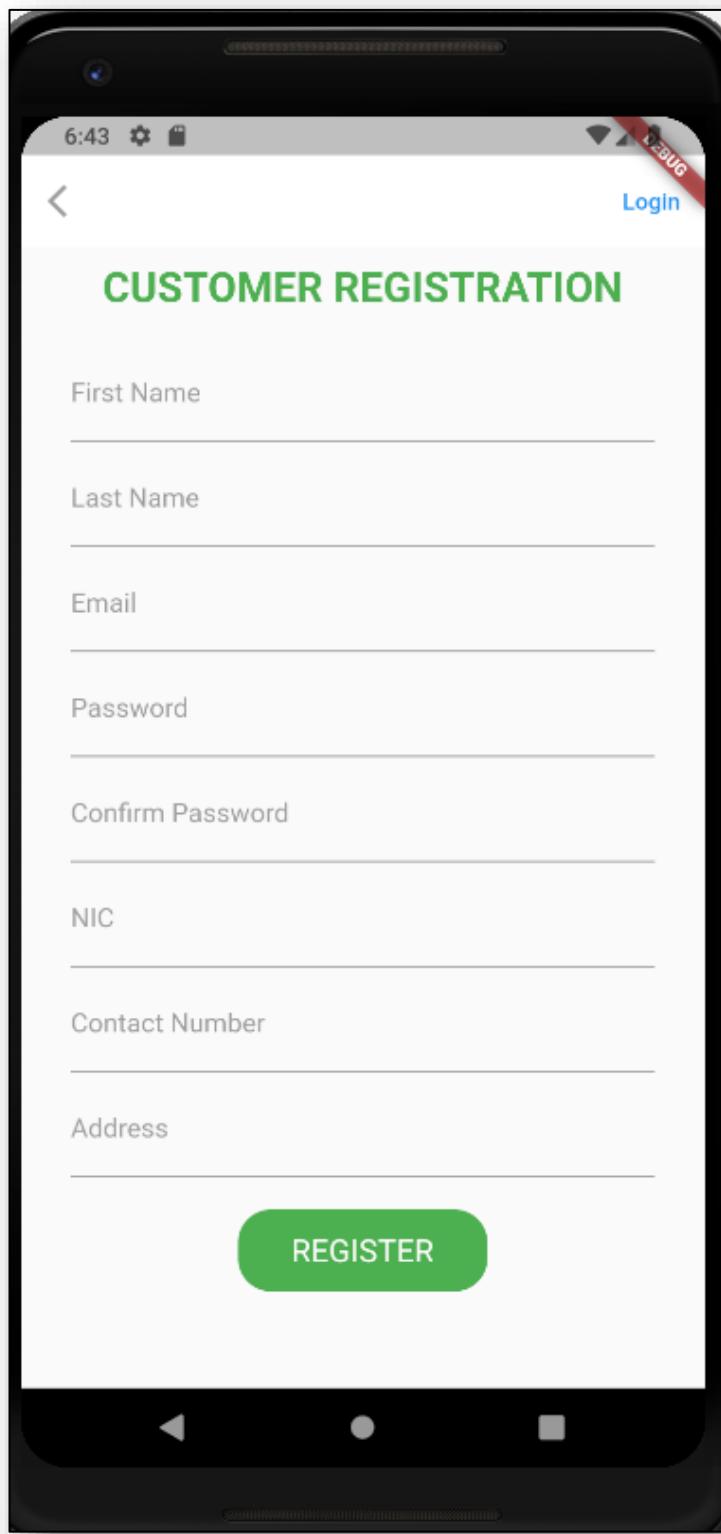
## About us



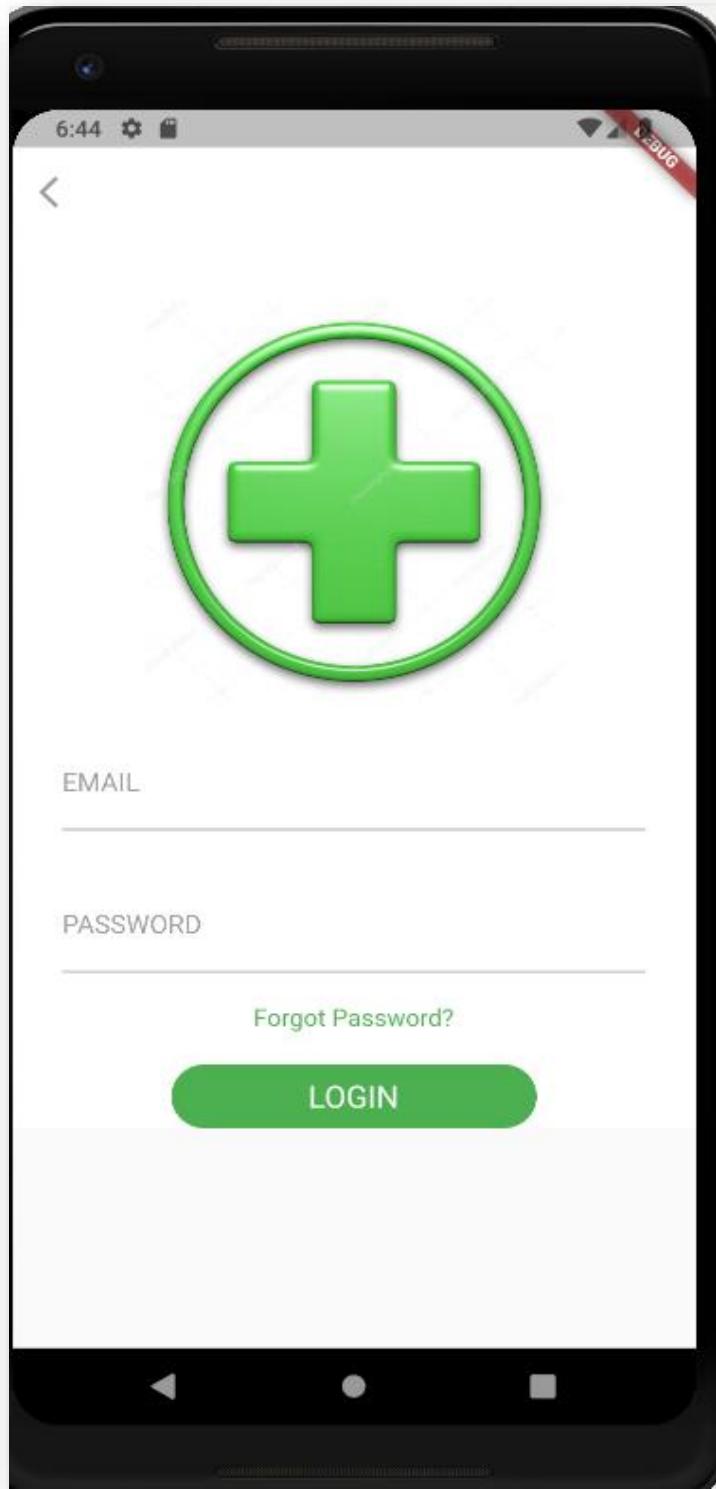
## Contact us



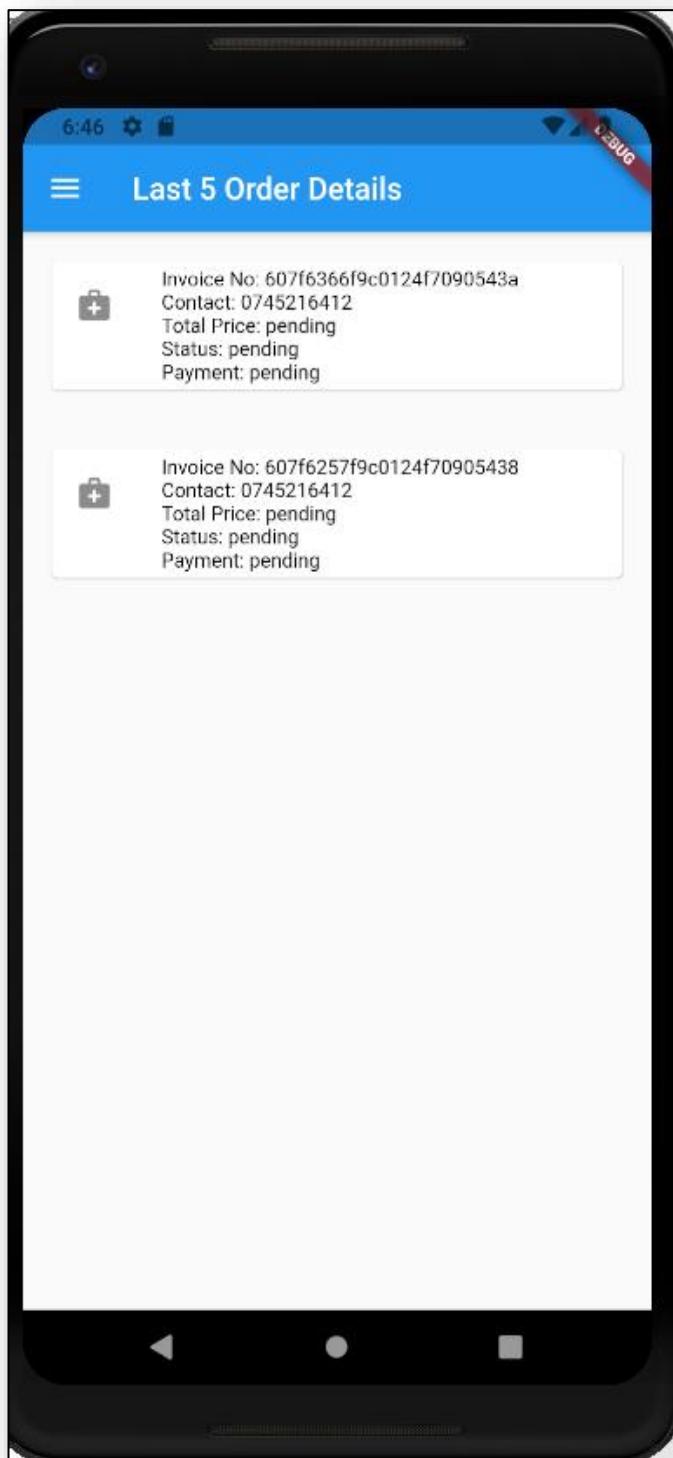
## Customer Register Page



## Login Page



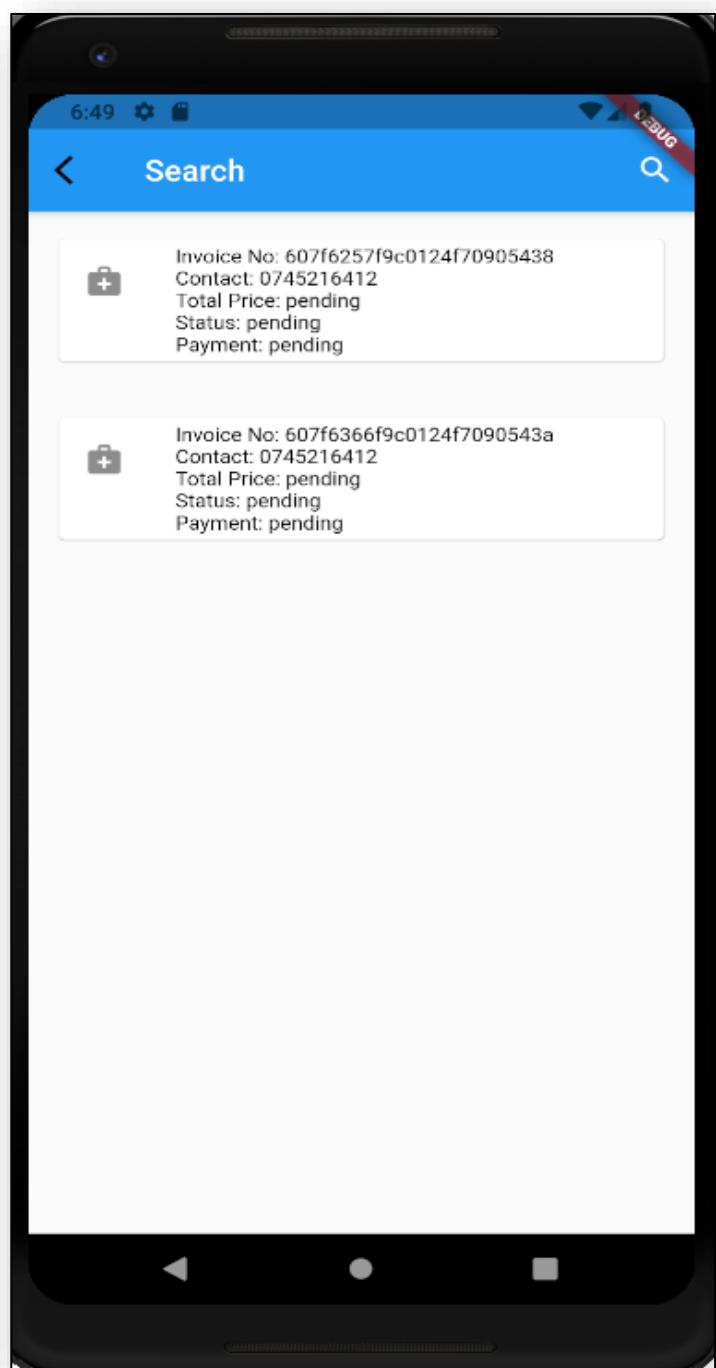
## Customer Dashboard (Customer part)



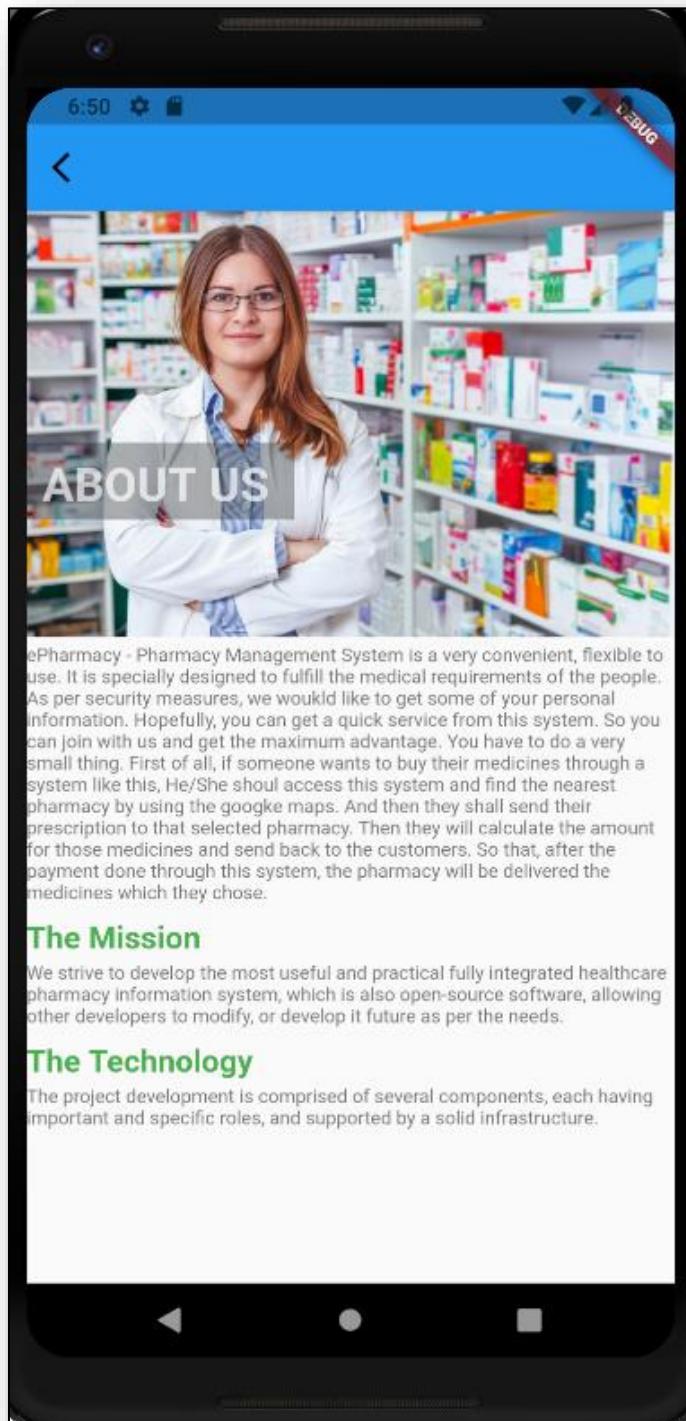
## Pharmacies (Customer part)

Email	City
weso@mailinator.com	Molestias non ducimu
k@k.com	Laborum Quis sequi
l@l.com	City
h@h.com	kandy
m@m.com	City
bb@gmail.com	sd
dd@gmail.com	ww
z@gmail.com	z
john@gmail.com	kottawa

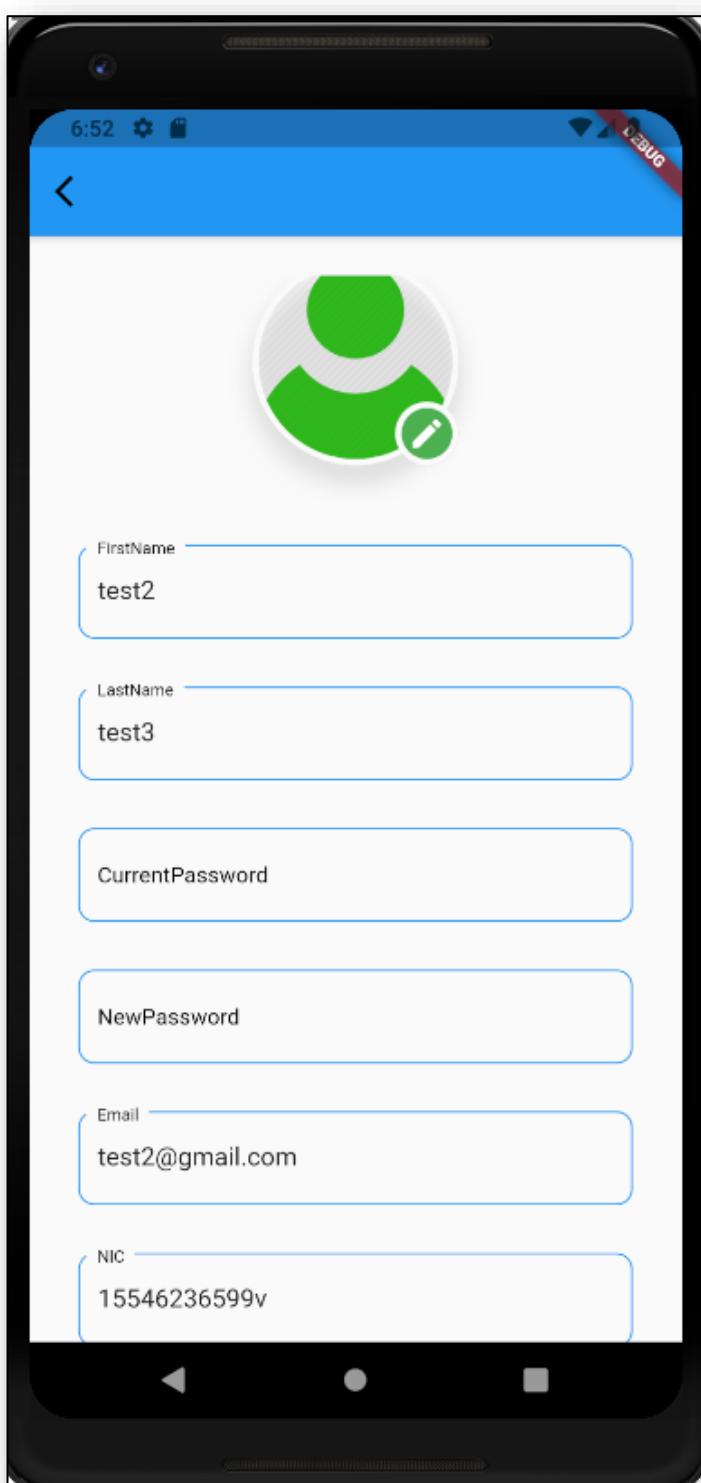
## Medicine History (Customer part)



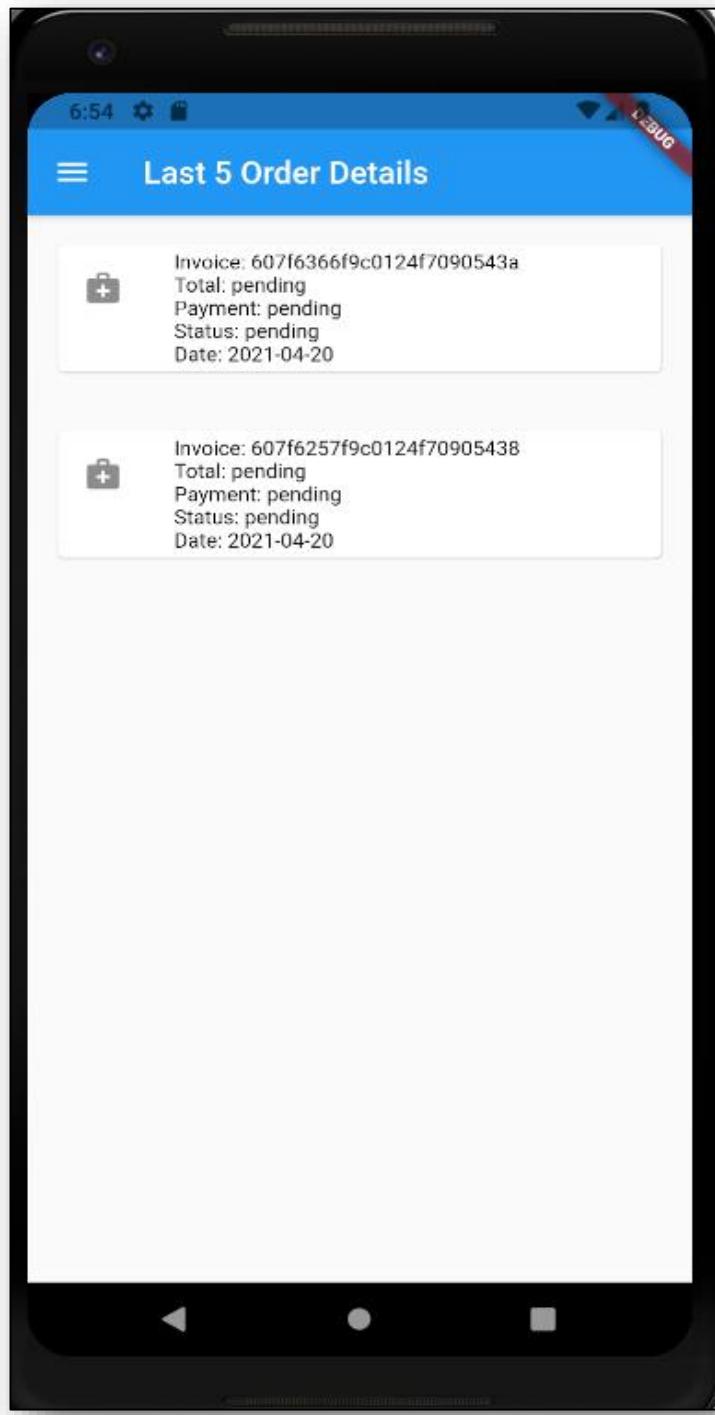
## About us (Customer part)



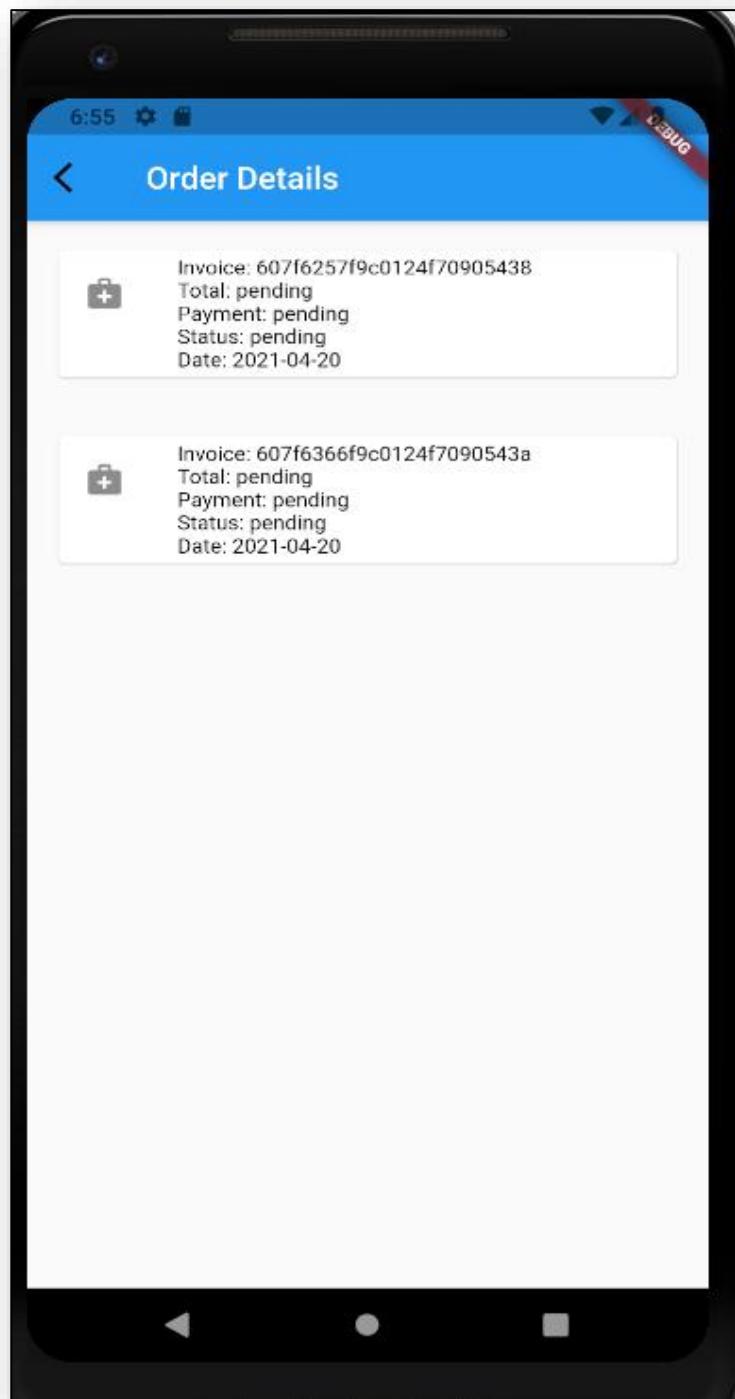
## Profile Settings (Customer part)



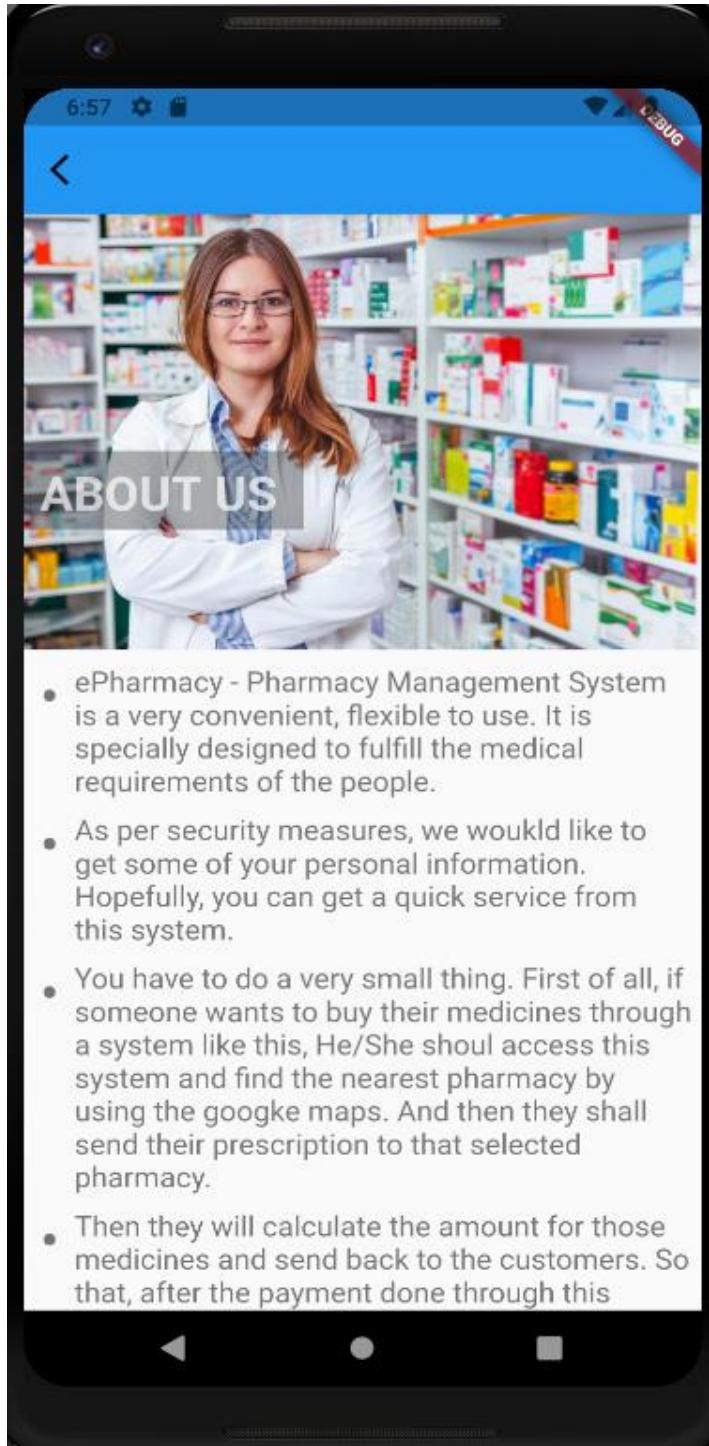
## Supplier Dashboard (Supplier part)



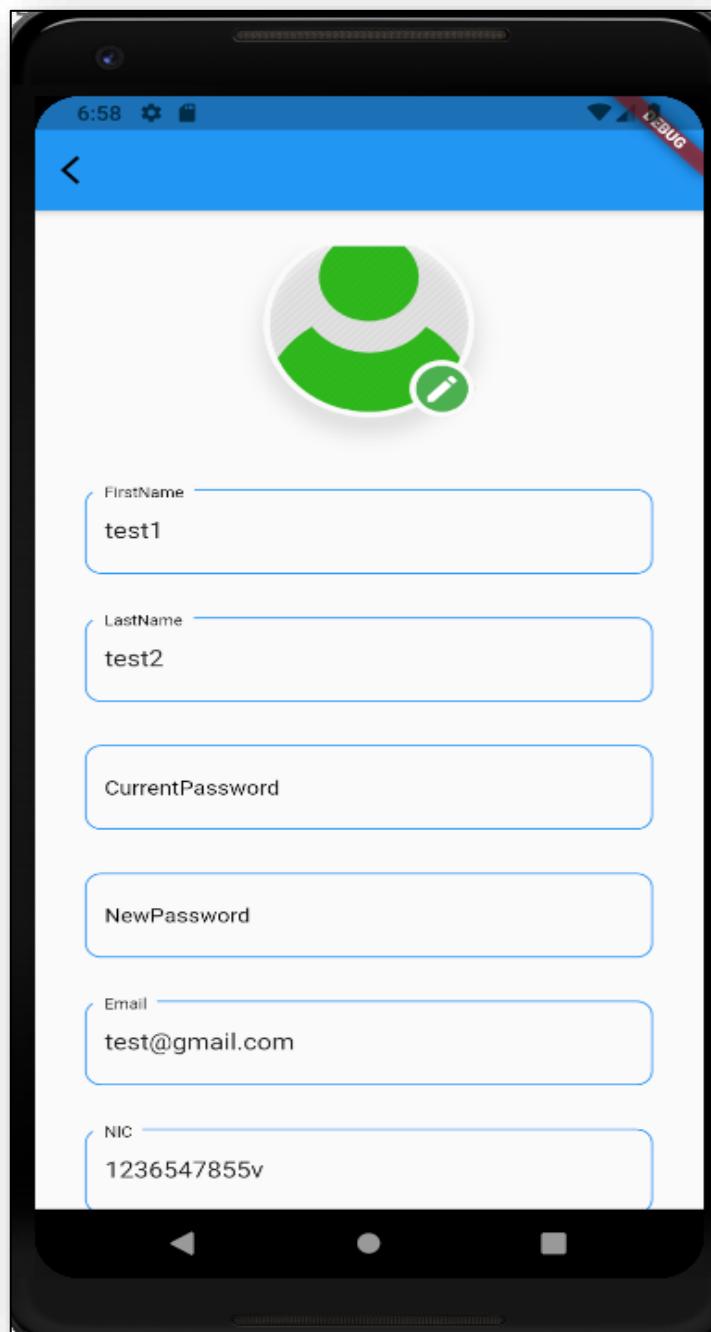
## **View Order (Supplier part)**



## About us (Supplier part)



## Profile settings (Supplier part)



# **8.Distributed Technology**

## **8.1 Openness**

- Openness refers to the degree to which a system is extensible.
- In our online pharmacy management this often refers to the potential for adding and removing and integrating new resources.
- According to this scenario the software platform which is created for OPMS is open for any customer who would like to get the benefit using this system. They can register and login in to this system as they wish at any time.
- All the users are provided with the facilities which are mentioned in the system.

## **8.2 Heterogeneity**

- The integrity of a distributed system refers to its ability to work with different programming languages and operating systems.
- According to the point which is mentioned above, the OPMS system is developed using some languages such as Dart, Node JS and also the application runs on IOS devices and windows.
- As this system is developed to run on multiple devices, it will be very easy for the customers to reach the application without any hesitation.

### **8.3 Security**

- As mentioned above this system runs on multiple platforms, therefore this system contains more security to secure customer privacy.
- In the registering process, the national identity card number and a copy for the card will be asked before the customer can proceed for the rest of the form, as an online payment method is equipped with this application, we must give a trustful and a secure service for the customers
- If a fraud occurs, the relevant authority can get the actions against the relevant party and proceed for the further inquiry, and also the admin has the power to deactivate and disable the specific account.
- Also, the customers can use the contact us page to enter their opinion, so then the admin can investigate and take the relevant actions.

### **8.4 Transparency**

- Transparency is defined simply as concealment from the user and the separation of the components of the system.
- This is more important in distributed system as this make their operation in the eyes of the customer to be friendlier. Customers should not know where the service generates from.
- According to this scenario the customers who use the OPMS system can only view the frontend of the system to do the process that the person is seeking for.
- The customers don't get a chance to view the backend part of the system; therefore they can't see the separation of the components.
- After clarifying all these methodologies, this system can be taken as a transparency system.

## 8.5 Database Connection

In this online pharmacy management system, we have used Mongo DB as our database to record all the records.

- Availability
- Redundancy
- Reliability
- Fault tolerance

Availability is the capacity of a system to limit the latency of the recovery as much as possible when there is a failure. According to the availability our system should be available for use at any given time.

Due to this reason the database should not be down or fail at any time because it should update the information which is fed to the system in Real-time. Suddenly if a failure occurs the system should be a backup to restore the files for use. Keeping a duplicate of the database system is known as redundancy.

Online pharmacy management system should be reliable; if a failure occurs the system should run as it was before the error.

Another important factor in the system is that, this should be fault tolerance, if the database has an error; it should recover from the error as soon as possible and run smoothly as before.

The specialty of our database is that we use Mongo DB, so there are two more clusters are backup databases. When one of databases goes down the next database will start to run and process the system smoothly while maintaining the integrity.

Therefore, our system can be known as a full recommended which consist with availability, Redundancy, reliability and fault tolerance.

## **9.Issues faced during implementation**

- New technologies have to learn such as node js, mongo db and middleware tools.
- Time management issue.
- Long time take for solving errors.

## **10. Future enhancement**

- High security options for customer and supplier data
- Live customer connection option
- More payment option
- Fast delivery on time
- Tracking order details option

## **11. Conclusion**

Online pharmacy management system is proved as a viable system in the information which are provided above, this system is a good implementation in the 21st century and for the current Situation in the country. As it is shown, this system saves time and make the work easy for the people to order the medicine. This system consist with an web application and a mobile application and this consist with an online payment system which is easy for any person to do transactions using this system. The mobile application and the web application is connected using the Node API and the mobile application is developed using flutter with dart language, also the web application is developed using PHP, HTML and CSS and the database is developed using Mongo DB. Also this is a heterogeneous, openness, transparency etc. system as mentioned above.

## 12. References

There don't have any references we found.

## 13. Individual Contribution

Name	Plymouth Index No	Individual Contribution
I.K.N.K. Weerasinghe	10674043	Login, contact us, medicine history pages front-end & backend part
Kely Weerasooriya	10674044	Supplier dashboard, view order, about us ,supplier profile settings pages(supplier part) front-end & backend part.
G.L.I. Karunananayake	10673980	Supplier registration, customer registration, customer dashboard pages front-end & backend part.
H.W.C. Waduge	10674040	Customer invoice, customer profile settings pages front-end & backend part
M.M.P.M Bandara	10673074	Pharmacies(customer part), home pages front-end & backend part
R.P.L Wanasinghe	10674041	Payment page(customer), About us, supplier deactivation(admin) pages front-end & backend part