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Revision / Document History

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

List of Abbreviations

DFD	**D**ata **F**low **D**iagram
E-R	**E**ntity **R**elationship
RS	**R**equirement **S**pecification

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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.

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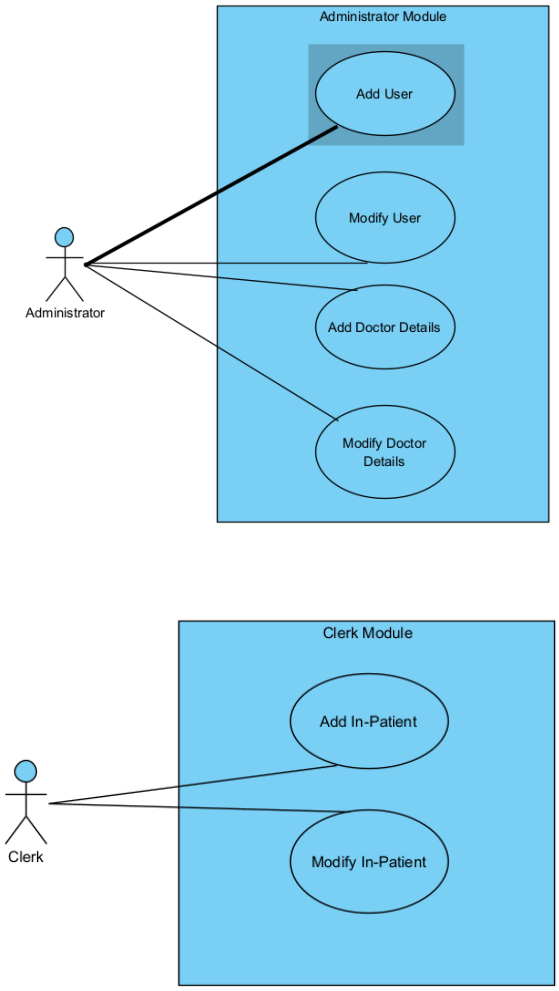
2. The billing department should be able to verify the eligibility of insurance and process the payment further.

2.2 Functional Requirements

FIGURE 2.1 USE CASE DIAGRAM



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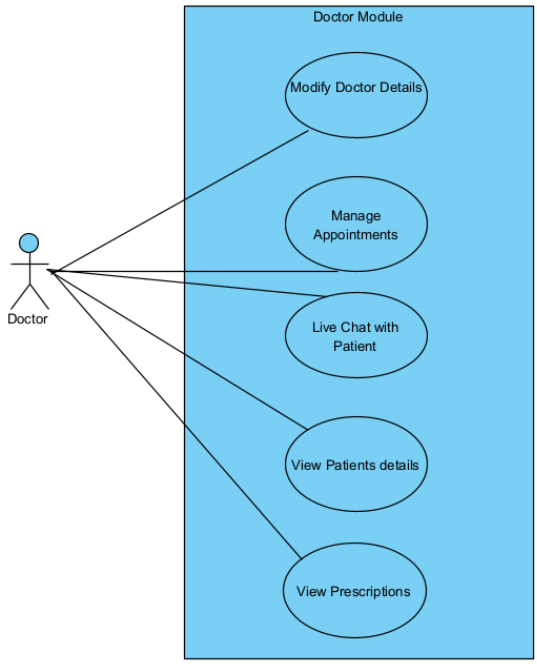

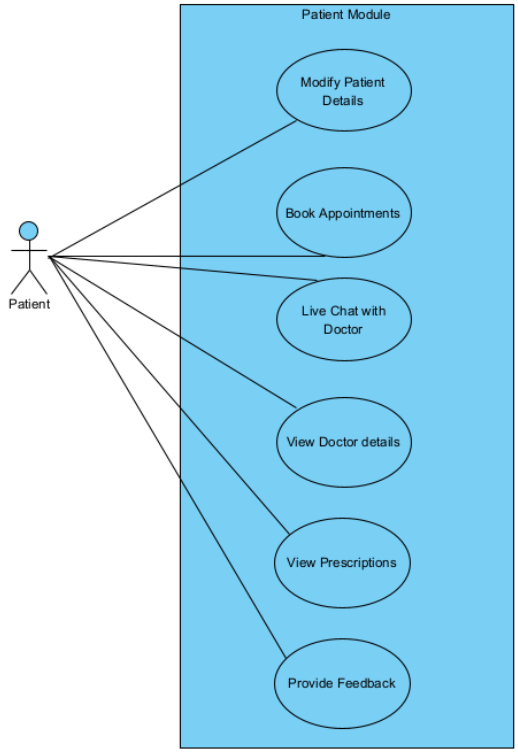

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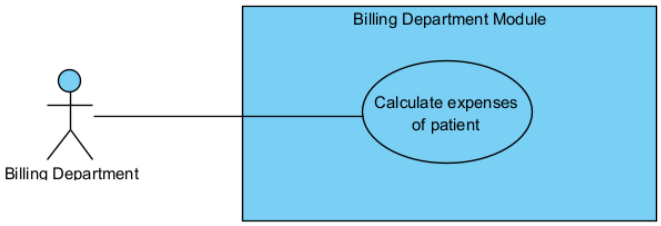

Login

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*

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

Appointments

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

Live Messaging

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

Feedback

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

Billing

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

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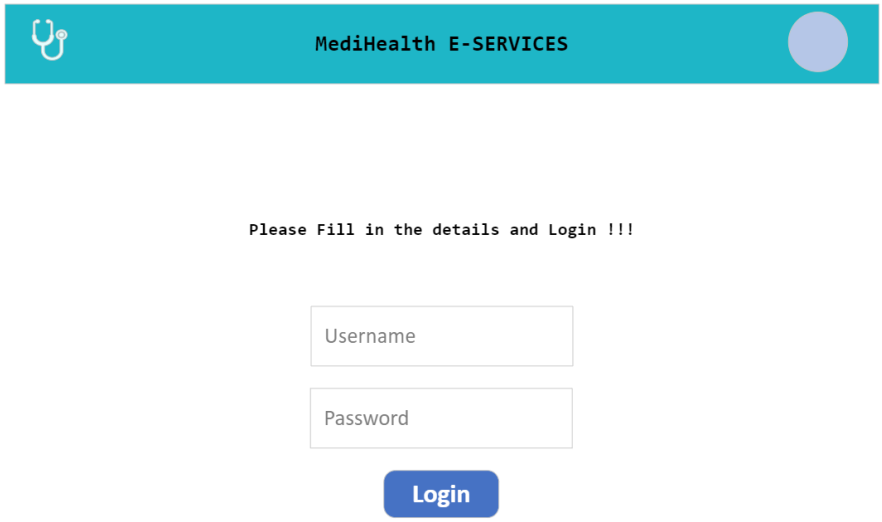
View Prescription

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



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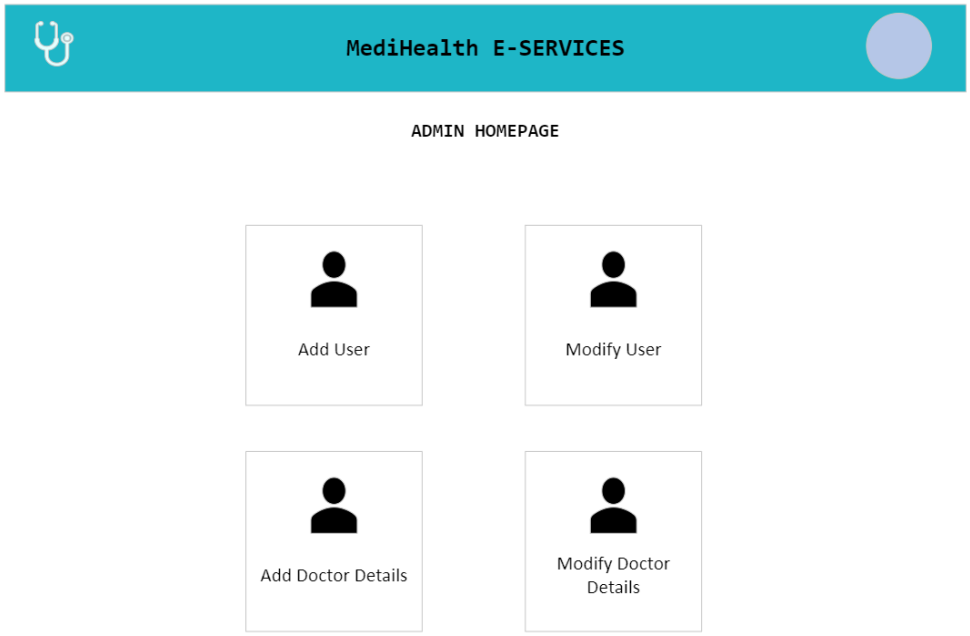

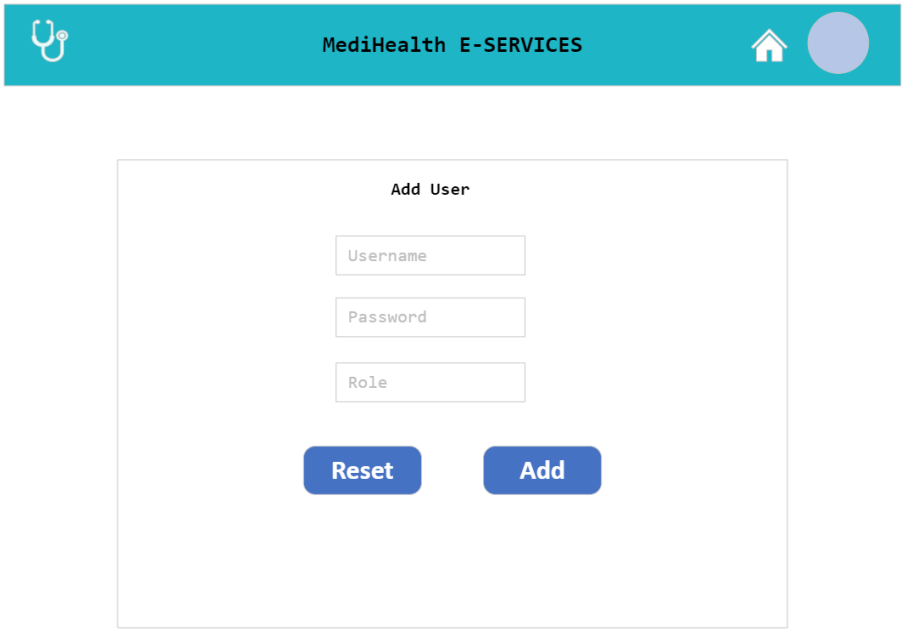

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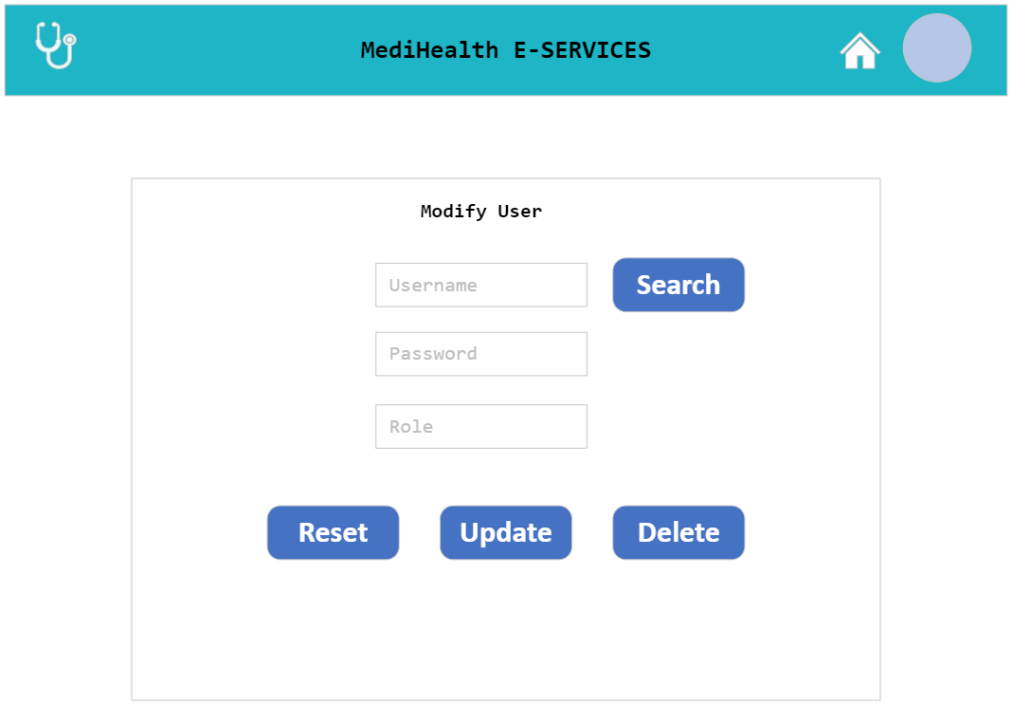

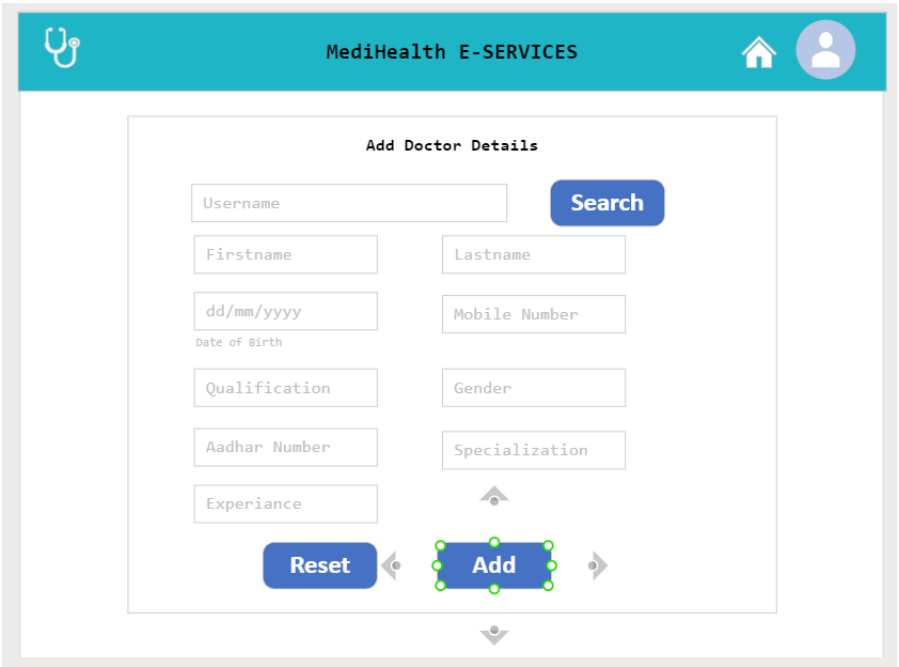

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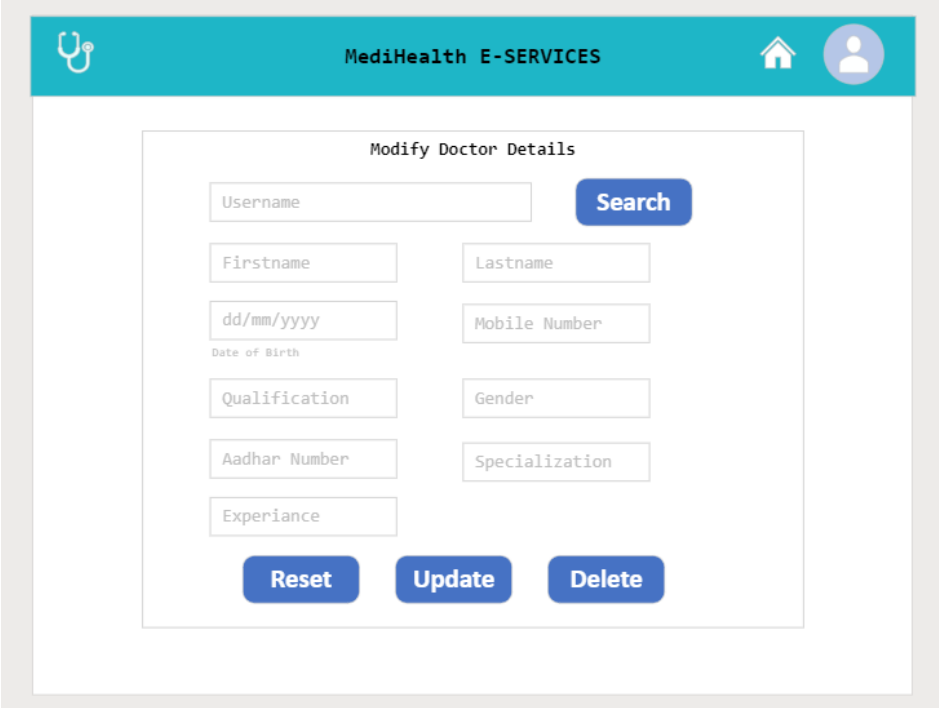

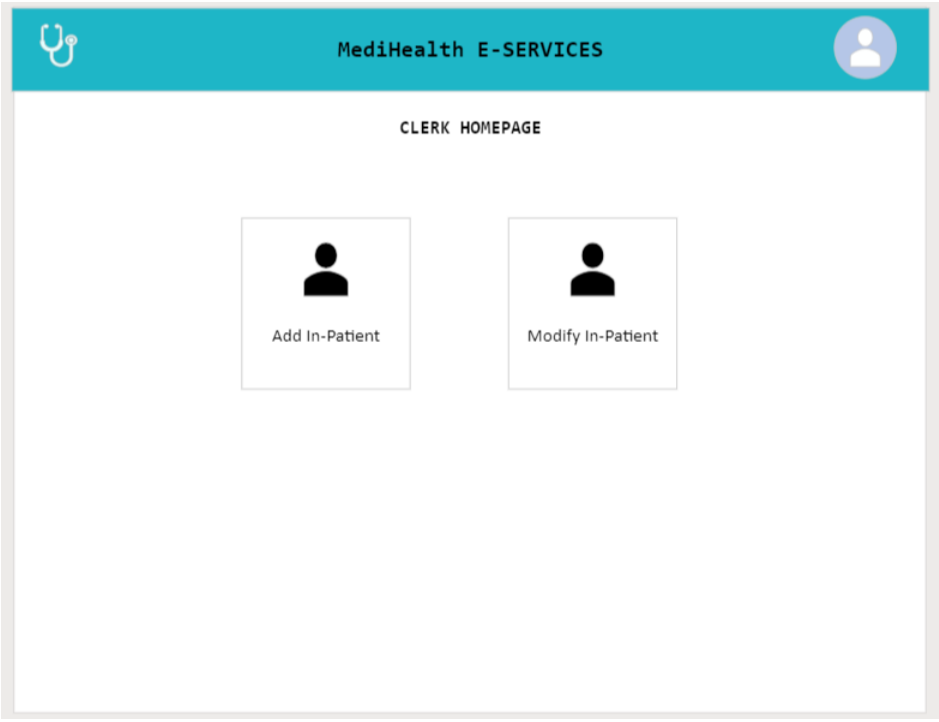

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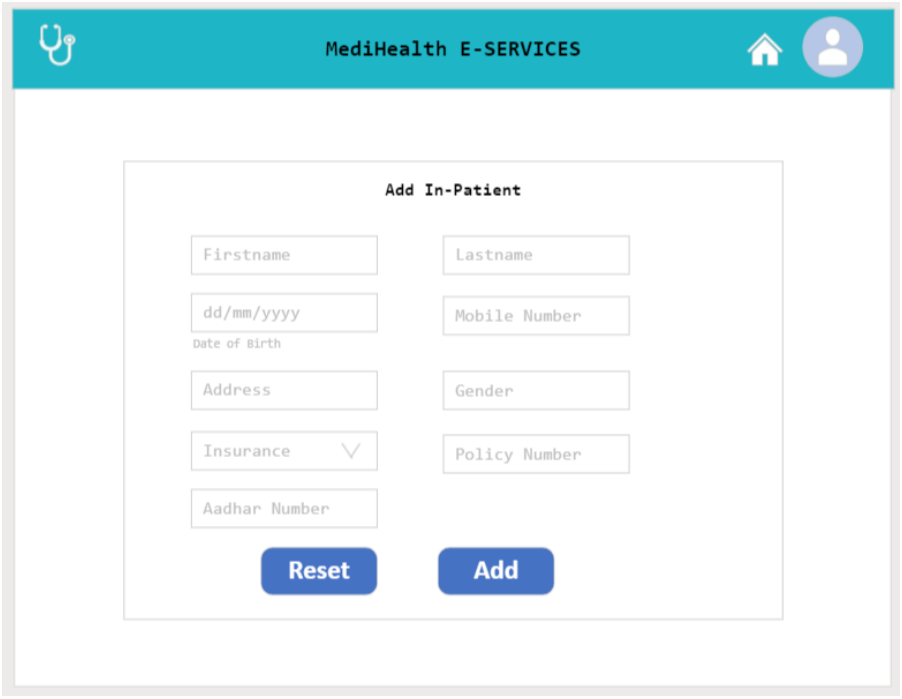

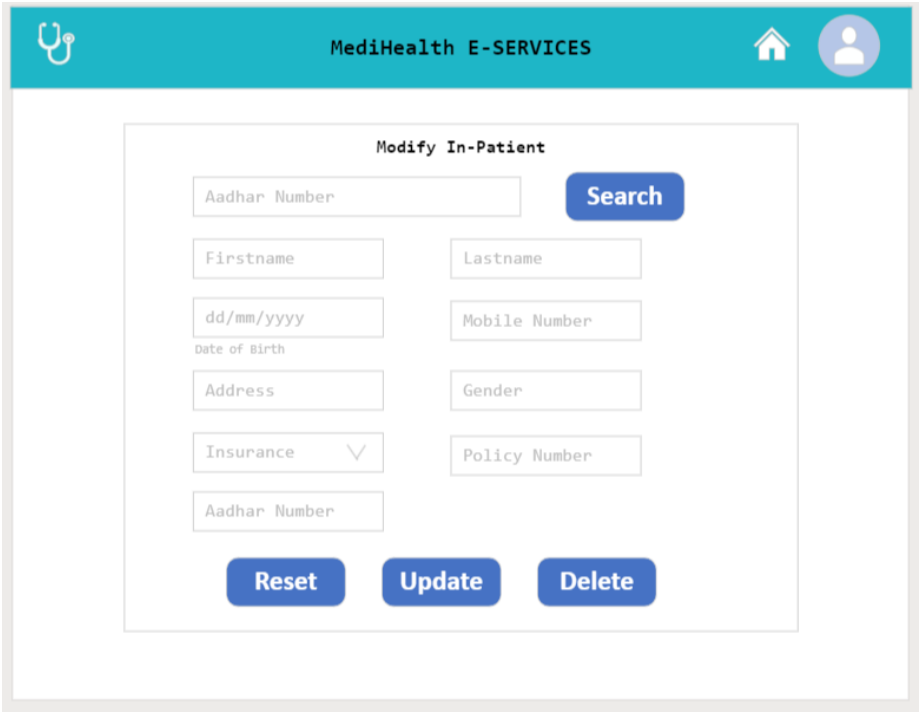

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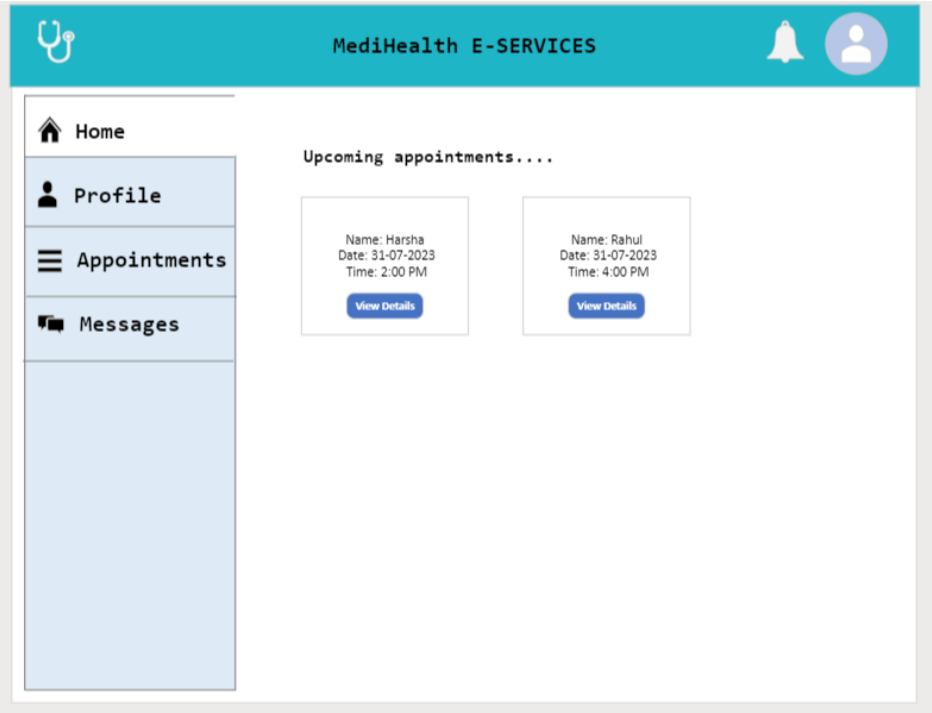

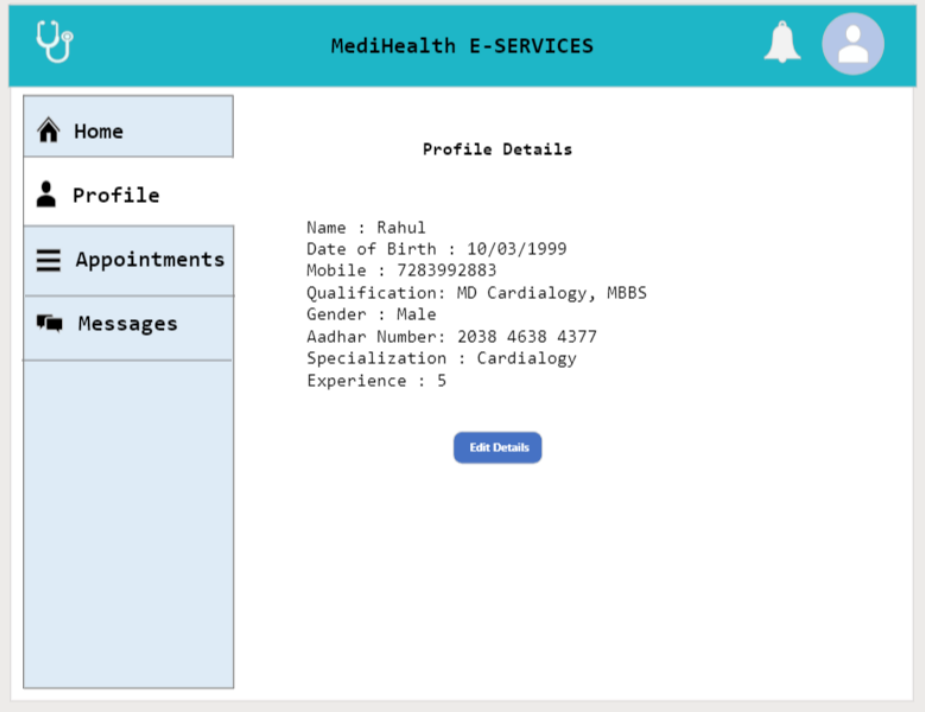

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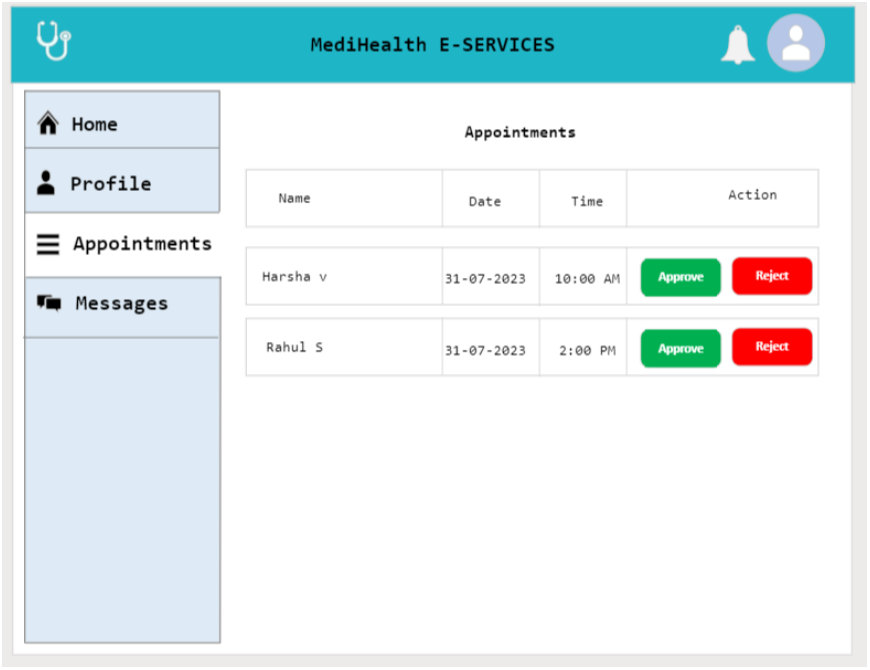

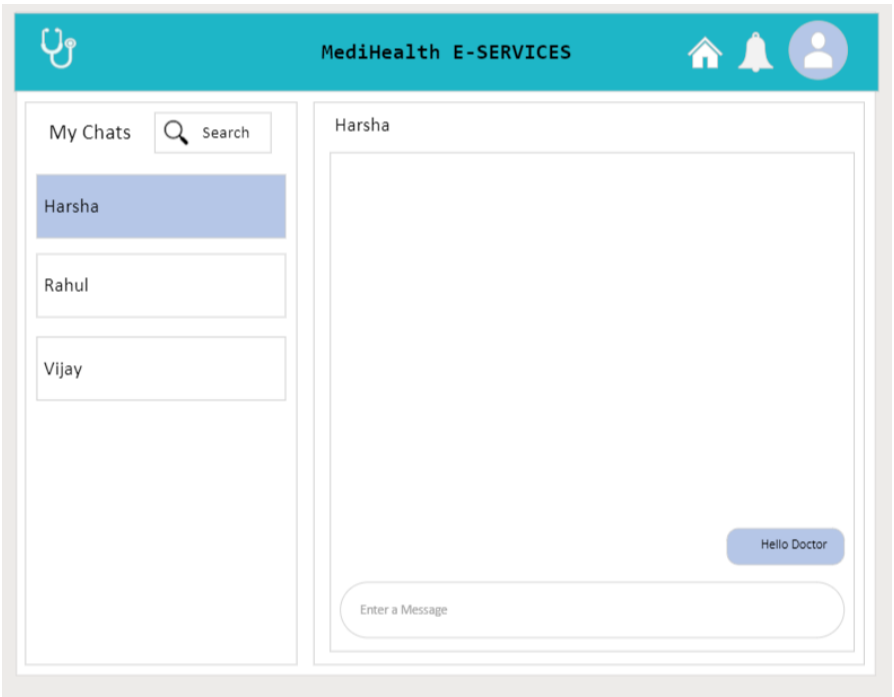

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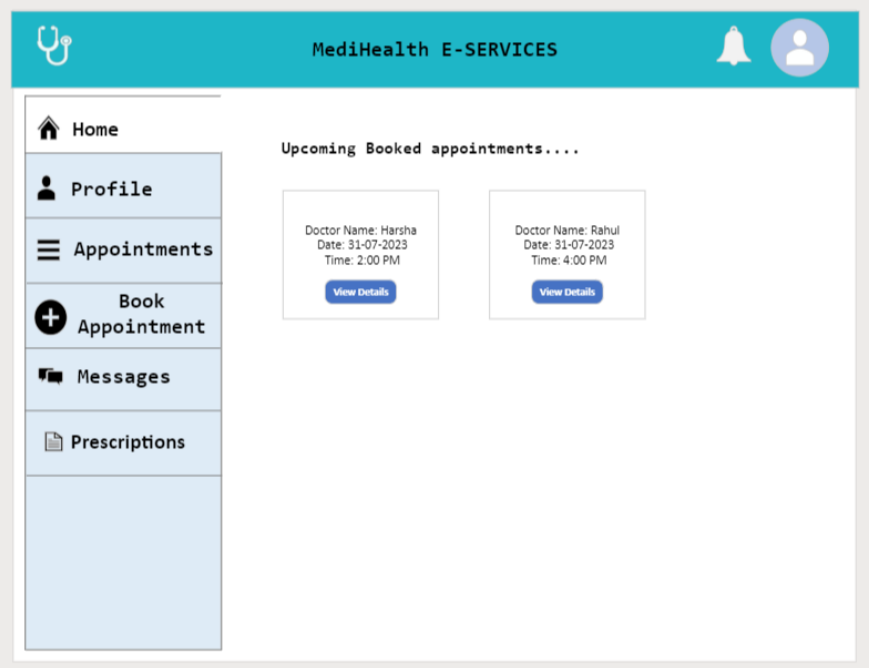

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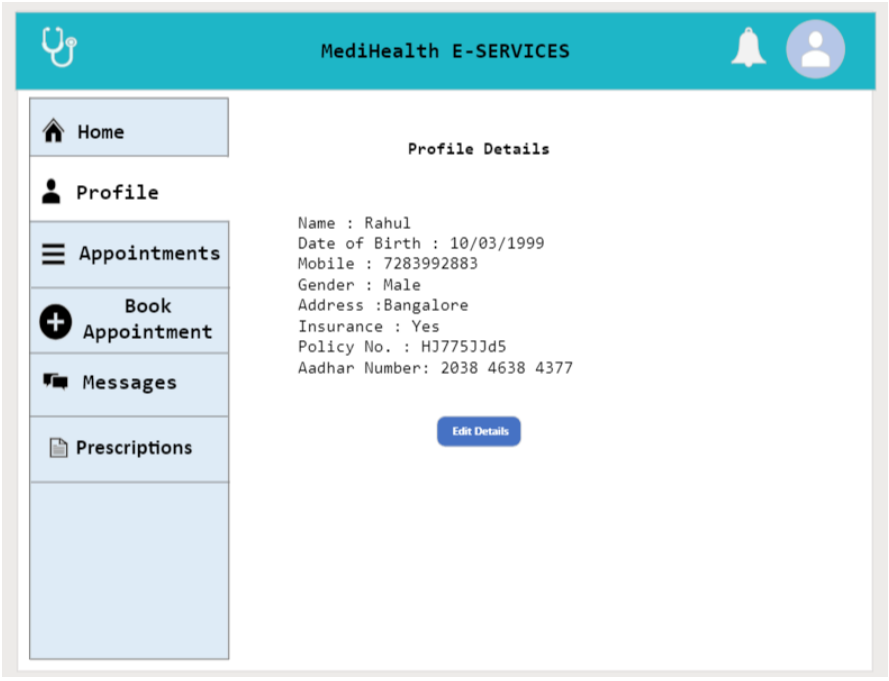

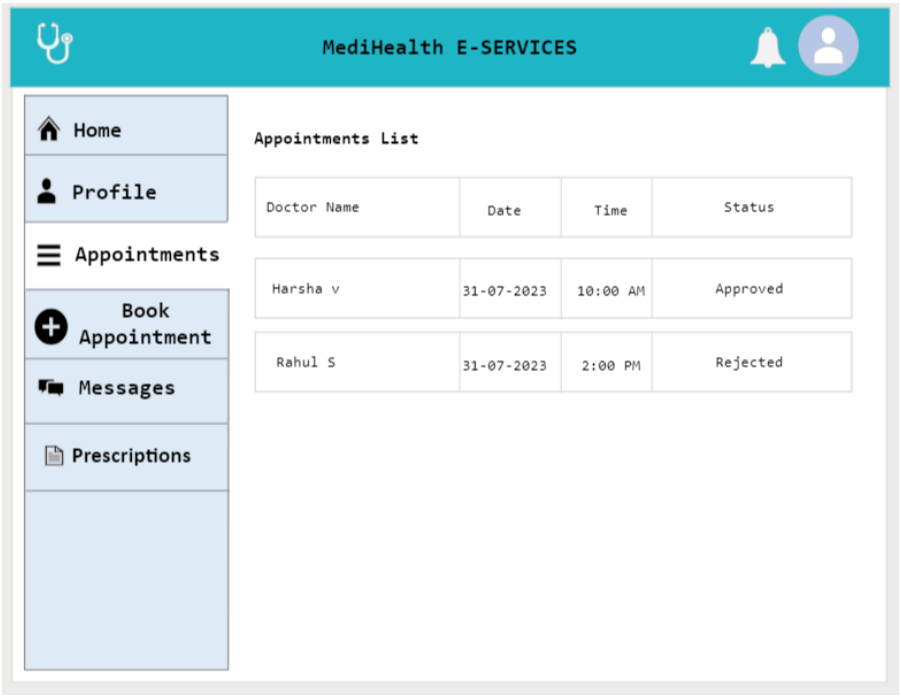

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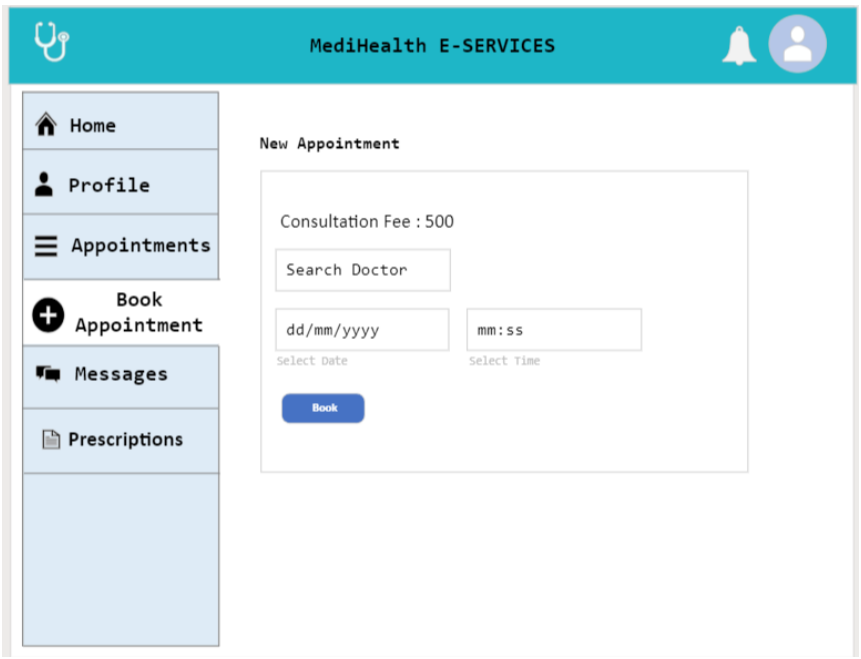

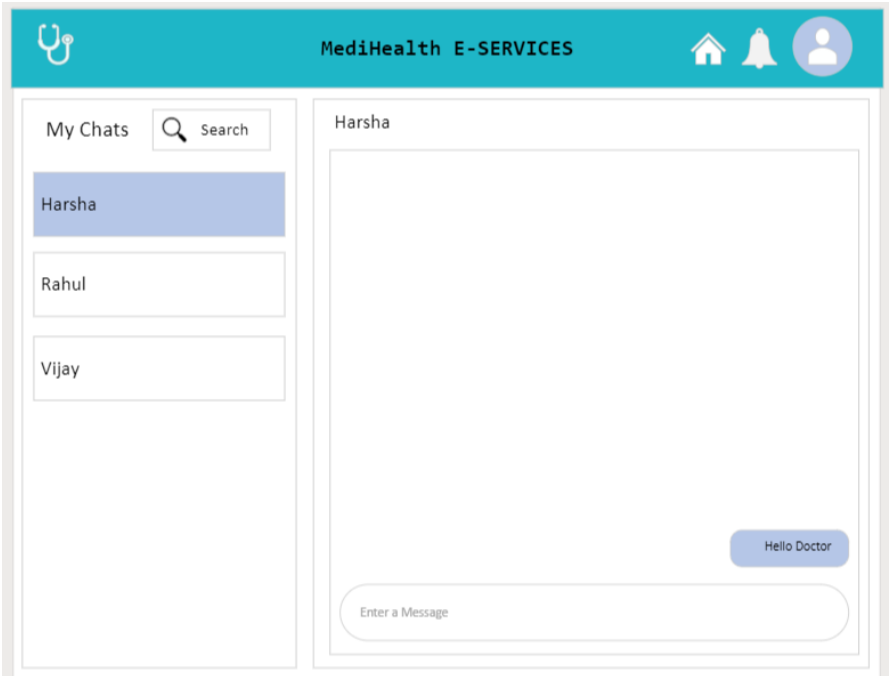

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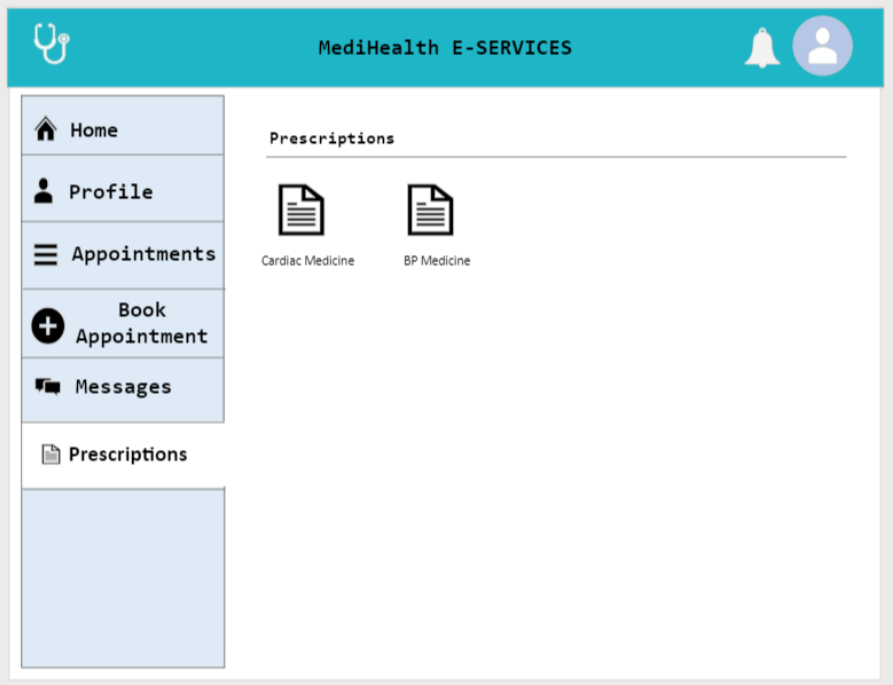

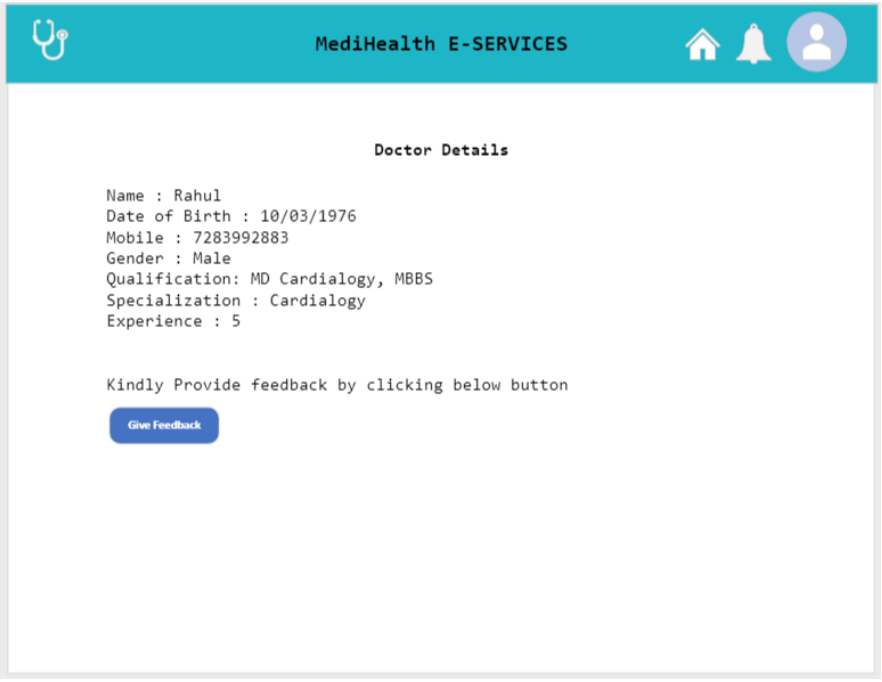

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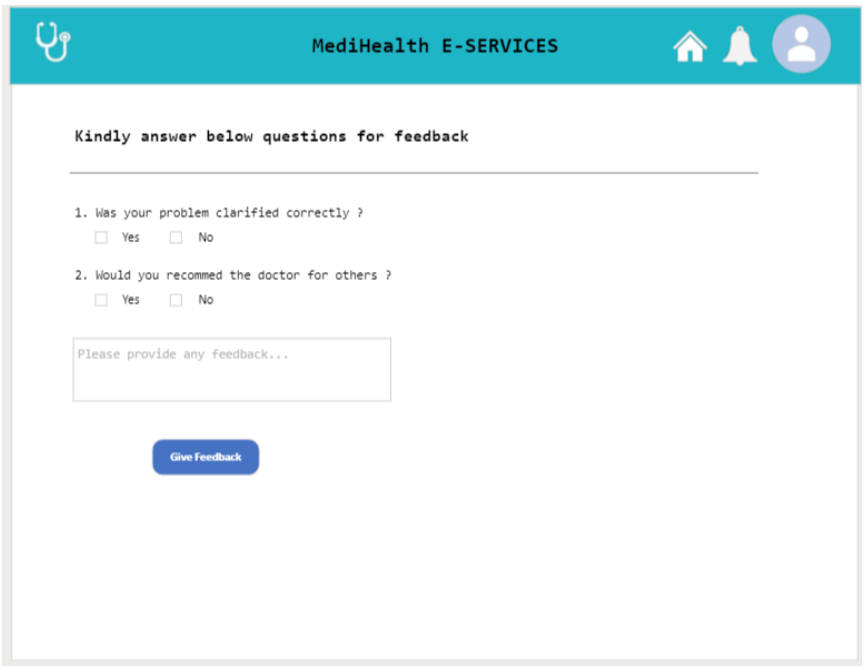

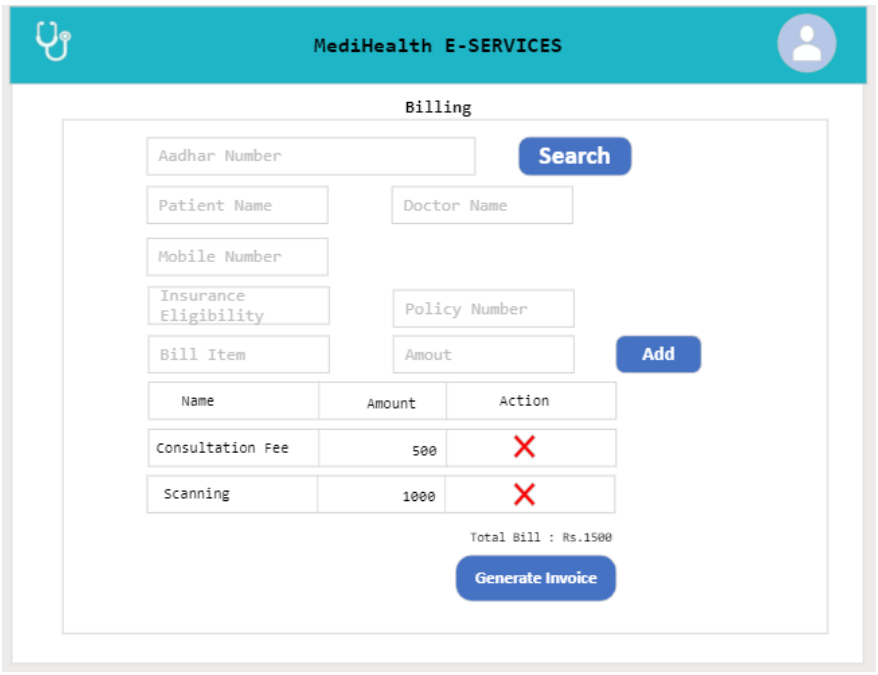

2.4 External Interface Requirements

NA

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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.

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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.

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