

## **Project: E-Medicare**

# FUNCTIONAL SPECIFICATION

<b>Project Code:</b>	
<b>Project Name:</b>	E-Medicare

## FUNCTIONAL SPECIFICATION

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## FUNCTIONAL SPECIFICATION

### 1 Introduction

Mphasis Ltd is a company which builds a software system which is responsible for adding and processing of a product.

Mphasis Ltd plans to develop "E-Medicare" - web application [J2EE Batches - Web Application], where users can register, login, purchase various products medicines.

#### **Scope and Overview:**

The scope of the "E-Medicare" will be to provide the functionality as described below. The system will be developed on a Windows operating system using Java/J2EE, Oracle 11g, Spring, Postman, Tomcat.

### 2 System Overview

The "E-Medicare" should support basic functionalities (explained in section 2.1) for all below listed users.

- Administrator (A)
- Customer (C)

#### **2.1 Authentication & Authorization**

##### **2.1.1 Authentication:**

Any end-user should be authenticated using a unique username and password.

##### **2.1.2 Authorization**

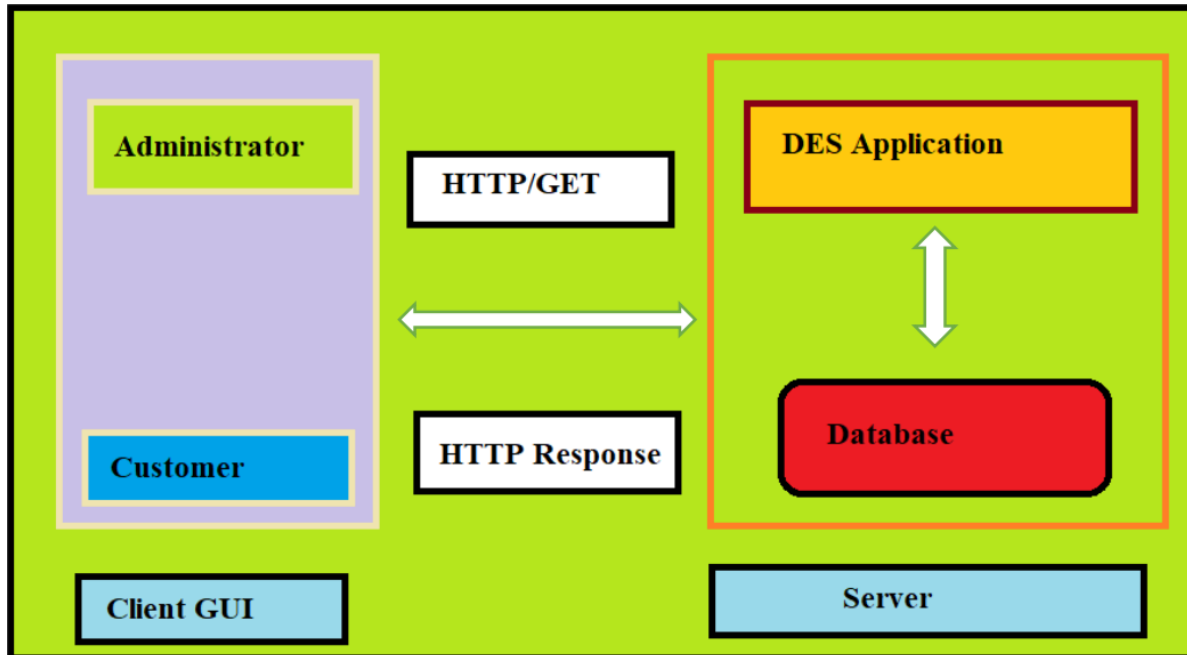
The operations supported and allowed would be based on the user type. For example, Administrator has the rights to add product information and view customer details. He can also view order details and purchase details of a medicine.

Whereas Customer/Buyer has a right to Add, Remove and Clear all the medicines from cart.

#### **Functional Flow**

The functional flow of the messages across different application components is shown below.

Ex. - Web Application.



#### ***Environment:***

The system will be developed on any Windows OS machine using J2EE, Oracle 11g, Spring.

- Intel hardware machine (PC P4-2.26 GHz, 512 MB RAM, 40 GB HDD)
- Server – Apache Tomcat 9 or higher
- Database – Oracle 11g
- JRE 11
- Eclipse IDE or Spring Tool Suite

## **FUNCTIONAL SPECIFICATION**

### **3 Sub-system Details**

The E-medicaid is defined, wherein all users need to login successfully before performing any of their respective operations.

Find below (section 3.1 & 3.2) tables that provides functionality descriptions for each type of user / sub-system. Against each requirement, indicative data is listed in column 'Data to include'. Further, suggested to add/modify more details wherever required with an approval from customer/faculty.

### 3.1 Administrator

The administrator as a user is defined to perform below listed operations after successful login.

ID	Objects	Operations	Data to include	Remarks
01 To 04	Product	Add View Delete Modify	Product Id, ProductName,Product Description,Product Type, ProuductPrice.	
05 To 10	User	View	User Id,User Name,Password,User Email,Address,Mobile, Gender	

### 3.2 Customer

The customer as a user is defined to perform below listed operations after successful login.

ID	Objects	Operations	Data to include	Remarks
US-001	User Signup	SignUp	Username, Password, Email, Phone Number,Address,Gender.	
US-002	Product	Add to Cart. Delete from Cart. Delete all products from cart. View all products.	Product Id, Product Name, Product Description,Price, Product Type	
US-003	User Login	Login	Email,Password	

## FUNCTIONAL SPECIFICATION

### 3.3 Login / Logout

**[Web Application - J2EE, Oracle 11g, Spring]**

- ❖ Go to Registration screen when you click on Register link.
- ❖ Go to Success screen when you login successfully after entering valid username & password fetched from the database.
- ❖ Redirect back to same login screen if username & password are not matching.
- ❖ Implement Session tracking for all logged in users before allowing access to application features. Anonymous users should be checked, unless explicitly mentioned.

## 4 Data Organization

This section explains the data storage requirements of the E-Medicare and **indicative** data description along with suggested table (database) structure. The following section explains few of the tables (fields) with description. However, in similar approach need to be considered for all other tables.

### 4.1 Table: *User\_Registration\_Details*

The user specific details such as username, email, phone etc. Authentication, and authorization / privileges should be kept in one or more tables, as necessary and applicable.

Field Name	Description
<i>UserID</i>	User ID is auto generated
<i>Name</i>	Customer Name
<i>Password</i>	User Password
<i>Email</i>	Customer Email Id acts as a user name
<i>Phone Number</i>	10-digit contact number of users
<i>Address</i>	Address
<i>Gender</i>	Gender

### 4.2 Table: *Product\_Details*

This table contains information related to a product.

Field Name	Description
<i>Product Id</i>	Unique product Id, Here product Id will be Primary Key
<i>Product Name</i>	Name of the Product e.g., Paracetamol etc.
<i>Price</i>	Price of the Product
<i>Product Type</i>	Type of the Product.
<i>Product Description</i>	Details of the product

#### 4.3 Table: Cart\_Details

This table contains information related to cart details.

Field Name	Description
<i>CId</i>	CartId is auto generated after adding product into the cart
<i>Price</i>	Price of the Product
<i>Product Type</i>	Type of the Product.
<i>Product Name</i>	Name of the Product
<i>Product Description</i>	Details of the product

#### 4.4 Table: Payment\_Details

This table contains information related to final checkout details.

Field Name	Description
<i>PaymentId</i>	Auto generated ID after successful payment.
<i>Amount</i>	Total amount

---

#### 4.5 Table:Login\_Details

This table contains information related to login details.

Field Name	Description
<i>lid</i>	Login id is auto generated
<i>Email</i>	Email id is acts as a username
<i>Password</i>	Password is used to login

## FUNCTIONAL SPECIFICATION

### 5. REST APIs to be Built.

Create following REST resources which are required in the application,

1. Creating **User** Entity: Create Spring Boot with Microservices Application with Spring Data JPA

**Technology stack:**

- Spring Boot

- Spring REST
- Spring Data JPA



Here will have multiple layers into the application:

1. Create an Entity: User
2. Create a UserDao interface and will make use of Spring Data JPA
  - a. Will have findByUserName method.
  - b. Add the User details
3. Finally, create a UserController will have the following Uri's:

URI	METHODS	Description	Format
/users/users	GET	Give all the users	JSON
/users/users	POST	Add the user details	JSON

## 2. Creating Product Entity:

Build a RESTful resource for **Product** manipulations, where CRUD operations to be carried out. Here will have multiple layers into the application:

1. Create an Entity: Product
2. Create a ProductDao interface and will make use of Spring Data JPA
  - a. Will have findByProductName method.
  - b. Add the Product details method.
  - c. Will have deleteProductById method.
  - d. Will have findAllProducts method.
3. Finally, create a ProductController will have the following Uri's:
- 4.

URI	METHODS	Description	Format
/products/products	GET	Get all the products	JSON
/products/products/{id}	GET	Get a single product by id	JSON
/products/products	POST	Update product	JSON
/products/products/{id}	DELETE	Delete a products based on product id	JSON
/products/products/{id}	PUT	Update product	JSON

### 3. Creating **login** Entity:

Build a RESTful resource for **login** manipulations, where following operations to be carried out. Here will have multiple layers into the application:

1. Create an Entity: login
2. Create a login Repository interface and will make use of Spring Data JPA
  - a. Add the login details

3. Finally, create a login Controller will have the following Uri's:

URI	METHODS	Description	Format
/logins/logins	POST	Adding user user credentials	JSON
/logins/logins	GET	Get all the users	JSON

### 4. Creating **Cart** Entity:

Build a RESTful resource for **Cart** manipulations, where following operations to be carried out. Here will have multiple layers into the application:

1. Create an Entity: Cart
2. Create a CartRepository interface and will make use of Spring Data JPA
  - a. Add the cart details.

3. Finally, create a CartController will have the following Uri's:

URI	METHODS	Description	Format
/carts/carts	POST	Add the user details with total price.	JSON

### 5. Creating **Payment** Entity:

Build a RESTful resource for **Payment** manipulations, where following operations to be carried out. Here will have multiple layers into the application:

1. Create an Entity: payment
2. Create a payment Repository interface and will make use of Spring Data JPA
  - b. Add the payment details.
3. Finally, create a payment Controller will have the following Uri's:

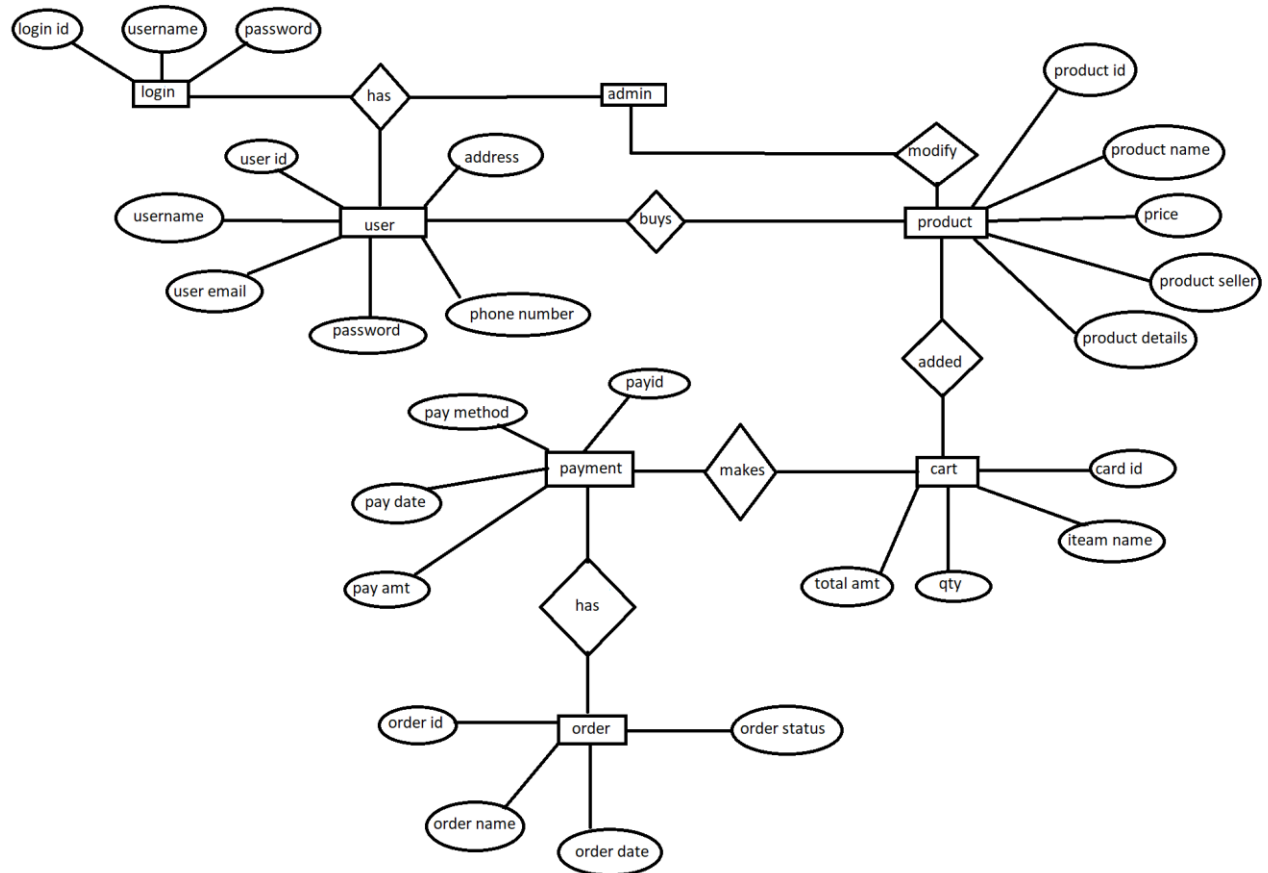
URI	METHODS	Description	Format
/payments/payments	POST	Add the payment details done by user	JSON

## FUNCTIONAL SPECIFICATION

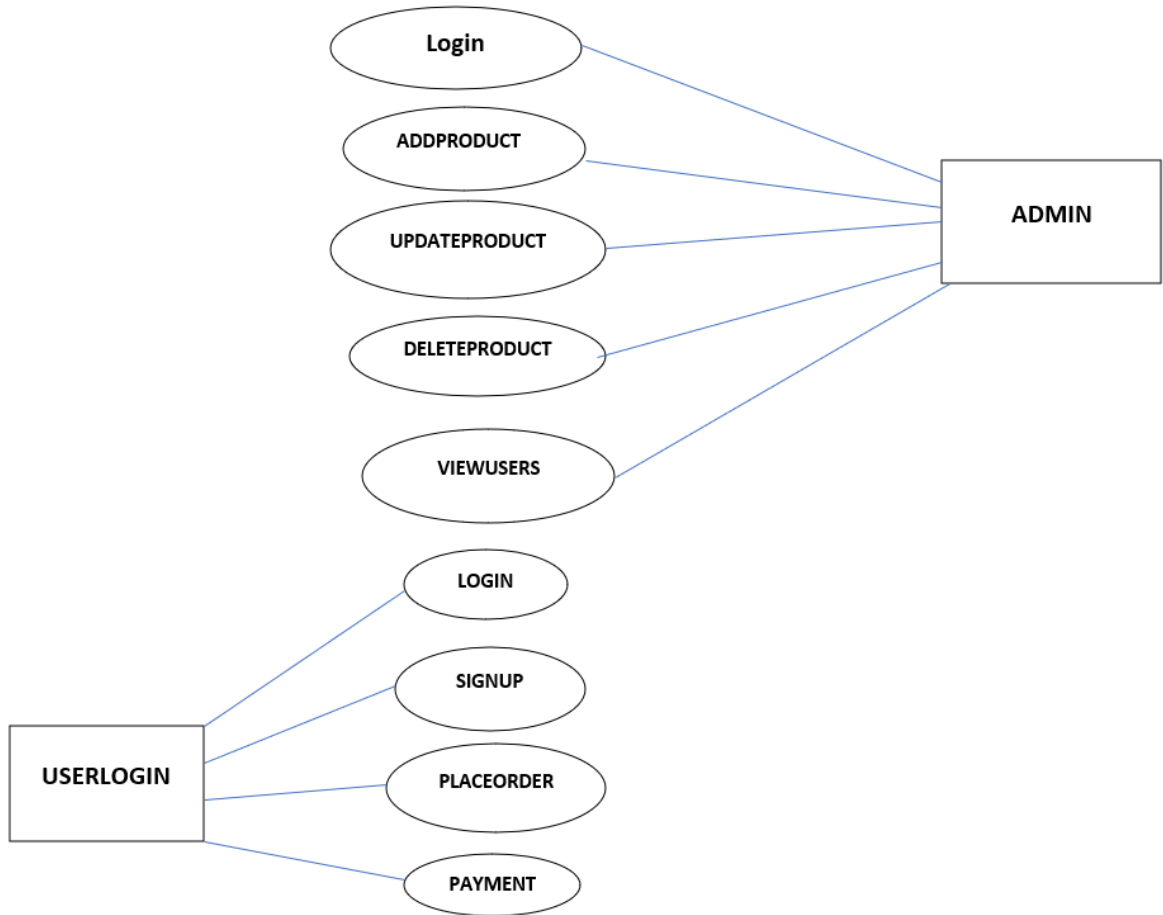
### 6. Assumptions

- User Interface: The type of client interface (front-end) to be supported - Angular based
- The administrator can add and remove medicines into the database on a weekly basis.
- You must not allow user to add same medicine twice.
- When you add medicines into cart the No. Of medicines selected will be incremented.
- If you remove the medicine from the cart, the counter will be decremented.
- The clear will remove all the medicines so that the No. of medicines will be zero
- The total amount will be calculated based on the medicine, accordingly, change the medicine counter & total amount.

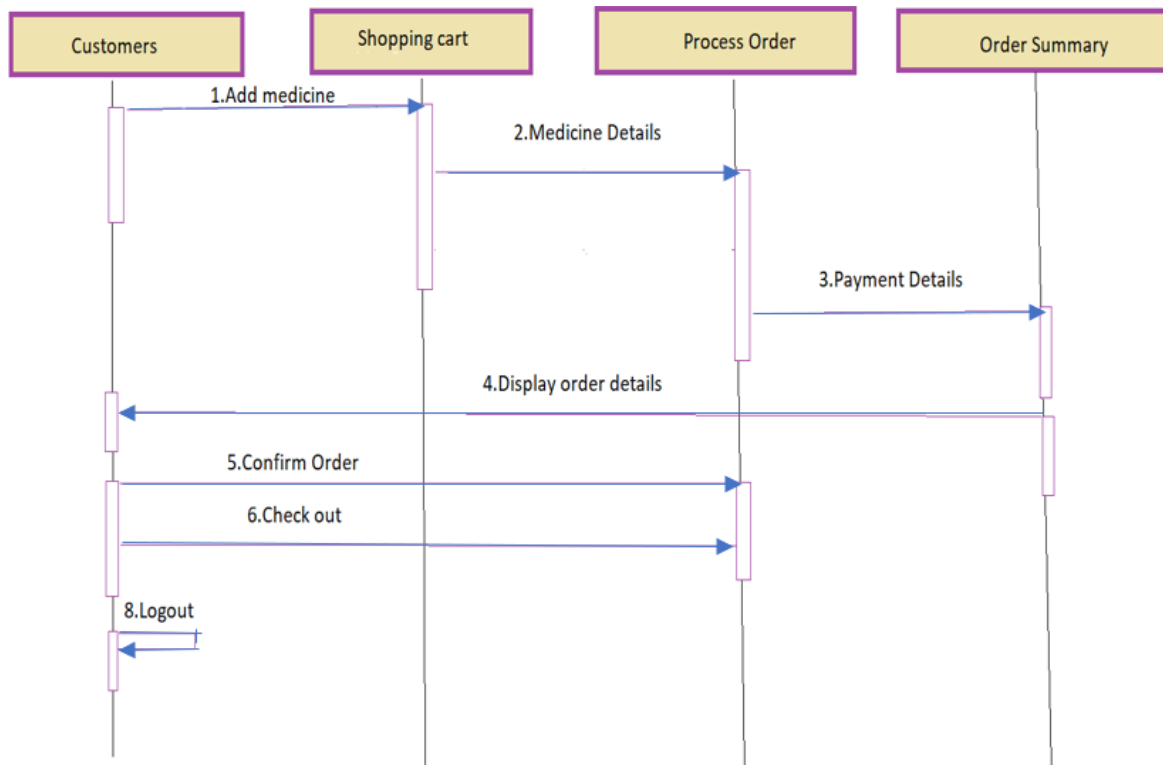
## 7. ER-Diagram



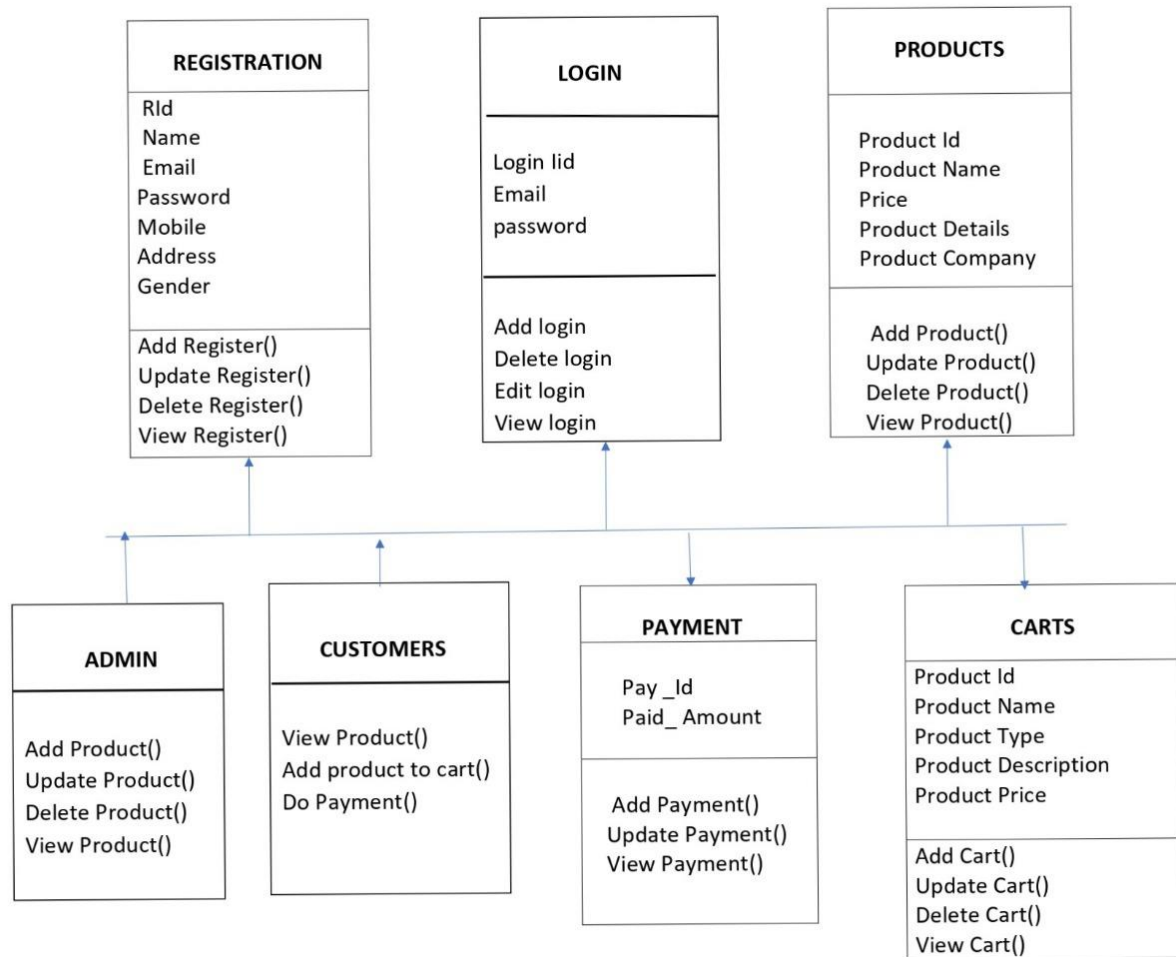
## 8. Use Case Diagram



## 9. Sequence Diagram

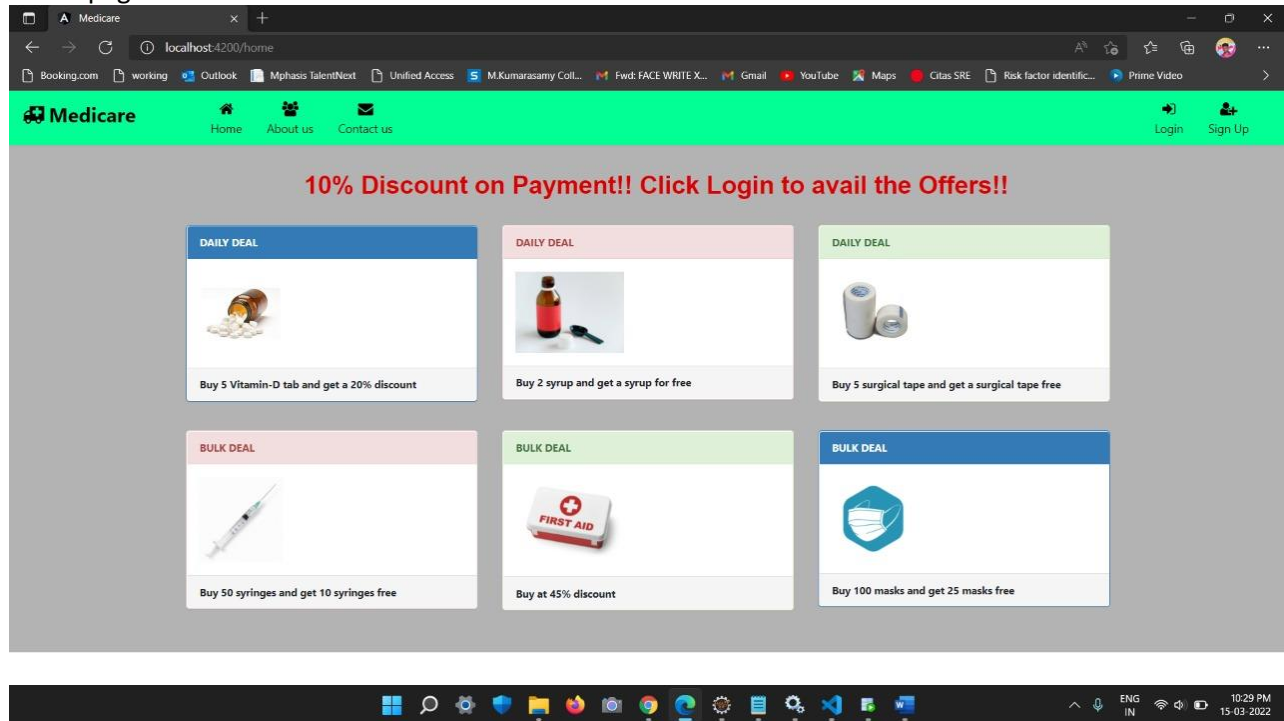


## 10. DB SCHEMA



## 8 Output Screenshots for your Project

### Home page



## About us page

Medicare

HomeAbout usContact us

LoginSign Up

### About Us

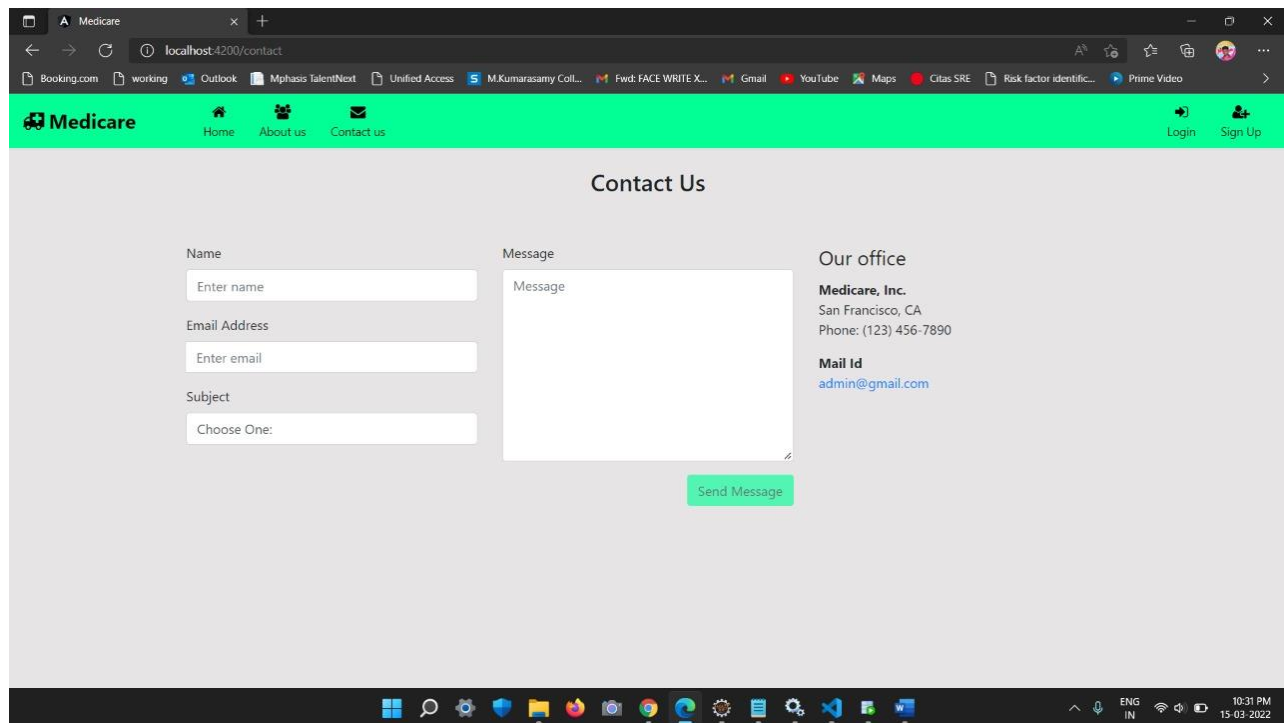
know more about us, we are more than a pharmacy...



Medicare Pharmacy is a part of Medicare Hospitals - India's trusted pharmacy. It is India's first and largest branded pharmacy network, with over 4200 plus outlets in key locations. Accredited with - International Quality Certification, Medicare Pharmacy offers genuine medicines round-the-clock, through our 24-hour Pharmacies. Medicare Pharmacy also provides customer care any time of the day! Quality is the cornerstone of our existence. We have gained experience in pharmacy operations management over the last 2 decades and are committed to delivering best service in the industry. Medicare Pharmacy is well stocked with medicines, OTC and FMCG products, manned by a team of qualified and experienced staff available to cater to your every need. Medicarepharmacy.in has more than 5000 products in various categories like Vitamins and Supplements, Baby Care, Personal Care, Health & Nutrition Foods and OTC. In addition to this we have more than 400 Medicare Brand Products in the following categories like vitamins and supplements, health food, oral care, skincare, personal care, baby care, OTC etc.



## Contact Us page



A screenshot of a web browser displaying the Medicare Contact Us page. The browser's address bar shows 'localhost:4200/contact'. The page has a green header with the Medicare logo and navigation links: Home, About us, and Contact us. On the right side of the header are 'Login' and 'Sign Up' links. The main content area is titled 'Contact Us' and contains a form with three input fields: 'Name' (with placeholder 'Enter name'), 'Email Address' (with placeholder 'Enter email'), and 'Subject' (with placeholder 'Choose One:'). To the right of these fields is a larger 'Message' input area. Below the form is a green 'Send Message' button. To the right of the form, under the heading 'Our office', is contact information for Medicare, Inc. in San Francisco, CA, including a phone number (123) 456-7890 and an email address 'admin@gmail.com'.

Medicare

Home About us Contact us

Login Sign Up

### Contact Us

Name  
Enter name

Email Address  
Enter email

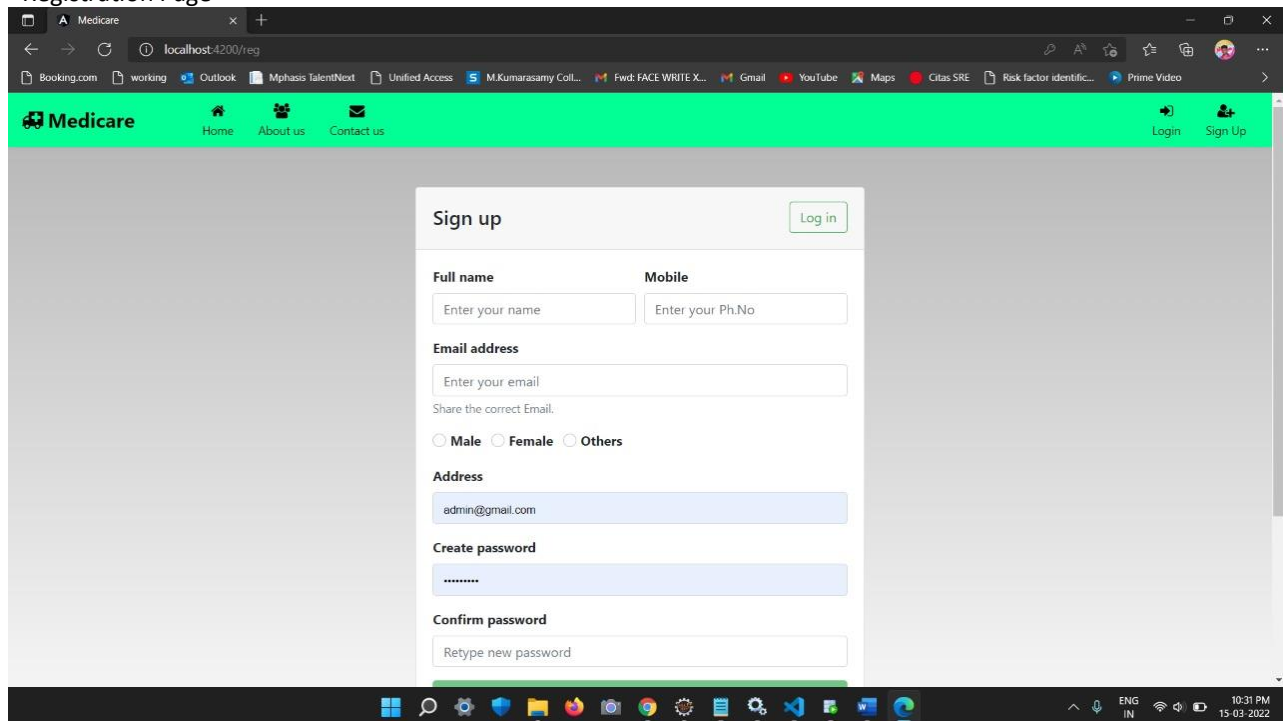
Subject  
Choose One:

Message  
Message

Send Message

**Our office**  
**Medicare, Inc.**  
San Francisco, CA  
Phone: (123) 456-7890  
**Mail Id**  
[admin@gmail.com](mailto:admin@gmail.com)

## Registration Page



A screenshot of a web browser displaying the Medicare Registration Page. The browser's address bar shows 'localhost:4200/reg'. The page has a green header with the Medicare logo and navigation links: Home, About us, and Contact us. On the right side of the header are 'Login' and 'Sign Up' links. The main content area features a 'Sign up' form with a 'Log in' link. The form includes fields for 'Full name' (placeholder 'Enter your name'), 'Mobile' (placeholder 'Enter your Ph.No'), 'Email address' (placeholder 'Enter your email'), and a note 'Share the correct Email.'. Below these are radio buttons for 'Male', 'Female', and 'Others'. The 'Address' field contains 'admin@gmail.com'. The 'Create password' field has a placeholder '\*\*\*\*\*', and the 'Confirm password' field has a placeholder 'Retype new password'.

Medicare

Home About us Contact us

Login Sign Up

### Sign up

Log in

**Full name**  
Enter your name

**Mobile**  
Enter your Ph.No

**Email address**  
Enter your email  
Share the correct Email.

☐ Male ☐ Female ☐ Others

**Address**  
admin@gmail.com

**Create password**  
\*\*\*\*\*

**Confirm password**  
Retype new password

## Login Page

Medicare

Home About us Contact us

Login Sign Up

Admin Login Customer Login

### Customer Login

Email

admin@gmail.com

Password

\*\*\*\*\*

☐ Remember me [Forgot password?](#)

Login

Don't have an account? [Sign up](#)

## Admin Login page

Medicare

Home About us Contact us

Login Sign Up

Admin Login Customer Login

### Admin Login

Email address

admin@gmail.com

Password

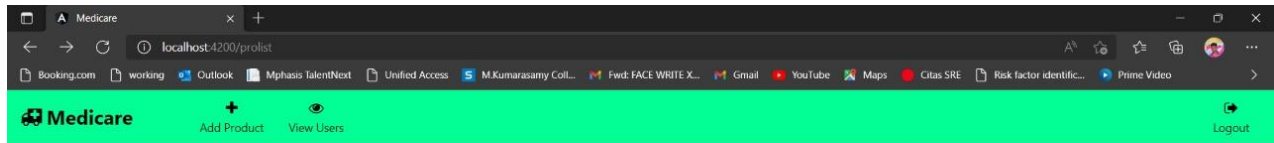
\*\*\*\*\*

☐ Remember me [Forgot password?](#)

Login

Don't have an account? [Sign up](#)

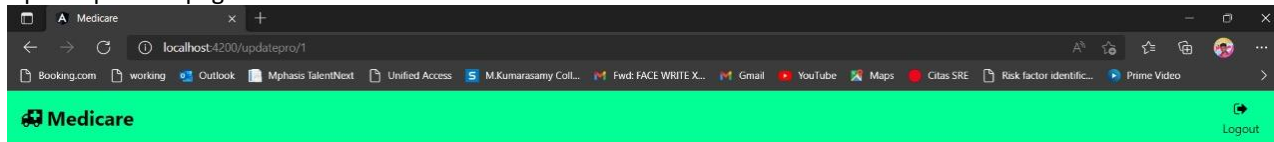
## Product List Page



PID	Product Name	Product Description	Product Type	Price	Action
1	Dolo	pain relief	Tablet	₹25.00	<button>Update</button> <button>Delete</button>



## Update product page



**Update Product**

Product Name

Product Description

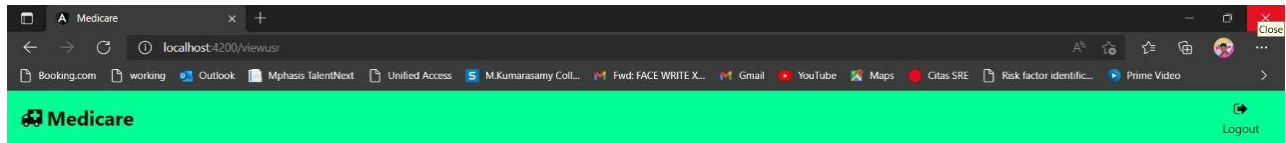
Product Type

Price

Update



## View Users



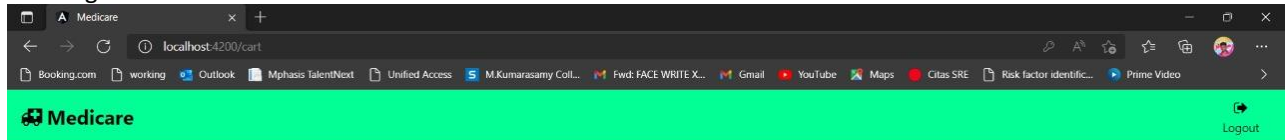
### Users

RID	Name	Email	Address	Moblie
1	Abishek	abishektcbm@gmail.com	2/108, doctor colony, SN puram road, thiruchitrambalam, Pattukkottai (tk ),Thanjavur (dt)	8940696047

[Back](#)



## Cart Page



### Cart

**10% Discount on Payment!!**

PID	Product Name	Product Type	Price
1	Dolo	Tablet	₹25.00
		TOTAL:	₹22.50

[Continue Shopping](#)

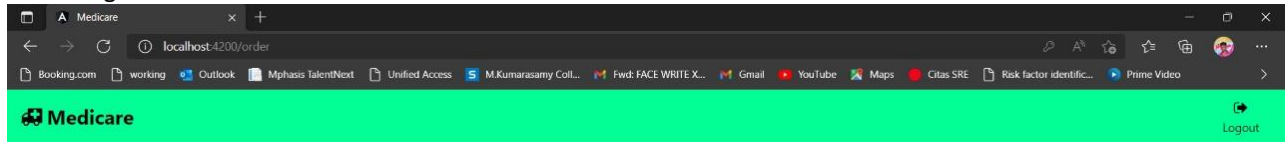
[Clear Cart](#)



[Confirm Payment](#)



## Order Page



Payment Success :)

### Order Summary

PID	Product Name	Product Type	Price
1	Dolo	Tablet	₹25.00
		PAID:	₹22.50

[Continue Shopping](#)

[Print Order](#)

