

Document Status: Approved

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Revision / Document History

Ver.	Date	Changed by	Modifications
	29/07/2023	Harshavardhan Reddy	

List of Abbreviations

DFD Data Flow Diagram
E-R Entity Relationship
RS Requirement Specification

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1. Introduction

1.1 Purpose

The purpose of the Medical Service Automation System project is to provide medical services online and maintain all the necessary documents in electronic format. Here we can have all the details of doctors, In-patients, clerks, billing department. It aims to provide the doctor appointment booking and live chat option between doctor and patient. It provides an option for both doctor and patient to view previous e-prescriptions.

1.2 Scope

The scope of the project includes comprehensive functionality for managing details of doctor, In-patient, and provide booking appointment facility, provide live chat option for doctor and patient, and calculating the billing expenses of the patient.

1.3 Definitions, Acronyms and Abbreviations

Not Applicable

1.4 References

Not Applicable

1.5 Coordinators

1. Harshavardhan Reddy

2. Software Requirements

2.1 Operational Requirements

Administrator Module:

1. The admin should be able to add new users to the system.
2. The admin should be able to modify the user details in the system.

Clerk Module:

1. The clerk should be able to add new In-patient details in the system.
2. The clerk should be able to modify new In-patient details in the system.

Doctor Module:

1. The doctor should be able to manage his details.
2. The doctor should be able to give appointments to the patients.
3. The doctor should be able to view previous e-prescriptions of the patient.
4. The doctor should be able to interact with the patient using live chat.

Patient Module:

1. The patient should be able to manage his details.
2. The patient should be able to book an appointment with a doctor.
3. The patient should be able to view his previous e-prescriptions.
4. The patient should be able to interact with the doctor using live chat.

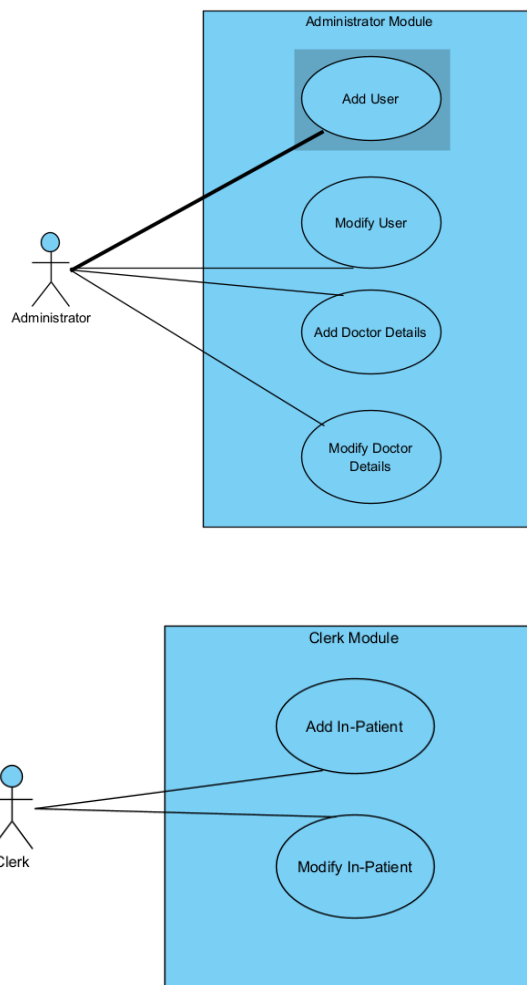
Billing Department Module:

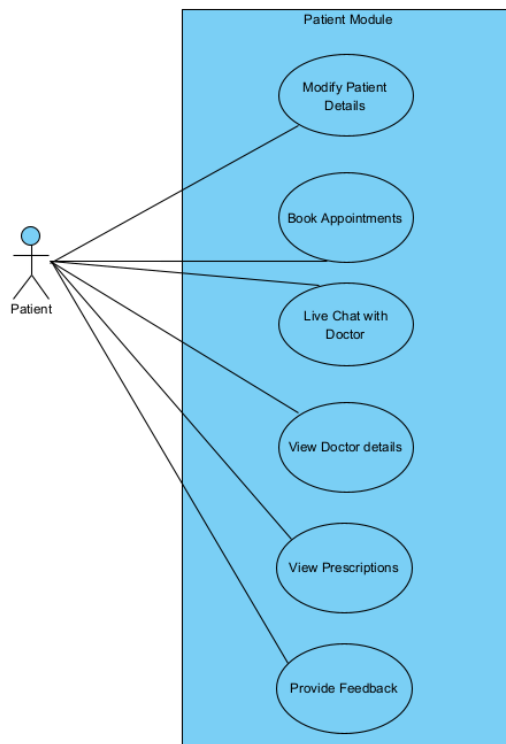
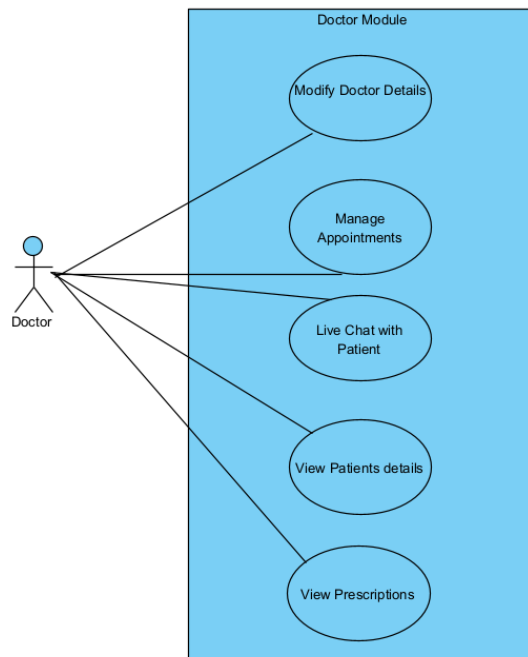
1. The billing department should be able to calculate the expenses of the patient.

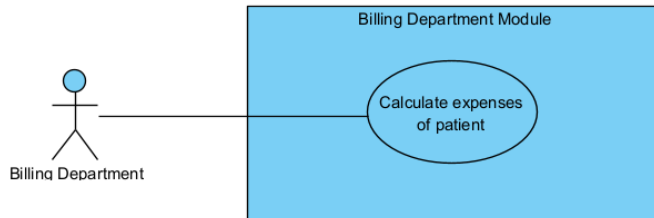
2. The billing department should be able to verify the eligibility of insurance and process the payment further.

2.2 Functional Requirements

FIGURE 2.1 USE CASE DIAGRAM







Login

Requirement Tag ID	RS-1-1	
Source/Trigger	Initial Login	
Description	Input	username and password
	Process	The system verifies the entered credentials against stored user credentials and grants access if valid.
	Output	Successful authentication and routing to respective modules.
Validation Method	Verify the correctness of user credentials, authenticate against stored data, and handle incorrect login attempts.	

Manage Users

Requirement Tag ID	RS-1-2	
Source/Trigger	Administrator	
Description	Input	User details will be filled up
	Process	The administrator will fill in the details of user and administrator can update the details whenever required
	Output	The required data is updated in the Database
Validation Method		

Manage Doctor Details

Requirement Tag ID	RS-1-3	
Source/Trigger	Administrator / Doctor	
Description	Input	The details of the doctor are filled in respective text fields
	Process	The administrator will fill in the details of doctor and later both administrator and doctor can update the details
	Output	The required data is updated in the Database
Validation Method		

Manage In-patient Details

Requirement Tag ID	RS-1-4
Source/Trigger	Clerk

Error! Unknown document property name.

Version: Error! Unknown document property name.

<i>Description</i>	<i>Input</i>	<i>The details of In-Patient are filled in respective text fields</i>
	<i>Process</i>	<i>The clerk will fill in the details of In-Patient and later clerk can update the details whenever required</i>
	<i>Output</i>	<i>The required data is updated in the Database</i>
<i>Validation Method</i>		

Appointments

Requirement Tag ID	RS-1-5	
Source/Trigger	Doctor and patient	
<i>Description</i>	<i>Input</i>	<i>Patient will book appointment at required date and time slots available</i>
	<i>Process</i>	<i>The doctor will manage the appointments and confirms them</i>
	<i>Output</i>	<i>The appointment will be confirmed</i>
<i>Validation Method</i>		

Live Messaging

Requirement Tag ID	RS-1-6	
Source/Trigger	Doctor and patient	
<i>Description</i>	<i>Input</i>	<i>The doctor and patient will interact with each other</i>
	<i>Process</i>	<i>The patient can reach out to the doctor with live chat option whenever required</i>
	<i>Output</i>	<i>The interactions happen between doctor and patient</i>
<i>Validation Method</i>		

Feedback

Requirement Tag ID	RS-1-7	
Source/Trigger	Patient	
<i>Description</i>	<i>Input</i>	<i>The patient will give his feedback of doctor</i>
	<i>Process</i>	<i>The feedback provided by the patient will be forwarded to the admin</i>
	<i>Output</i>	<i>The feedback will be taken of doctor service</i>
<i>Validation Method</i>		

Billing

Requirement Tag ID	RS-1-8	
Source/Trigger	Billing Department	
<i>Description</i>	<i>Input</i>	<i>The billing department fill in the expenses and details of the patient</i>
	<i>Process</i>	<i>The billing department calculates the expenses and verifies the eligibility of insurance</i>
	<i>Output</i>	<i>The bill will be processed further based on insurance eligibility</i>
<i>Validation Method</i>		

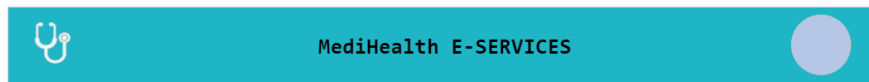
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View Prescription

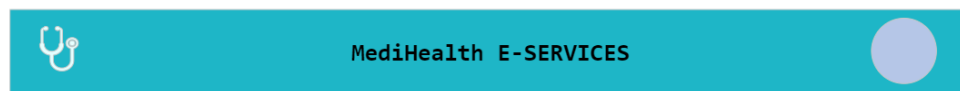
Requirement Tag ID	RS-1-9	
Source/Trigger	Doctor and Patient	
Description	Input	Previous e-prescriptions will be available to view
	Process	Both doctor and patient can view previous e-prescriptions whenever required
	Output	The documents will be accessible
Validation Method		

2.3 User Interface Requirements

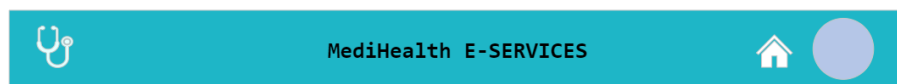
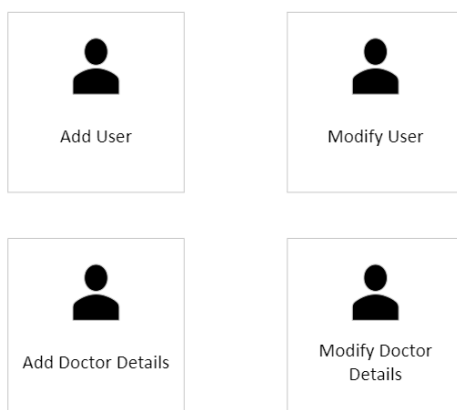


Please Fill in the details and Login !!!

Login



ADMIN HOMEPAGE



Add User

Reset

Add



Modify User

<input type="text" value="Username"/>	<input type="button" value="Search"/>
<input type="text" value="Password"/>	
<input type="text" value="Role"/>	




MediHealth E-SERVICES

Add Doctor Details

<input type="text" value="Username"/>	<input type="button" value="Search"/>
<input type="text" value="Firstname"/>	<input type="text" value="Lastname"/>
<input type="text" value="dd/mm/yyyy"/> <small>Date of Birth</small>	<input type="text" value="Mobile Number"/>
<input type="text" value="Qualification"/>	<input type="text" value="Gender"/>
<input type="text" value="Aadhar Number"/>	<input type="text" value="Specialization"/>
<input type="text" value="Experience"/>	

The screenshot shows the 'Modify Doctor Details' form within the MediHealth E-SERVICES application. The form is titled 'Modify Doctor Details' and contains several input fields for doctor information. At the top, there is a 'Username' field and a 'Search' button. Below this, there are fields for 'Firstname' and 'Lastname'. Further down, there is a 'Date of Birth' field with a placeholder 'dd/mm/yyyy' and a 'Mobile Number' field. Below these are 'Qualification' and 'Gender' fields. At the bottom of the form are 'Aadhar Number', 'Specialization', and 'Experience' fields. At the very bottom of the form are three buttons: 'Reset', 'Update', and 'Delete'. The interface has a teal header with a stethoscope icon, a home icon, and a user profile icon.


The screenshot shows the 'CLERK HOMEPAGE' within the MediHealth E-SERVICES application. The page has a teal header with a stethoscope icon, the text 'MediHealth E-SERVICES', and a user profile icon. Below the header, the text 'CLERK HOMEPAGE' is centered. The main content area contains two large buttons, each with a person icon. The left button is labeled 'Add In-Patient' and the right button is labeled 'Modify In-Patient'.

 **MediHealth E-SERVICES**  

Add In-Patient

Date of Birth

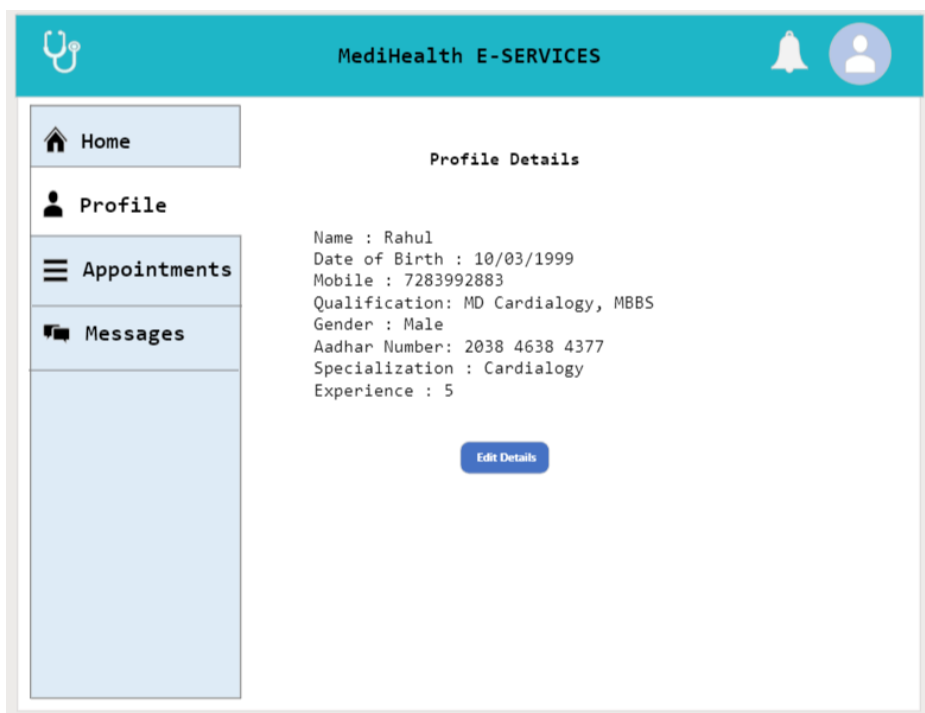
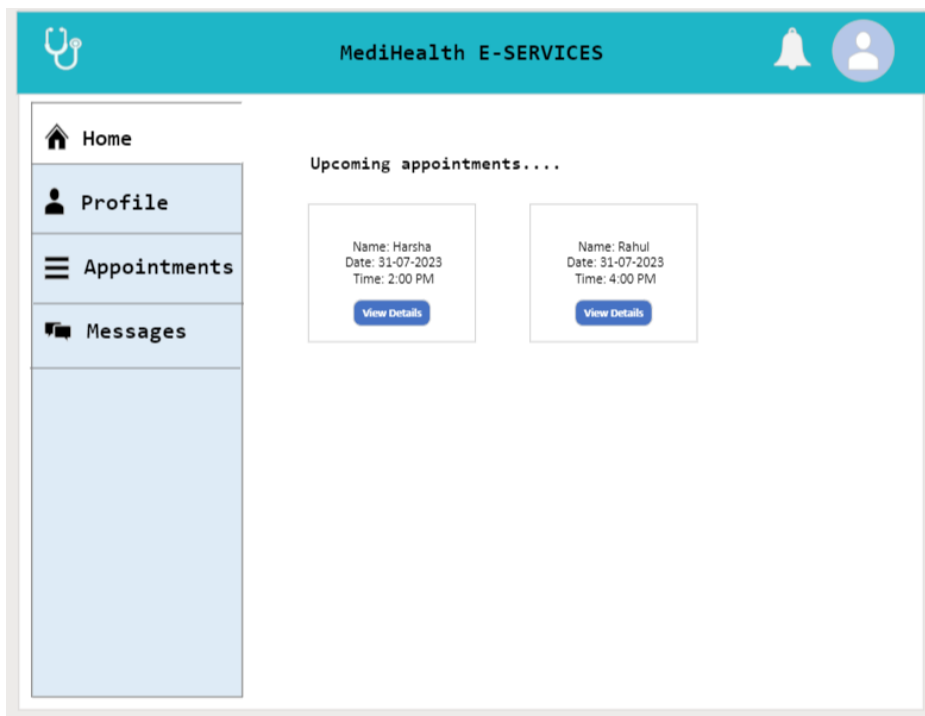
▼

 **MediHealth E-SERVICES**  

Modify In-Patient

Date of Birth

▼



Name	Date	Time	Action
Harsha v	31-07-2023	10:00 AM	Approve Reject
Rahul S	31-07-2023	2:00 PM	Approve Reject




 **MediHealth E-SERVICES**   


Patient Details


Name : Rahul
Date of Birth : 10/03/1999
Mobile : 7283992883
Gender : Male
Consultation Department : Cardiology


Click below for previous prescriptions Documents


[View Documents](#)


 **MediHealth E-SERVICES**  


 Home

 Profile

 Appointments

 Book Appointment

 Messages

 Prescriptions




Upcoming Booked appointments....


Doctor Name: Harsha
Date: 31-07-2023
Time: 2:00 PM


[View Details](#)


Doctor Name: Rahul
Date: 31-07-2023
Time: 4:00 PM


[View Details](#)



MediHealth E-SERVICES




 Home

 Profile

 Appointments

 Book Appointment




 Messages


 Prescriptions


Profile Details


Name : Rahul
 Date of Birth : 10/03/1999
 Mobile : 7283992883
 Gender : Male
 Address :Bangalore
 Insurance : Yes
 Policy No. : HJ775JJd5
 Aadhar Number: 2038 4638 4377


Edit Details



MediHealth E-SERVICES




 Home

 Profile

 Appointments

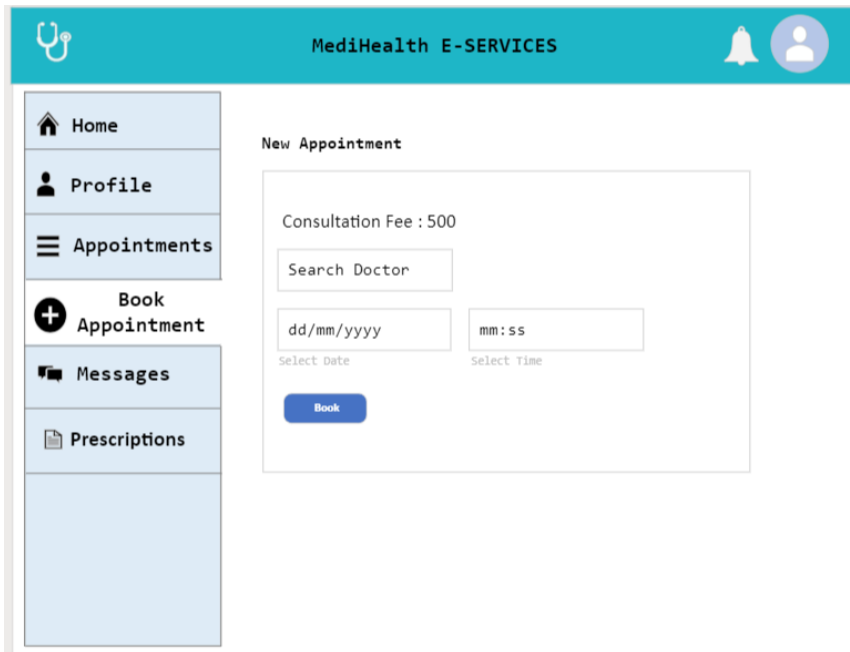
 Book Appointment

 Messages

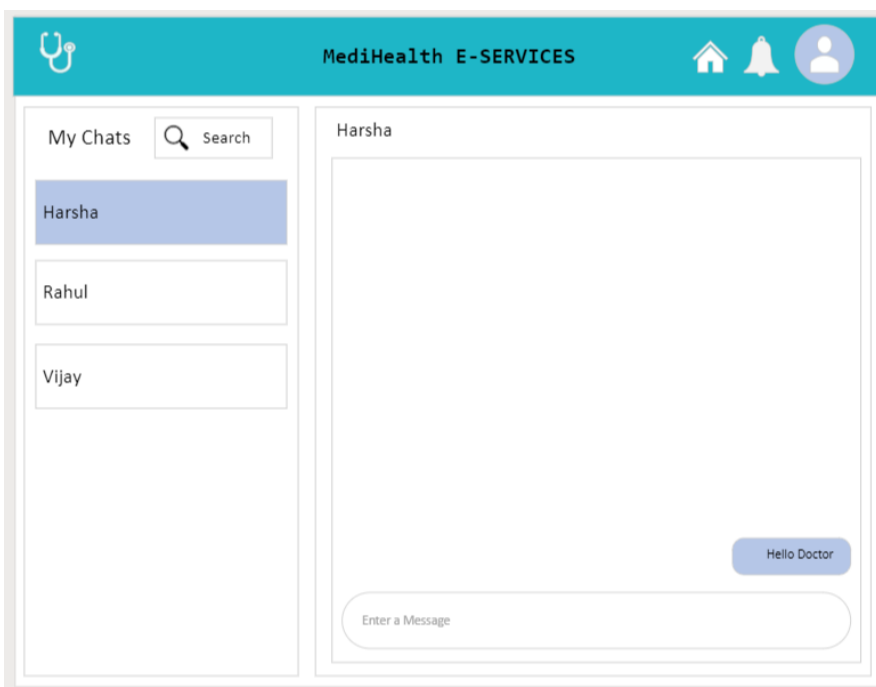
 Prescriptions

Appointments List

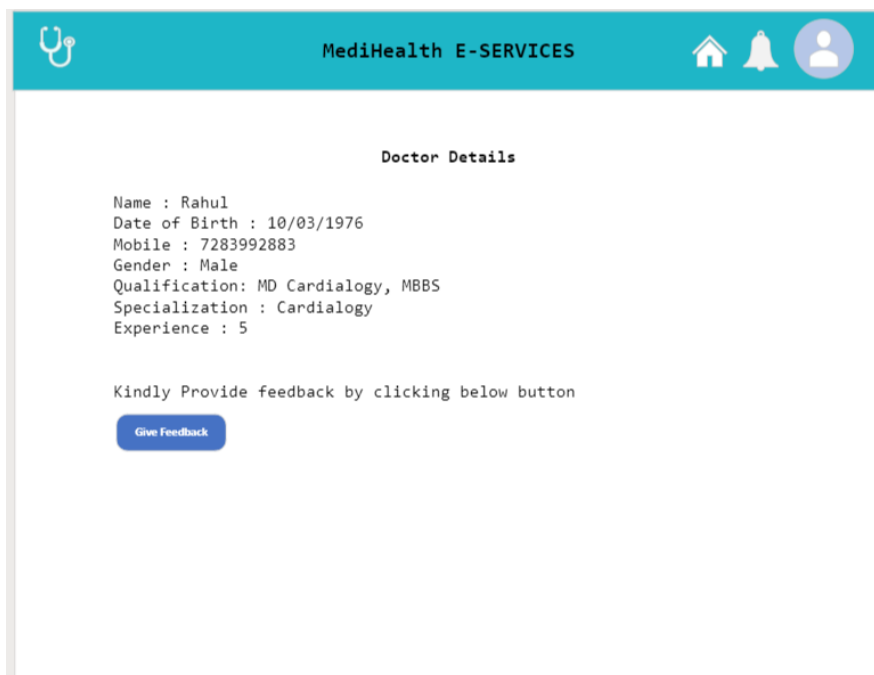
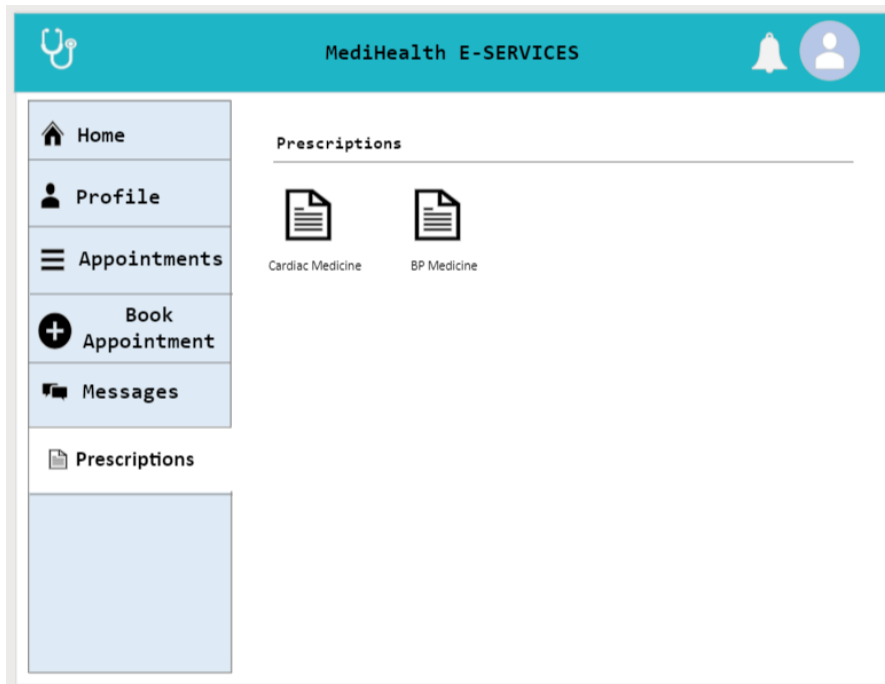
Doctor Name	Date	Time	Status
Harsha v	31-07-2023	10:00 AM	Approved
Rahul S	31-07-2023	2:00 PM	Rejected

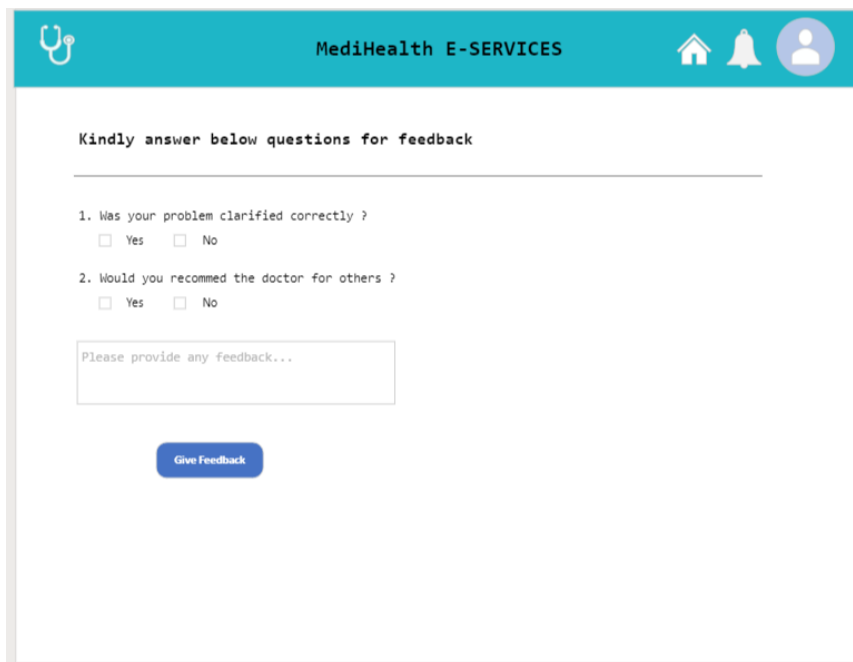


The screenshot shows the 'New Appointment' form in the MediHealth E-SERVICES application. The header bar is teal with a stethoscope icon, the text 'MediHealth E-SERVICES', and a notification bell and user profile icon. A left sidebar contains links: Home, Profile, Appointments, Book Appointment (highlighted with a plus icon), Messages, and Prescriptions. The main content area is titled 'New Appointment' and displays 'Consultation Fee : 500'. It includes a 'Search Doctor' input field, date and time selection fields (labeled 'dd/mm/yyyy' and 'mm:ss' with 'Select Date' and 'Select Time' prompts), and a blue 'Book' button.



The screenshot shows the chat interface in the MediHealth E-SERVICES application. The header bar is teal with a stethoscope icon, the text 'MediHealth E-SERVICES', and a home, notification bell, and user profile icon. The left sidebar, titled 'My Chats', includes a search bar and a list of chat partners: Harsha (highlighted), Rahul, and Vijay. The main chat area for 'Harsha' shows a large empty text box, a blue 'Hello Doctor' button, and a message input field at the bottom labeled 'Enter a Message'.





MediHealth E-SERVICES

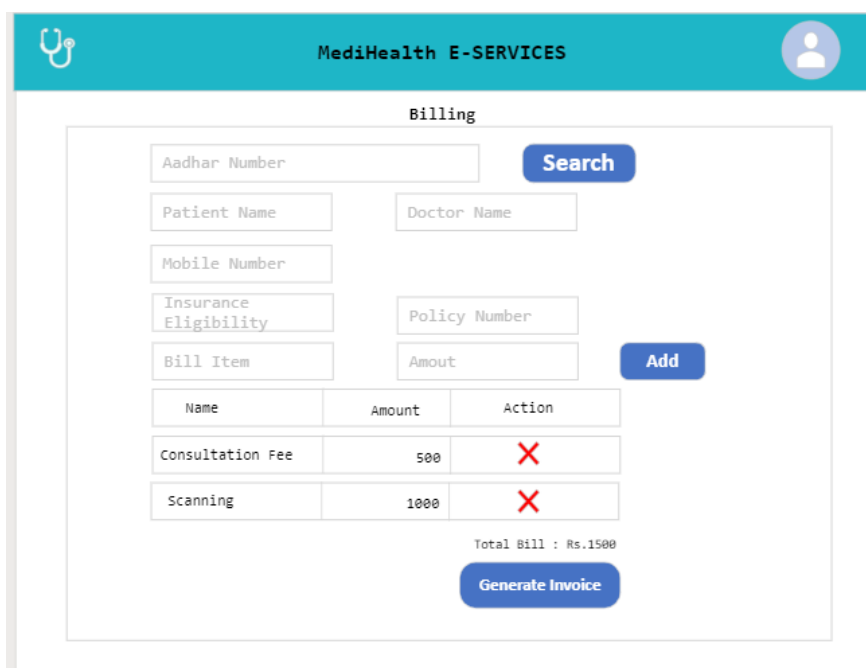
Kindly answer below questions for feedback

1. Was your problem clarified correctly ?
☐ Yes ☐ No

2. Would you recommend the doctor for others ?
☐ Yes ☐ No

Please provide any feedback...

Give Feedback



MediHealth E-SERVICES

Billing

Aadhar Number Search

Patient Name Doctor Name

Mobile Number

Insurance Eligibility Policy Number

Bill Item Amount Add

Name	Amount	Action
Consultation Fee	500	X
Scanning	1000	X

Total Bill : Rs.1500

Generate Invoice

2.4 External Interface Requirements

NA

3. Project Execution Related Requirements

3.1 Development Environment

Technologies to be used for development of the Application:

- HTML5, CSS3
- JavaScript
- React JS
- Node JS

Software tools that can be used for development:

- Visual Studio Code

3.2 Design requirements

Not applicable.

3.3 Coding requirements

Since this is front end part of our Medical Service Automation System Application, we followed all the JavaScript coding standard requirements.

3.4 Error handling requirements

NA

3.5 Resource Requirements

Technologies to be used for development of the Application:

- HTML, CSS
- JavaScript
- React JS

3.6 Risk management

Not applicable.

3.7 Training Requirements

- Since the application being developed is greatly dependent on user interaction, the end user should be comfortable with the UI.
- End users should be given a walkthrough of the working of the entire application throughout. Training should be provided with respect to efficient UI usage.

4. Testing Requirements

The testing phase includes front end level validation including mandatory fields and specified format fields.

5. Quality Assurance Activities

NA

6. Software Acceptance Criteria

As this is a web Application it can run on any platform. So, there is no software acceptance criteria.

7. Deliverables

7.1 List of Deliverables

Not applicable

7.2 Delivery

Not Applicable

8. Requirements Acceptance Statement

Requirements Acceptance statement consists of agreement to above mentioned requirements, by the user & developer.