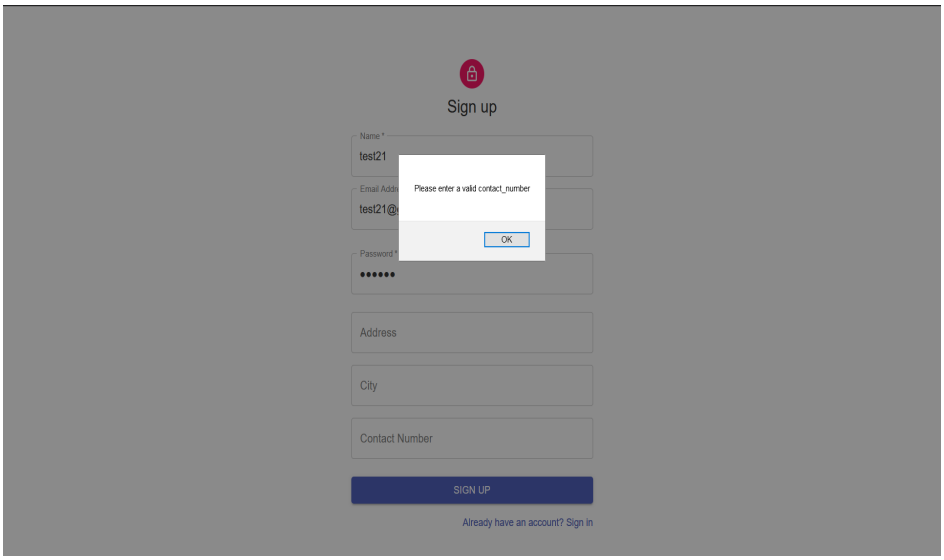
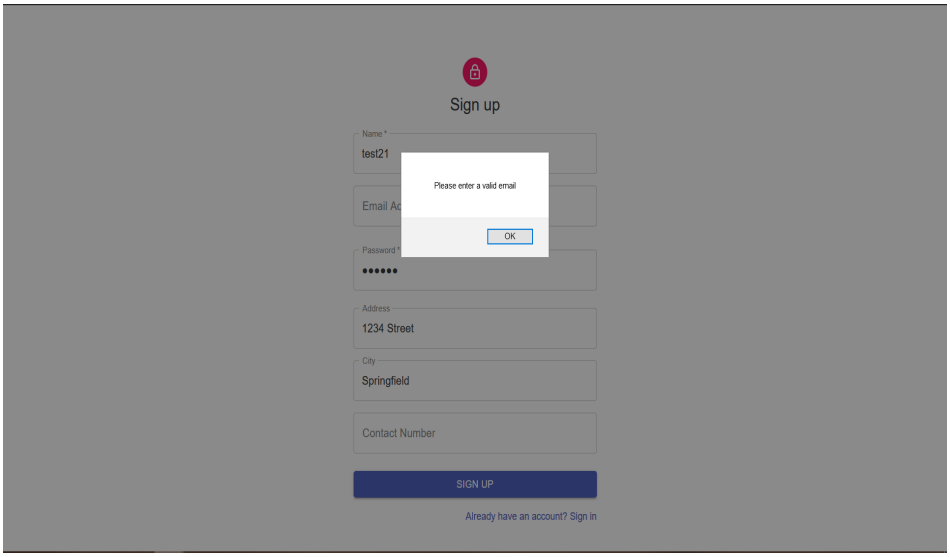
Unit testing

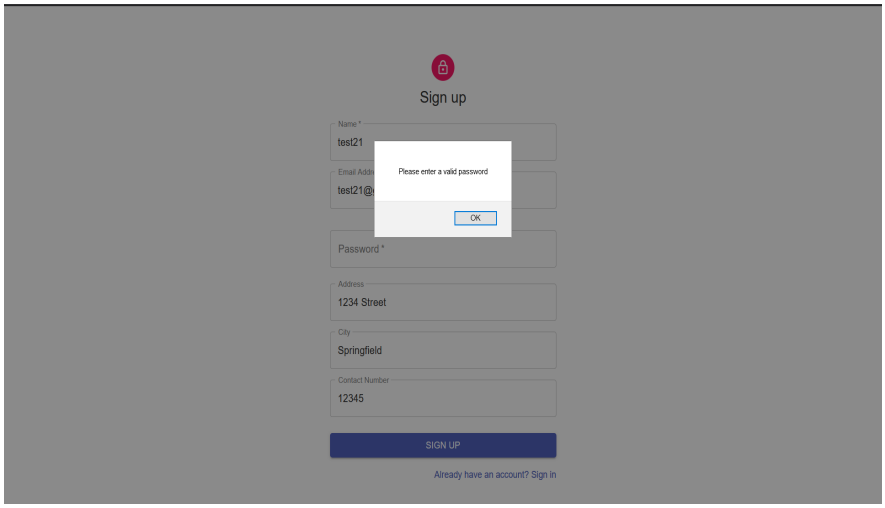
- Unit testing is done by the developer.Unit testing is a type of software testing where individual units or components of a software are tested. The purpose is to validate that each unit of the software code performs as expected.
- Unit Testing is of two types automatic and manual
- But in our project automatic testing is very hard because output is very dynamic and we have to enter/select data
- So we have done manual unit testing ,so that we can cover maximum functionality in our code.
- The **Unit Testing Techniques** are mainly categorized into 2 parts which are Black box testing that involves testing of user interface along with input and output, White box testing that involves testing the functional behaviour of the software application.
- White box testing is very hard in our project so we will perform black box testing
- We will use the equivalence class method and boundary value method for efficient black box testing.

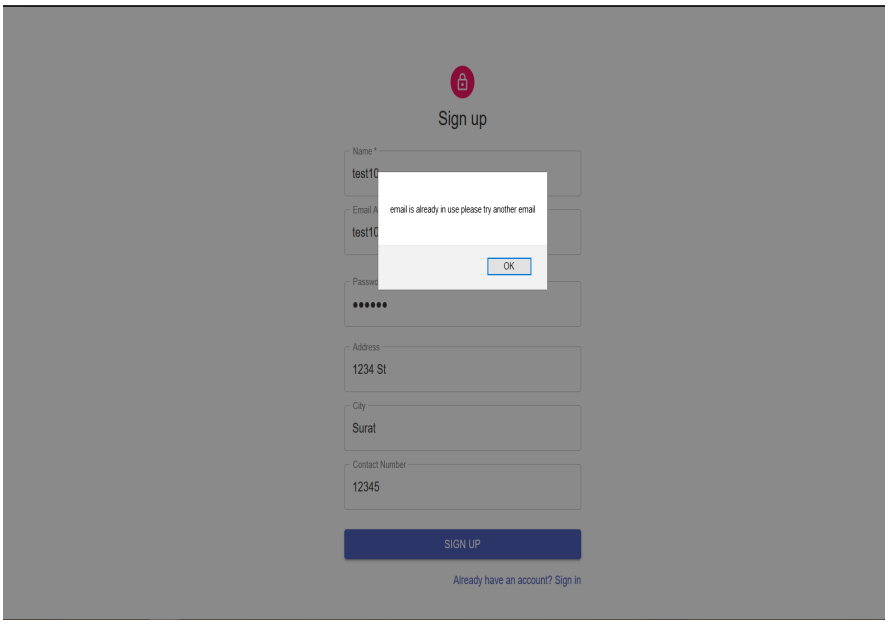
TEST 1:
Create an Account (Patient)

◆ The fields :- name , email, password, contact number are necessary. Otherwise the user should not be registered.
◆ The email id should be unique otherwise email already exists message will be displayed


Sign up
Name *
test21
Please enter a valid contact_number
OK
Password *
Address
City
Contact Number
SIGN UP
Already have an account? Sign in


Sign up
Name *
test21
Please enter a valid email
OK
Password *
Address
1234 Street
City
Springfield
Contact Number
SIGN UP
Already have an account? Sign in

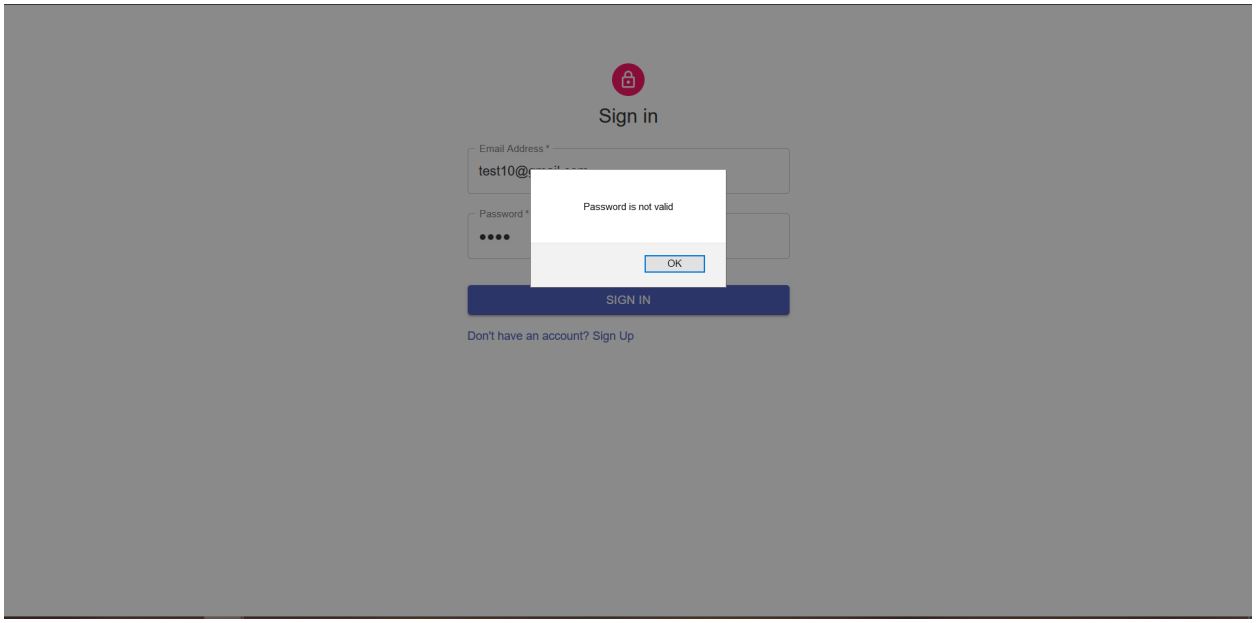

Sign up
Name *
test21
Please enter a valid password
OK
Password *
Address
1234 Street
City
Springfield
Contact Number
12345
SIGN UP
Already have an account? Sign in

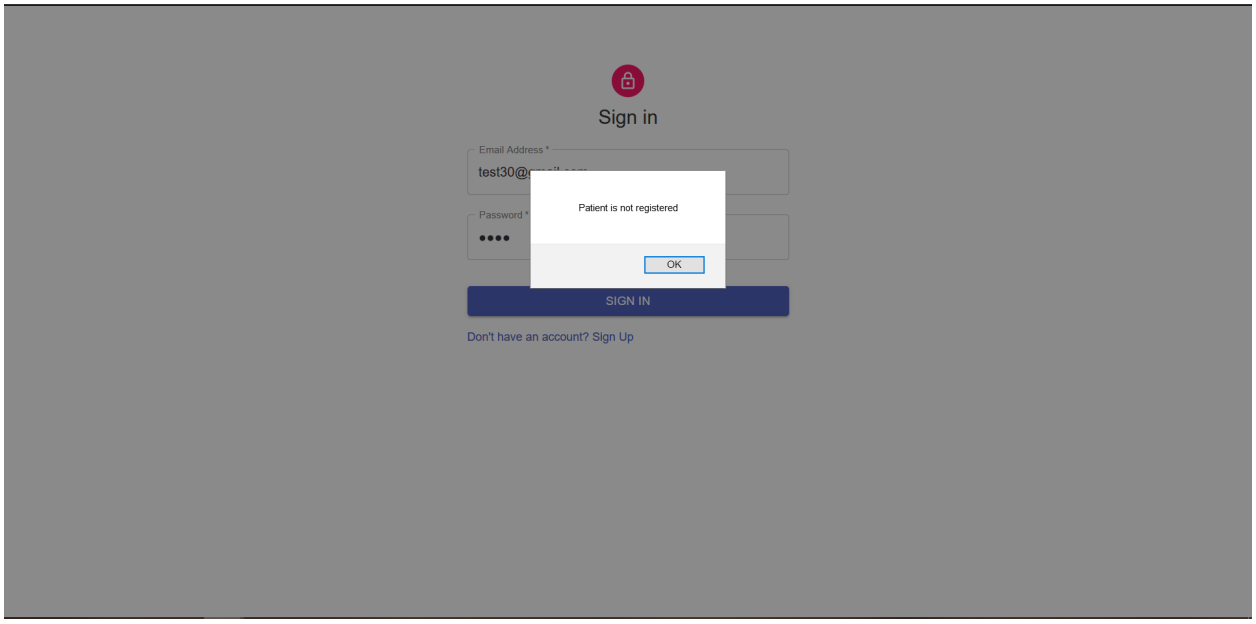

Sign up
Name *
email is already in use please try another email
OK
Address
1234 St
City
Surat
Contact Number
12345
SIGN UP
Already have an account? Sign in

TEST 2:
Login (Patient)

Enter Email and Password:

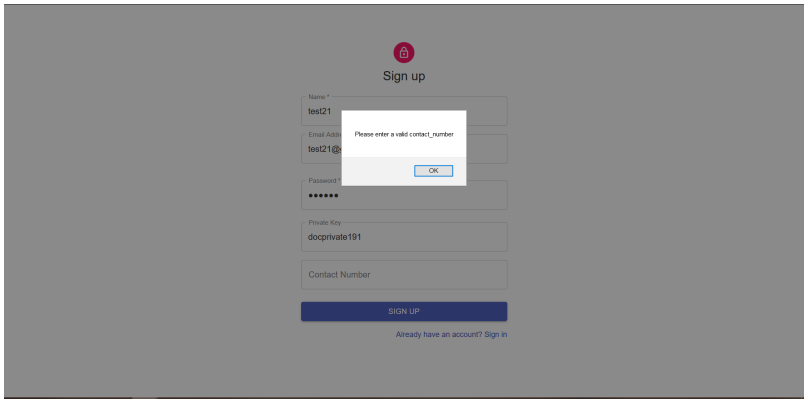
- If they do not match, then user doesn't exists message will be displayed
- If they match, then it will be redirected to the patient page

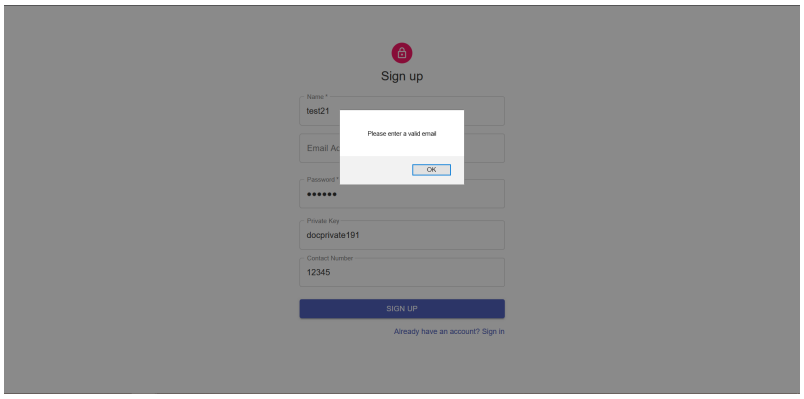


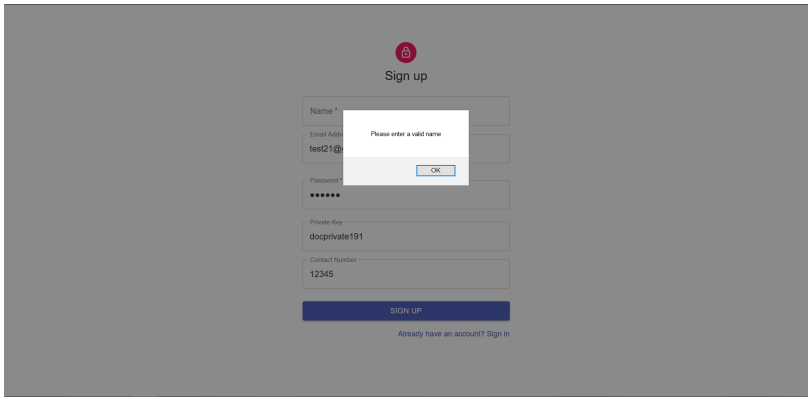


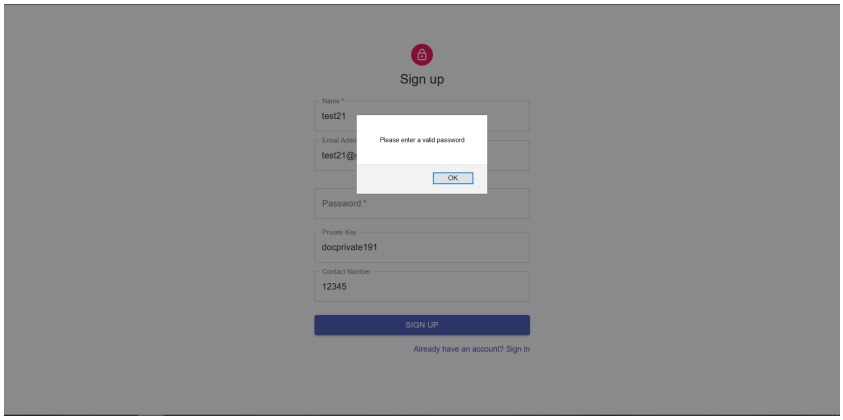
TEST 3:
Create an Account (Doctor) :-

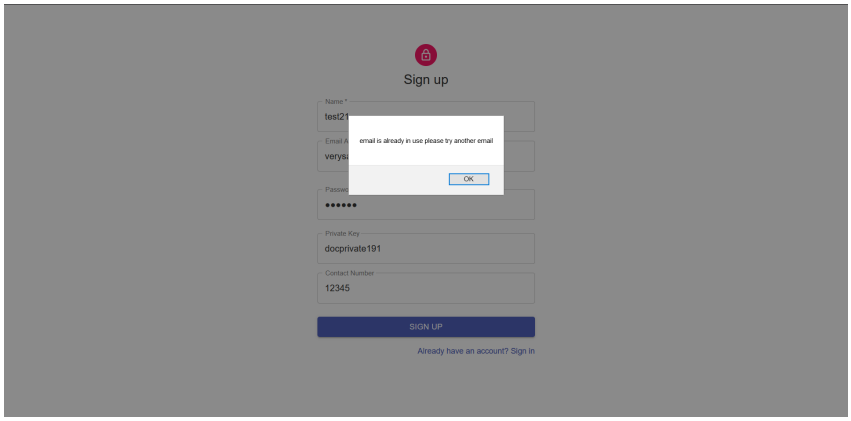
- If the private key is wrong, then the doctor should not be able to log in.
- If any of the fields(email, contact number , password) is missing, or the email is already registered, then the doctor should not be able to log in.



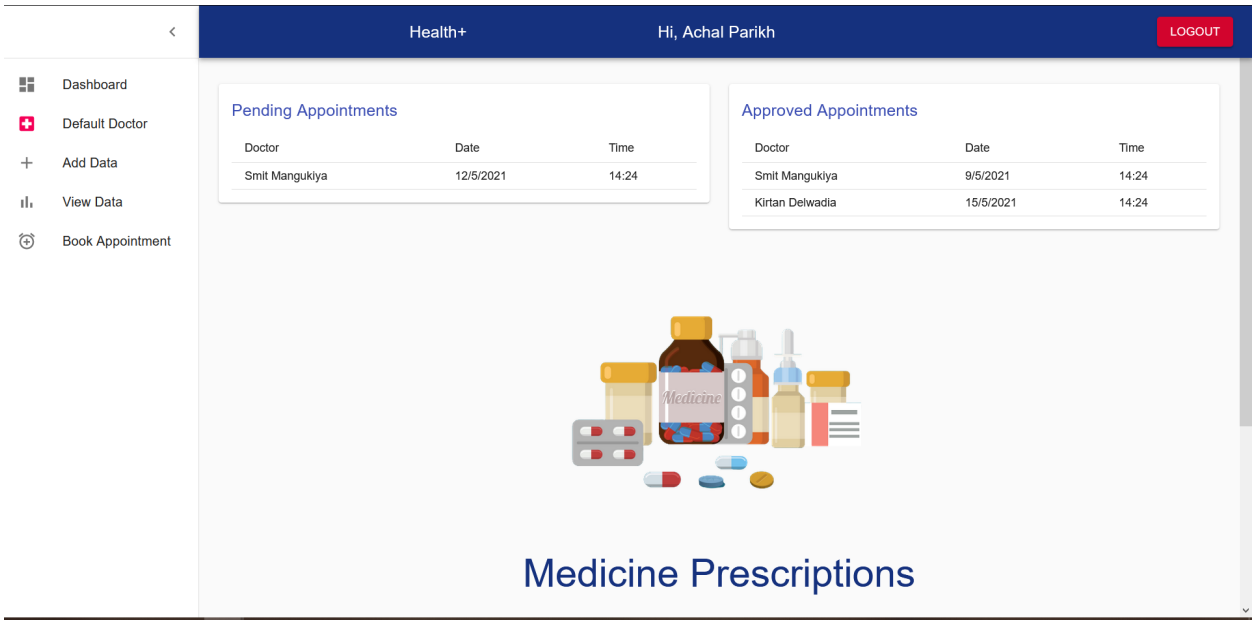






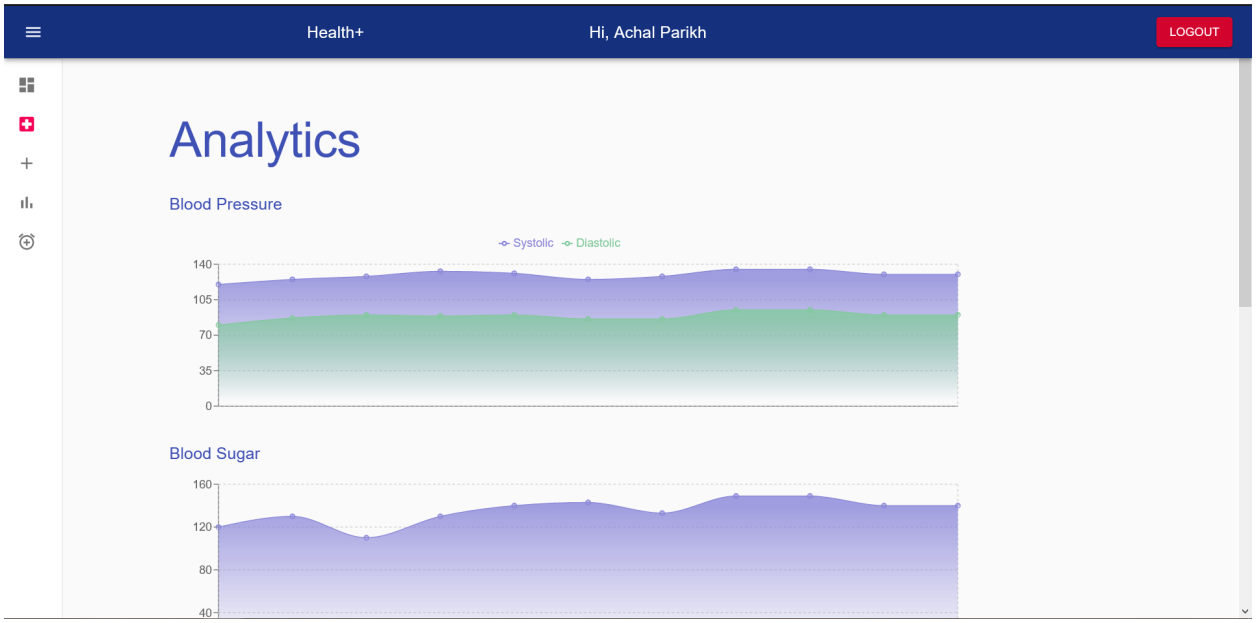


- After Logging, display dashboard



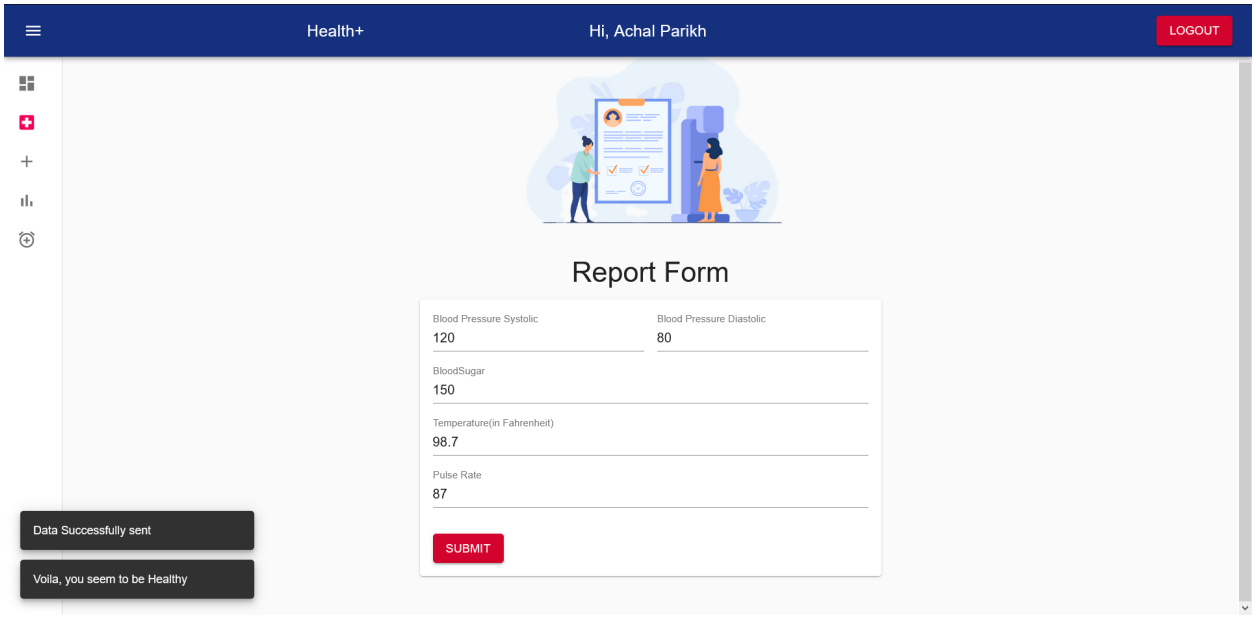
TEST 4:
View data (graphs) :-

- After addition of data, the graph should be generated and along with the time at which it was entered.

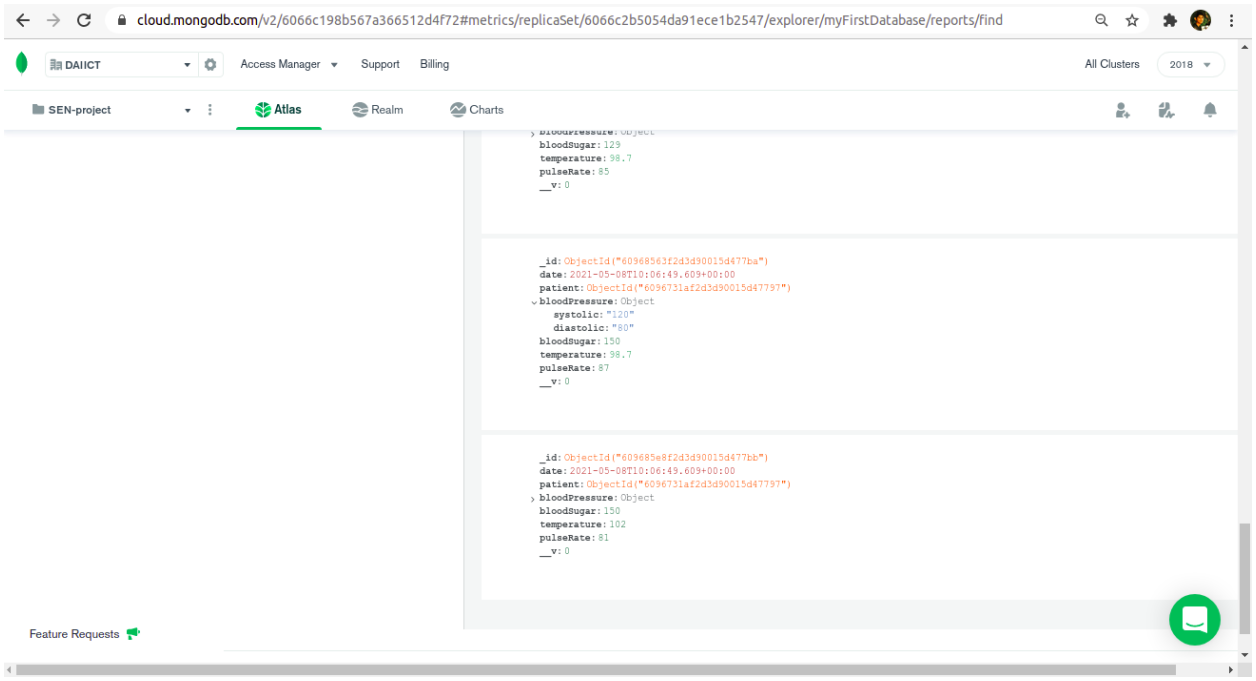


TEST 5:
Add Data:

- If data is within the threshold, then we should get the message that the patient is healthy.



- After addition, data will be stored in database



- Here Valid will mean that the patient is fine and doesn't need medical attention now.
- Invalid means that the person is unhealthy and mail will be sent to the doctor.

Equivalence class :-

1) D1 :- BloodPressure Systolic between 90-140(both inclusive) or empty [valid]
2) D2 :- BloodPressure Diastolic between 60-100(both inclusive) or empty[valid]
3) D3 :- PulseRate between 60-100(both inclusive) or empty [valid]
4) D4 :- Temperature between 95-101(both inclusive) or empty [valid]
5) D5 :- BloodSugar between 70-180(both inclusive) or empty [valid]

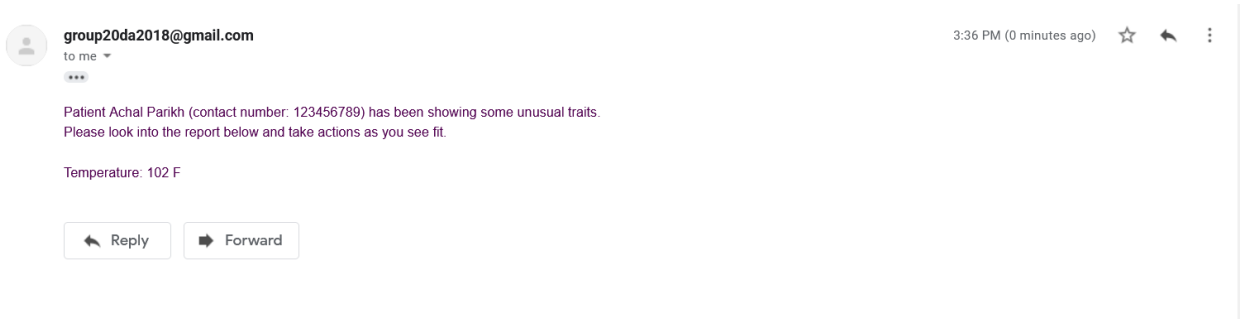
Boundary value :-

Parameter	Invalid	Valid	Valid	Invalid
BloodPressure Systolic	89	90	140	141
BloodPressure Diastolic	59	60	100	101

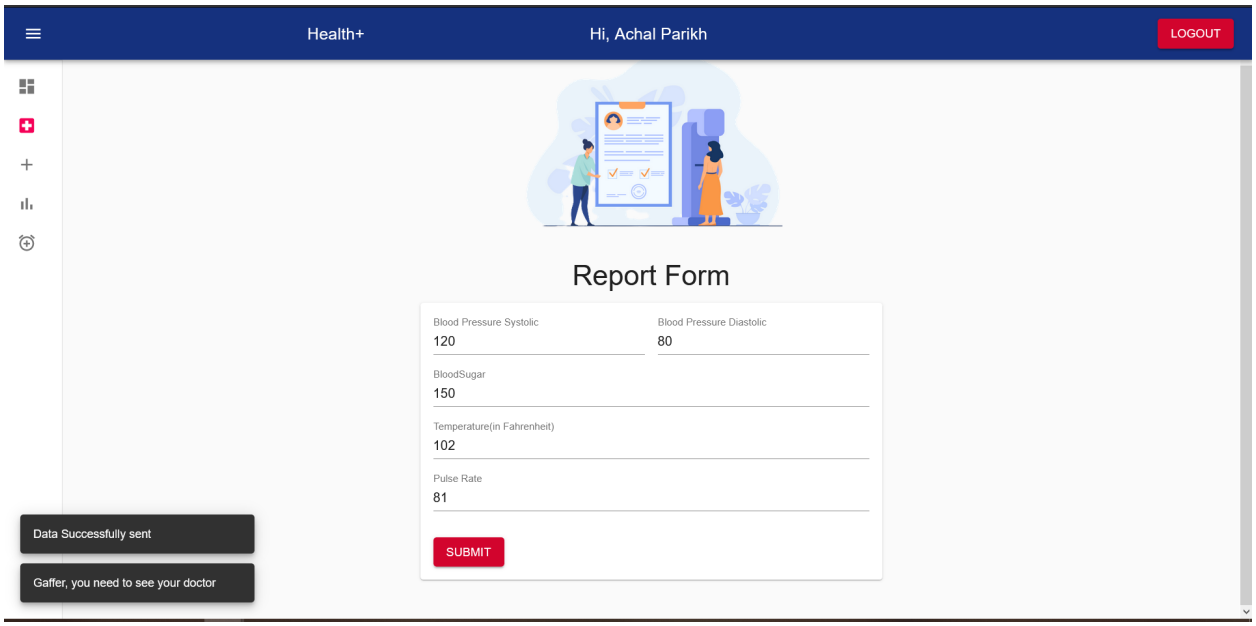
PulseRate	59	60	100	101
Temperature	94	95	101	102
BloodSugar	69	70	180	181

TEST 6:

- If any of the values exceeds the the threshold, then send an email



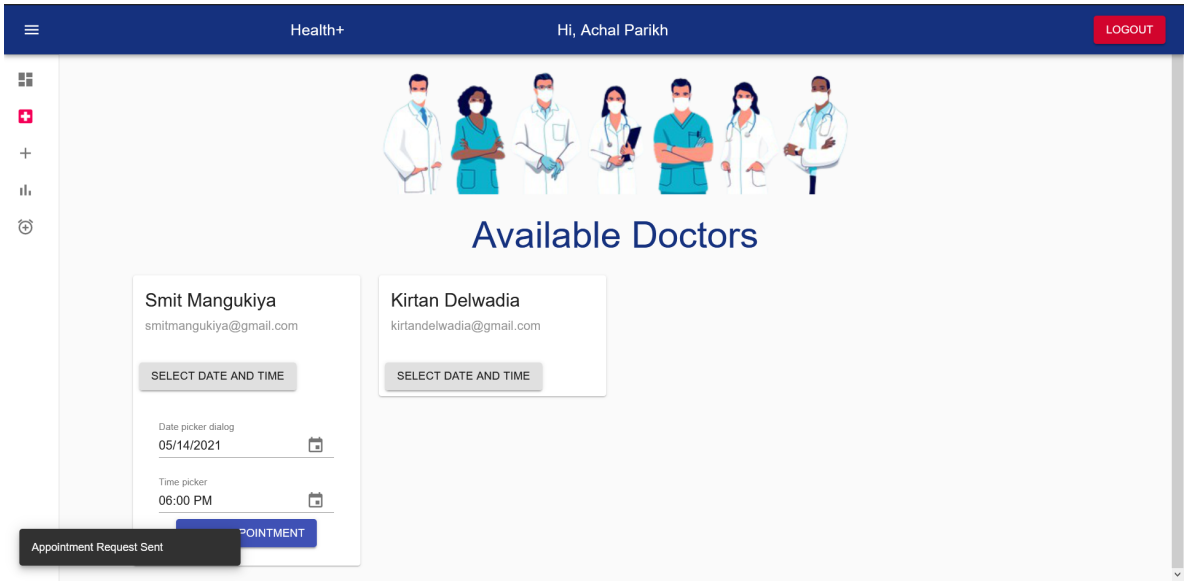
- Display message that the patient needs to visit the doctor



TEST 7 :

Book appointment (patient)

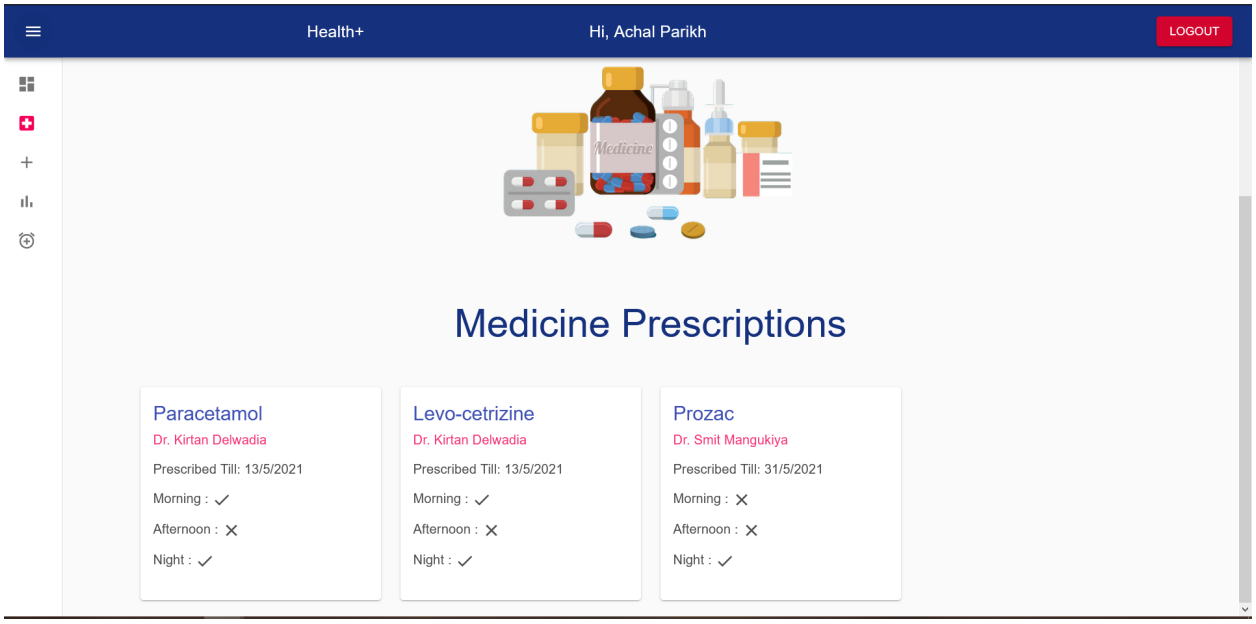
- The patient should be able to select the date and time on which he wants to book an appointment and that request should be sent to the doctor.



TEST 8:

Medical Prescriptions(patient) :

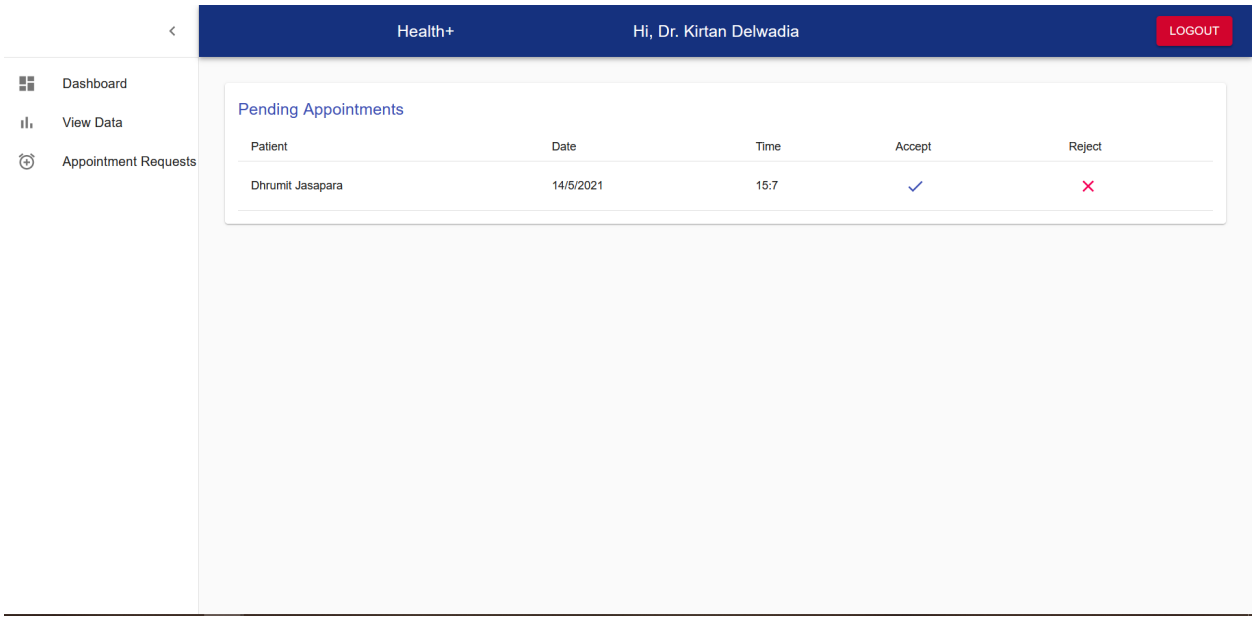
- The patient should be shown the details of the medicine prescribed by the doctor, when he is required to take the medicine and for how long he should take it.



TEST 9:

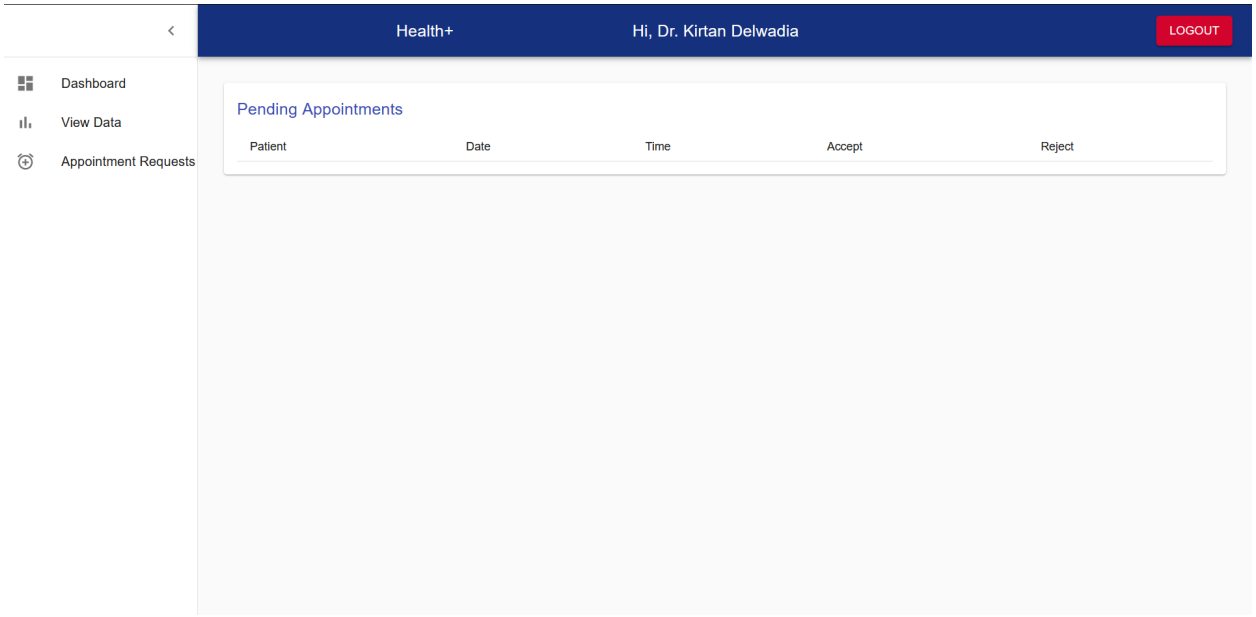
Request of appointment (doctor) :

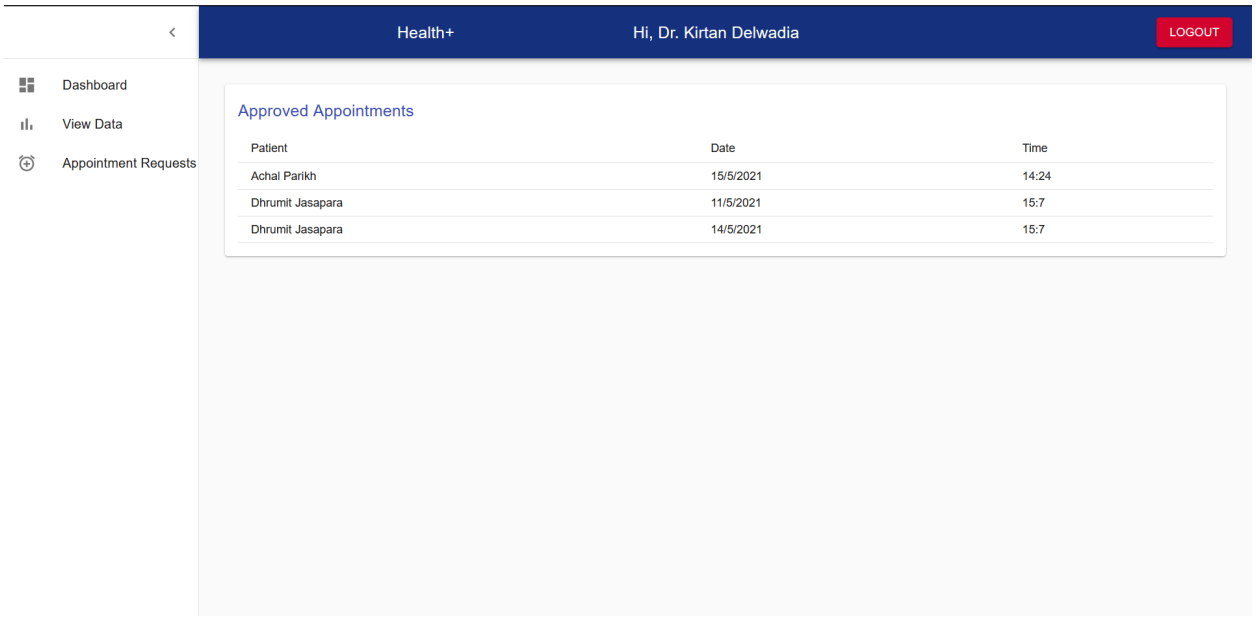
- When the patient request for an appointment, that should be visible to the doctor, and he/she should be given option to accept or reject it.

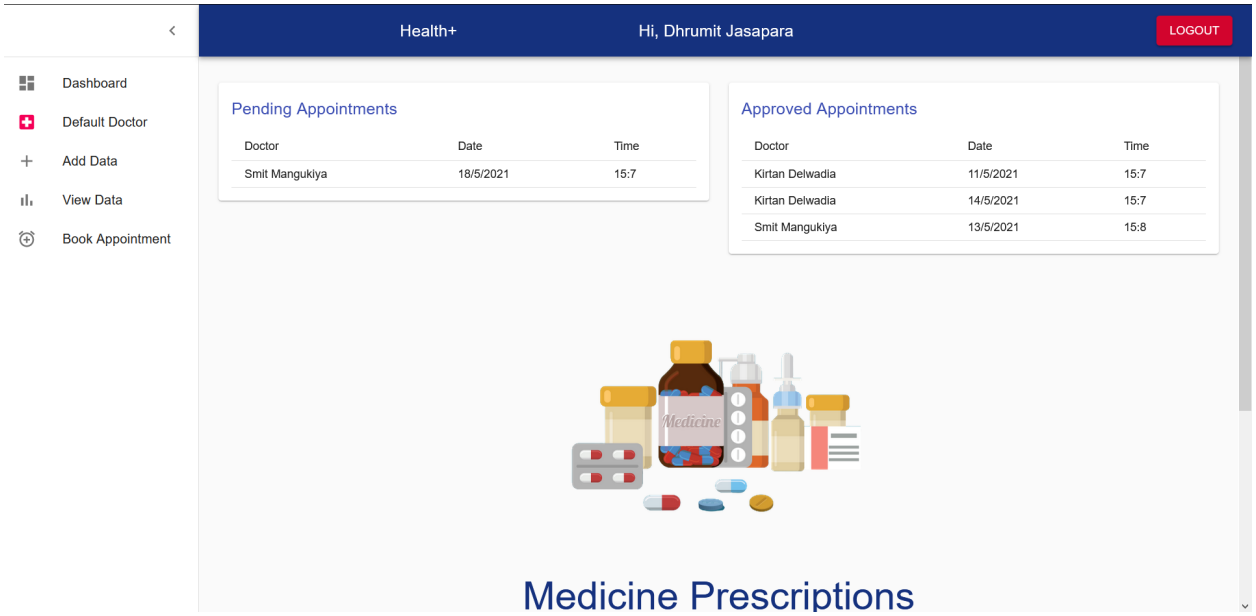


Accept or reject the request,

- If accepted, display the appointment to patient and doctor



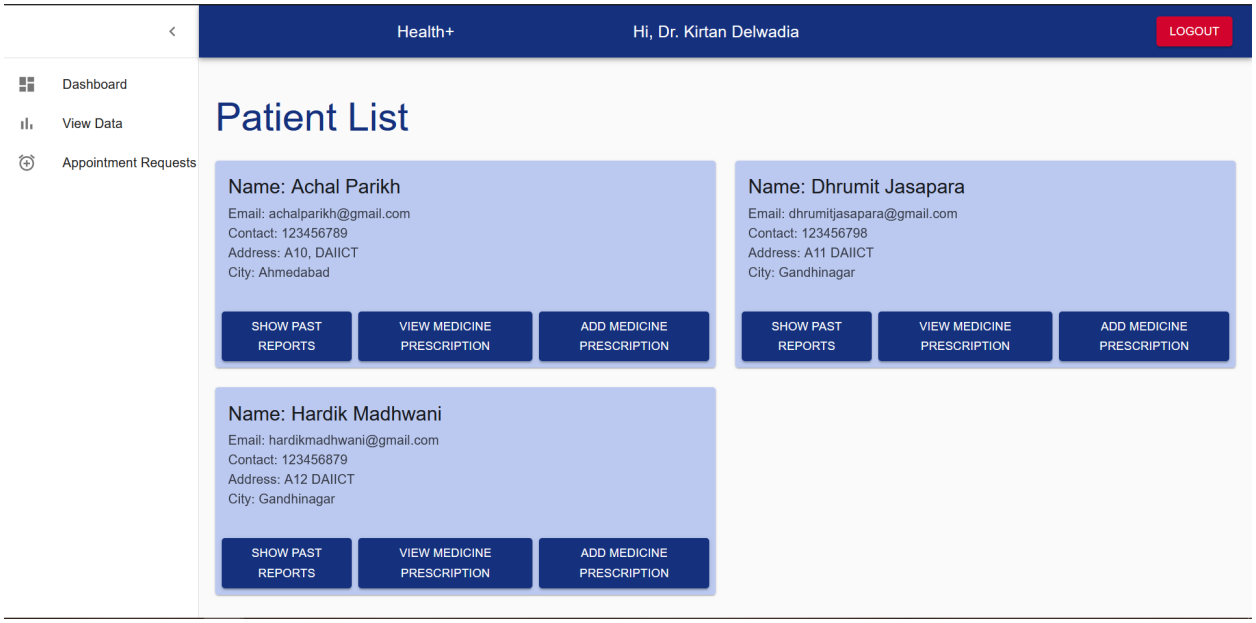




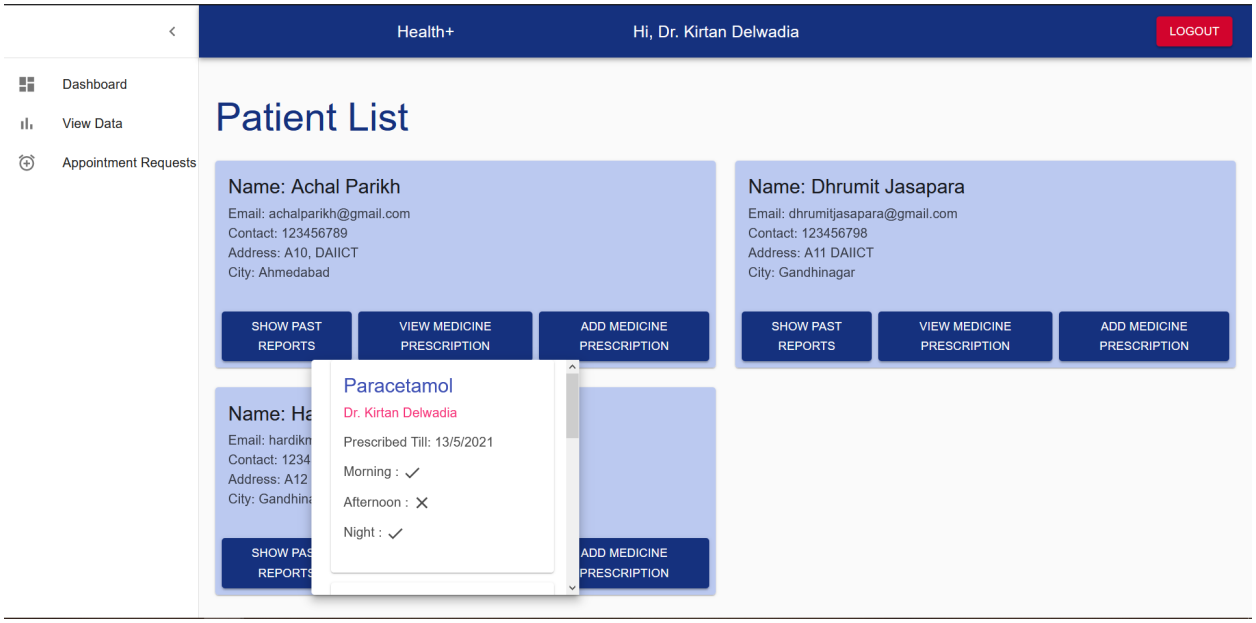
TEST 10:

Show list of patient to doctor :

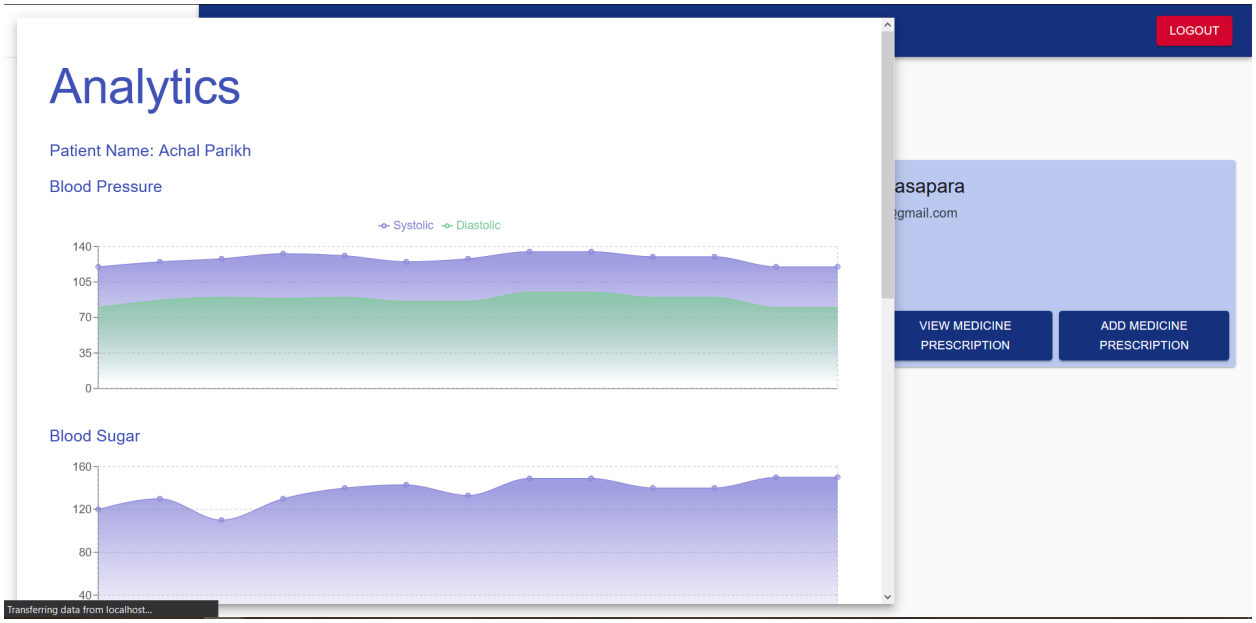
- The list of all patients, along with the graph of parameters, medical prescription should be visible to the doctor so he can analyze the situation of the patient



Show past prescriptions



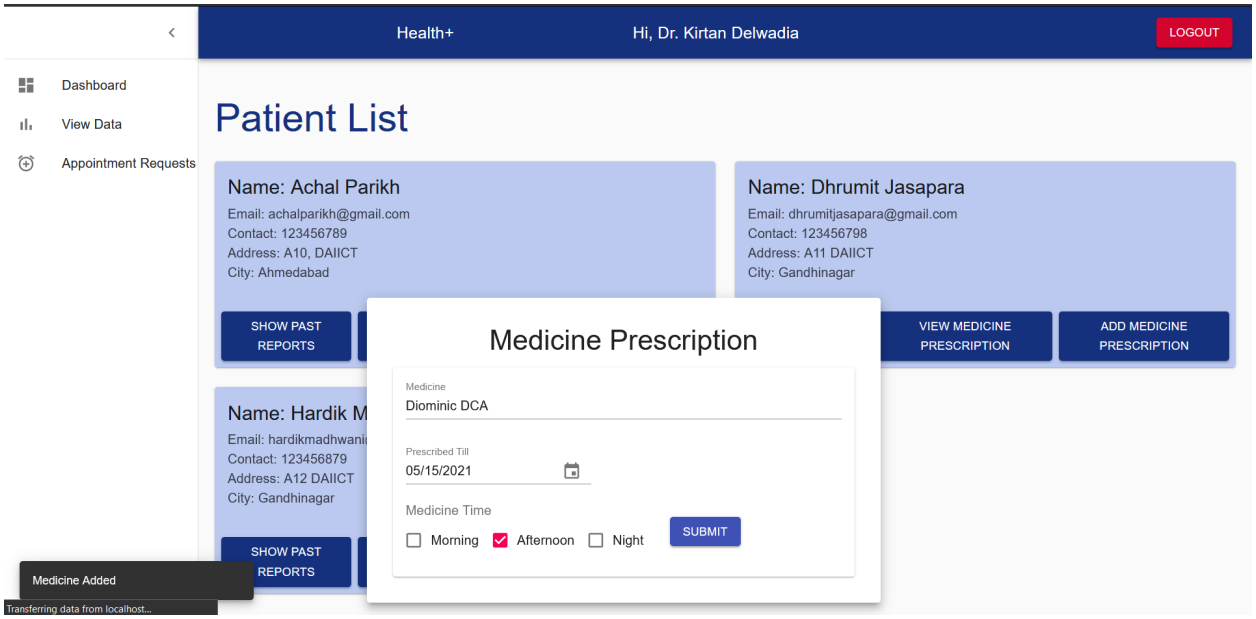
Record of parameters of the patient:

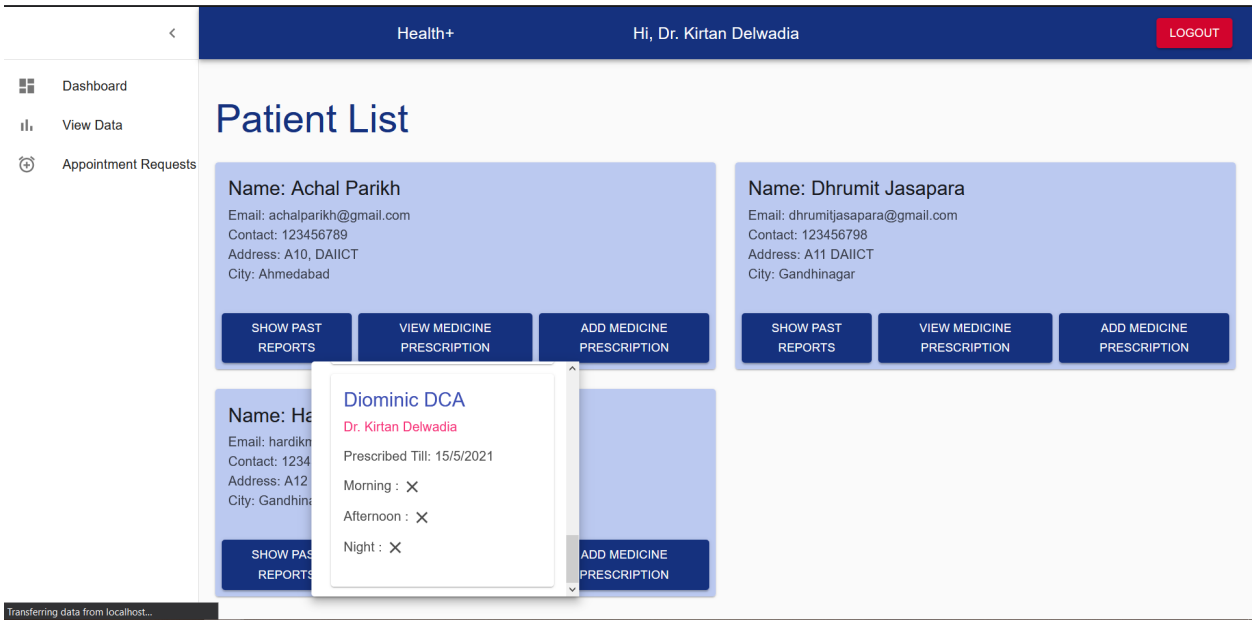


TEST 11:

Addition of medicine to the patient :

- After looking at the parameters of the patient, the doctor should be able to prescribe medicine to the patient and the details of when to take it should be added in the patients side.





TEST 12:

Show list of doctors and update the doctor in the patient:

- A list of doctors working in the hospital should be shown to the patients so they can decide under which doctor they want to take the treatment .