


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

Email Address *
test21@

Password *

Address

City


Contact Number

SIGN UP

Already have an account? [Sign In](#)

Please enter a valid contact_number

OK



Sign up

Name *
test21

Email Address *
test21@

Password *

Address
1234 Street

City
Springfield


Contact Number

SIGN UP

Already have an account? [Sign In](#)

Please enter a valid email

OK



Sign up

Name *

test21

Email Address *

test21@

Password *

Address

1234 Street

City

Springfield

Contact Number


12345

SIGN UP

Already have an account? [Sign In](#)

Please enter a valid password

OK



Sign up

Name *

test10

Email Address *

test10

Password *

••••••

Address

1234 St

City

Surat

Contact Number

12345

SIGN UP

Already have an account? [Sign In](#)

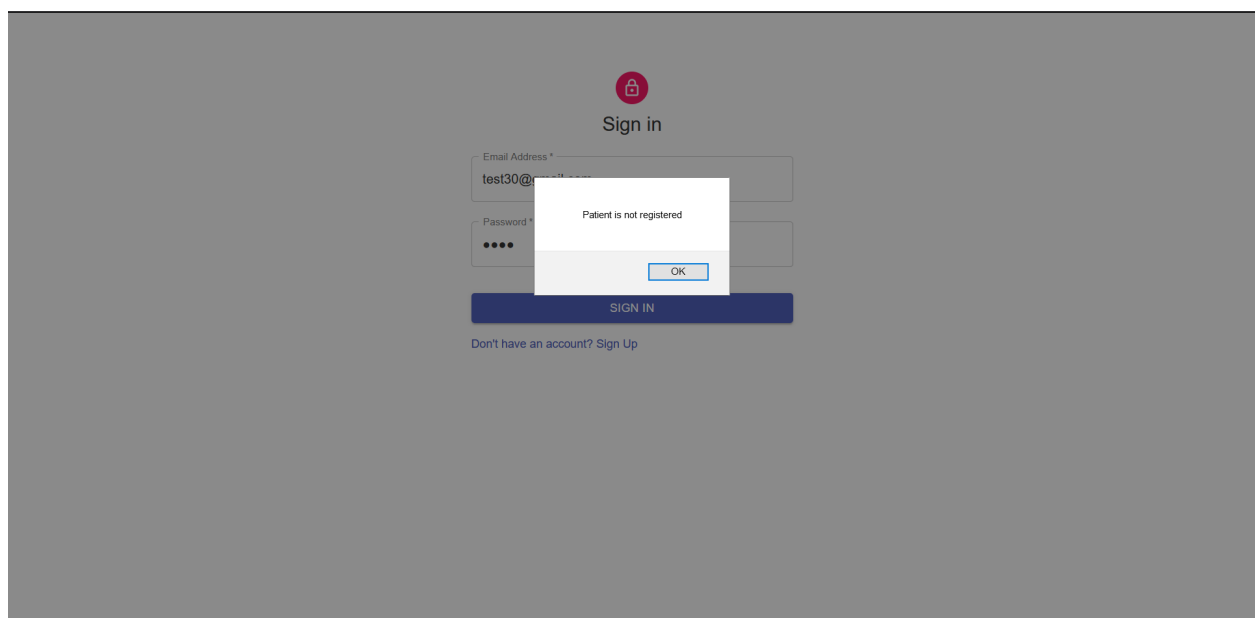
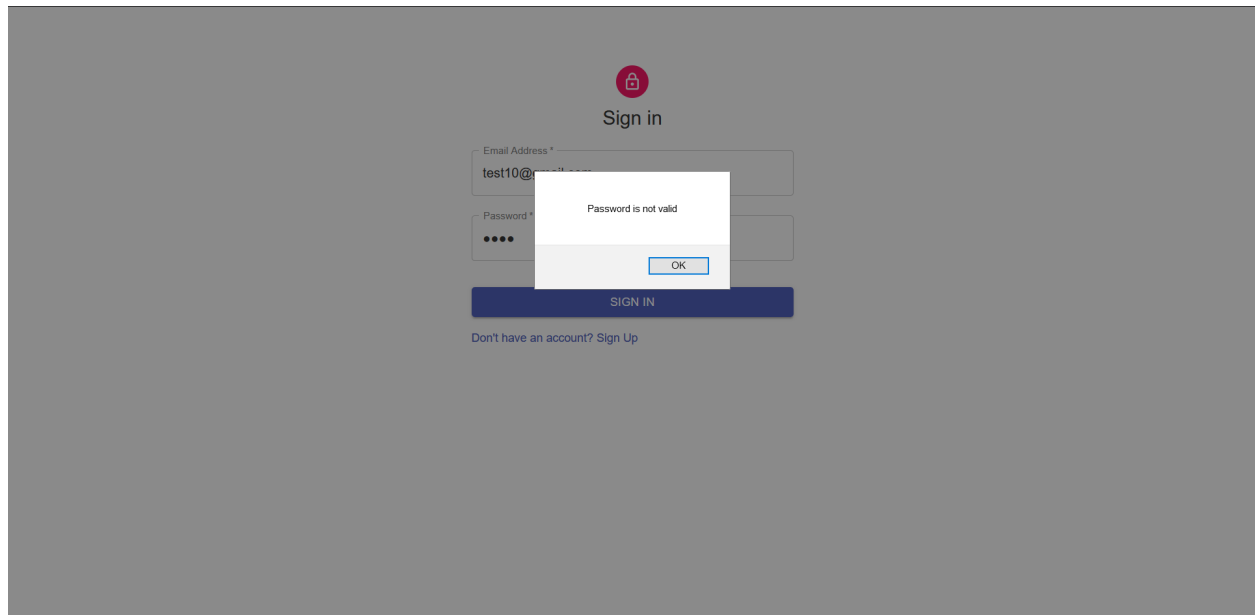
email is already in use please try another email

OK

TEST 2: Login (Patient)

Enter Email and Password:

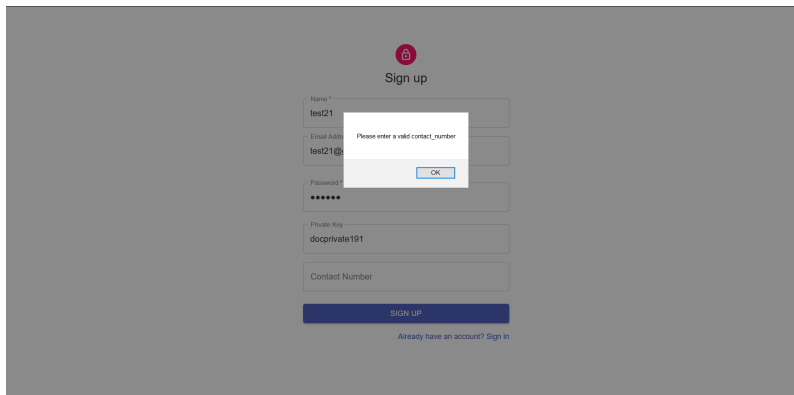
- If they do not match, then user doesn't exists message will be displayed
- If they match, then it will be redirected to the patient page



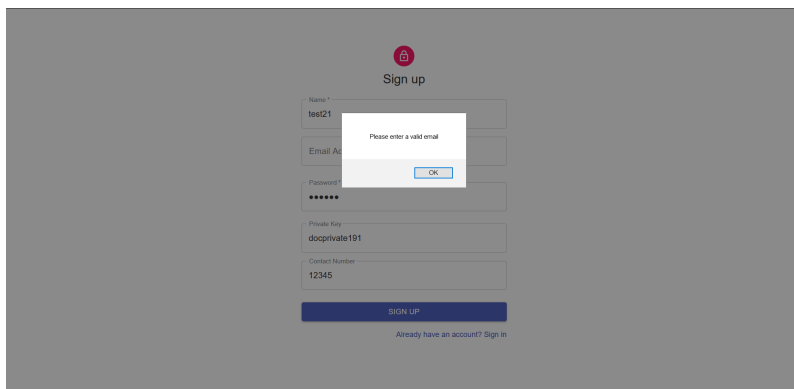
TEST 3:

Create an Account (Doctor) :-

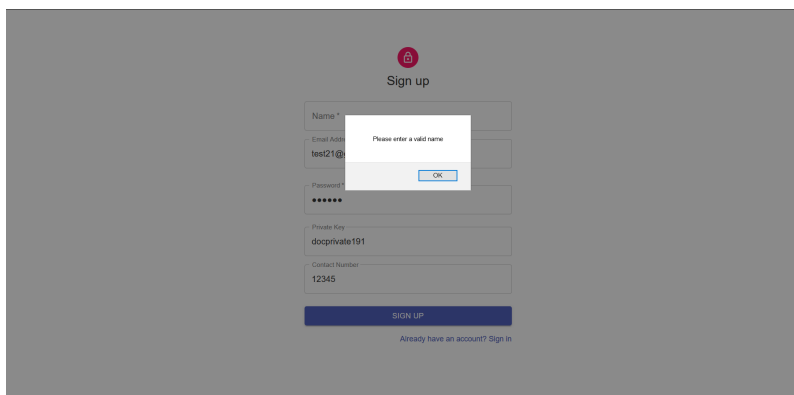
- If the private key is wrong, then the doctor should not be able to log in.
- If any of the fields(email, contact number , password) is missing, or the email is already registered, then the doctor should not be able to log in.



The image shows a 'Sign up' form with a red lock icon at the top. The form fields are: Name (test21), Email Address (test21@gmail.com), Password (masked with dots), Private Key (docprivate191), and Contact Number (empty). A blue 'SIGN UP' button is at the bottom. A modal dialog box is displayed over the form with the message 'Please enter a valid contact_number' and an 'OK' button. Below the button, there is a link: 'Already have an account? Sign in'.



The image shows the same 'Sign up' form, but with the Contact Number field filled with '12345'. A modal dialog box is displayed with the message 'Please enter a valid email' and an 'OK' button. The 'SIGN UP' button and the 'Already have an account? Sign in' link are visible at the bottom.



The image shows the same 'Sign up' form, but with the Name field filled with 'test21' and the Contact Number field filled with '12345'. A modal dialog box is displayed with the message 'Please enter a valid name' and an 'OK' button. The 'SIGN UP' button and the 'Already have an account? Sign in' link are visible at the bottom.

Sign up

Name *

test21

Email Address *

test21@gmail.com

Please enter a valid password

OK

Password *

Private Key

docprivate191

Contact Number

12345

SIGN UP

Already have an account? Sign in

Sign up

Name *

test21

Email Address *

very@gmail.com

email is already in use please try another email

OK

Password *

Private Key

docprivate191

Contact Number

12345

SIGN UP

Already have an account? Sign in

- After Logging, display dashboard

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Health+

Hi, Achal Parikh

LOGOUT

Dashboard

Default Doctor

Add Data

View Data

Book Appointment

Pending Appointments

Doctor	Date	Time
Smit Mangukiya	12/5/2021	14:24

Approved Appointments

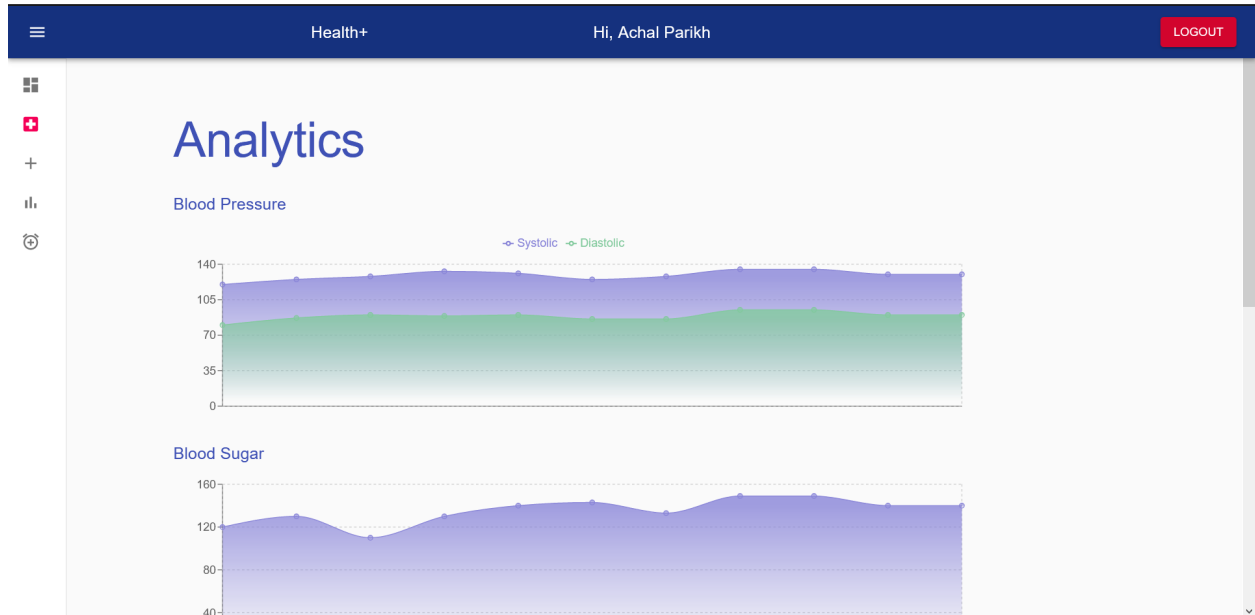
Doctor	Date	Time
Smit Mangukiya	9/5/2021	14:24
Kirtan Delwadia	15/5/2021	14:24

Medicine Prescriptions

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.

The screenshot shows the 'Report Form' in the Health+ application. It features an illustration of a doctor and a patient at the top. Below the illustration is a form with the following fields and values:

Blood Pressure Systolic	Blood Pressure Diastolic
120	80

Blood Sugar
150

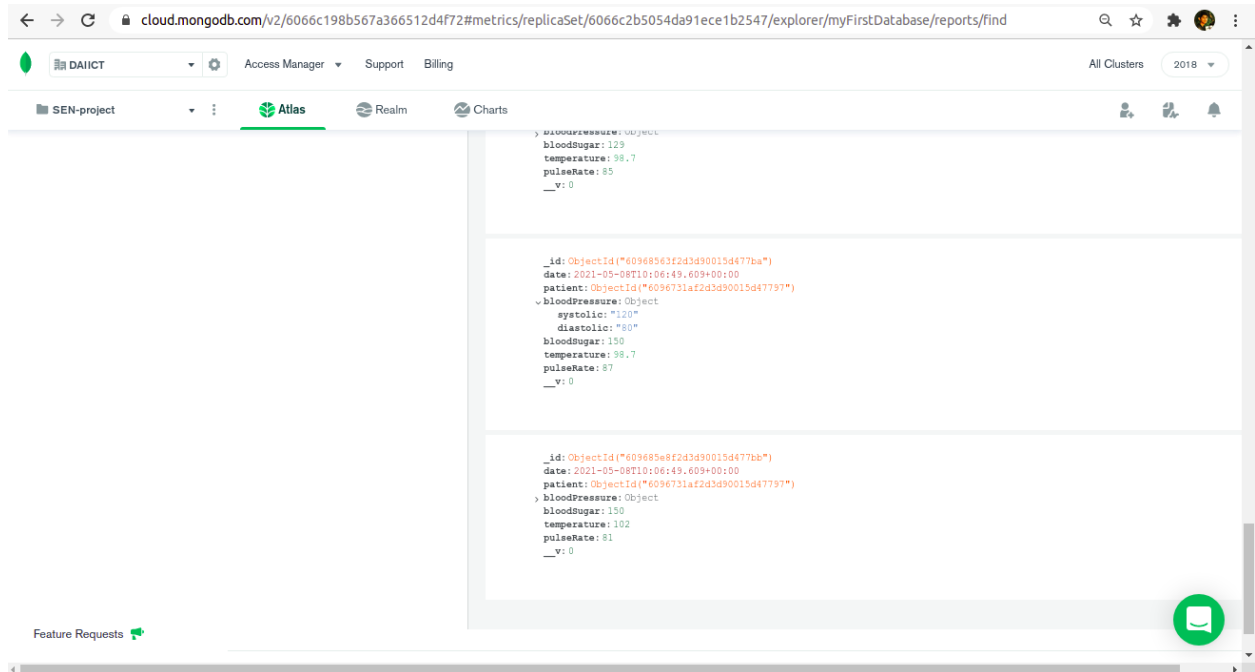
Temperature(in Fahrenheit)
98.7

Pulse Rate
87

A red 'SUBMIT' button is located at the bottom of the form. Two success messages are displayed in the bottom left corner:

- Data Successfully sent
- Voila, you seem to be 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]

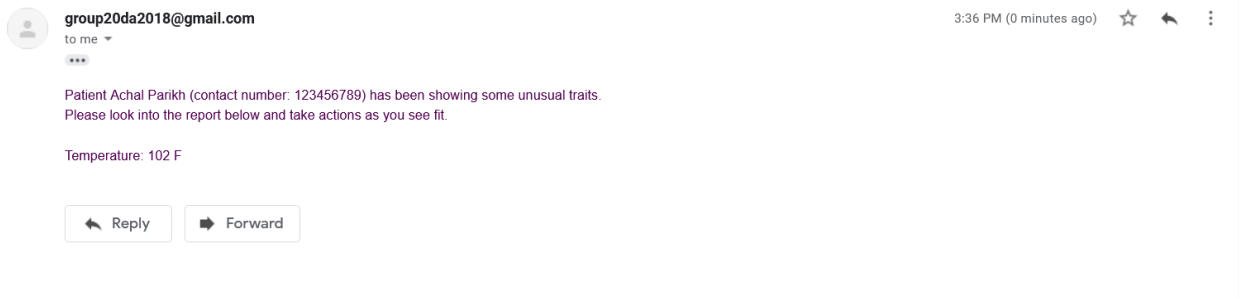
Boundary value :-

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

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Health+

Hi, Achal Parikh

LOGOUT

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Report Form

Blood Pressure Systolic	Blood Pressure Diastolic
120	80
BloodSugar	
150	
Temperature(in Fahrenheit)	
102	
Pulse Rate	
81	

SUBMIT

Data Successfully sent

Gaffer, you need to see your 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.

Health+ Hi, Achal Parikh LOGOUT

Available Doctors

Smit Mangukiya
smitmangukiya@gmail.com

SELECT DATE AND TIME

Date picker dialog
05/14/2021

Time picker
06:00 PM

BOOK APPOINTMENT

Appointment Request Sent

Kirtan Delwadia
kirtandelwadia@gmail.com

SELECT DATE AND TIME

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.

Health+ Hi, Achal Parikh LOGOUT

Medicine Prescriptions

Paracetamol
Dr. Kirtan Delwadia
Prescribed Till: 13/5/2021
Morning : ✓
Afternoon : ✗
Night : ✓

Levo-cetirizine
Dr. Kirtan Delwadia
Prescribed Till: 13/5/2021
Morning : ✓
Afternoon : ✗
Night : ✓

Prozac
Dr. Smit Mangukiya
Prescribed Till: 31/5/2021
Morning : ✗
Afternoon : ✗
Night : ✓

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.

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Health+

Hi, Dr. Kirtan Delwadia

LOGOUT

Dashboard

View Data

Appointment Requests

Pending Appointments

Patient	Date	Time	Accept	Reject
Dhruvit Jasapara	14/5/2021	15:7	✓	✗

Accept or reject the request,

- If accepted, display the appointment to patient and doctor

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Health+

Hi, Dr. Kirtan Delwadia

LOGOUT

Dashboard

View Data

Appointment Requests

Pending Appointments

Patient	Date	Time	Accept	Reject
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Health+

Hi, Dr. Kirtan Delwadia

LOGOUT

Dashboard

View Data

Appointment Requests

Approved Appointments

Patient	Date	Time
Achal Parikh	15/5/2021	14:24
Dhruvit Jasapara	11/5/2021	15:7
Dhruvit Jasapara	14/5/2021	15:7

Show past prescriptions

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Health+

Hi, Dr. Kirtan Delwadia

LOGOUT

Dashboard

View Data

Appointment Requests

Patient List

Name: Achal Parikh
Email: achalparikh@gmail.com
Contact: 123456789
Address: A10, DAIICT
City: Ahmedabad

SHOW PAST REPORTS

VIEW MEDICINE PRESCRIPTION

ADD MEDICINE PRESCRIPTION

Name: Dhrumit Jasapara
Email: dhrumitjasapara@gmail.com
Contact: 123456798
Address: A11 DAIICT
City: Gandhinagar

SHOW PAST REPORTS

VIEW MEDICINE PRESCRIPTION

ADD MEDICINE PRESCRIPTION

Name: Hardik
Email: hardik@gmail.com
Contact: 123456789
Address: A12 DAIICT
City: Gandhinagar

SHOW PAST REPORTS

VIEW MEDICINE PRESCRIPTION

ADD MEDICINE PRESCRIPTION

Paracetamol
Dr. Kirtan Delwadia
Prescribed Till: 13/5/2021
Morning : ✓
Afternoon : ✕
Night : ✓

Record of parameters of the patient:

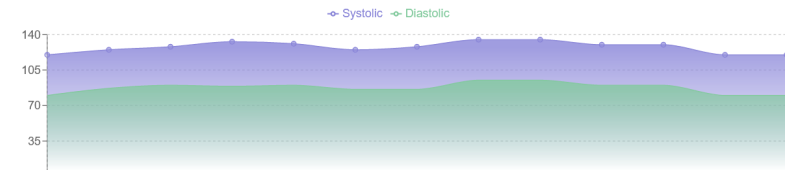
Analytics

Patient Name: Achal Parikh

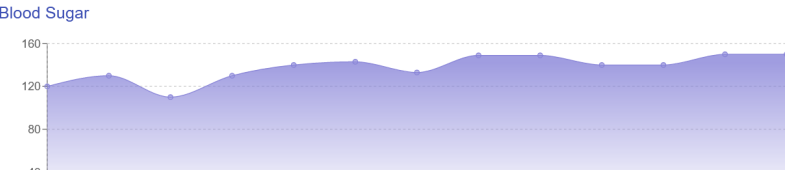
Blood Pressure

Systolic

Diastolic



Blood Sugar



asapara

gmail.com

VIEW MEDICINE PRESCRIPTION

ADD MEDICINE PRESCRIPTION

Transferring data from localhost...

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.

The screenshot shows a web application interface for a doctor's office. The top navigation bar includes a 'Health+' logo, the doctor's name 'Hi, Dr. Kirtan Delwadia', and a 'LOGOUT' button. The left sidebar contains navigation links: 'Dashboard', 'View Data', and 'Appointment Requests'. The main content area is titled 'Patient List' and displays three patient cards. Each card shows the patient's name, email, contact number, address, and city. Below each card are three buttons: 'SHOW PAST REPORTS', 'VIEW MEDICINE PRESCRIPTION', and 'ADD MEDICINE PRESCRIPTION'. A modal window titled 'Medicine Prescription' is open, showing the details of a prescription for 'Diominic DCA' prescribed till '05/15/2021'. The 'Medicine Time' section has three options: 'Morning', 'Afternoon' (selected), and 'Night'. A 'SUBMIT' button is at the bottom right of the modal. A 'Medicine Added' notification is visible at the bottom left of the page.

Health+ Hi, Dr. Kirtan Delwadia LOGOUT

Dashboard View Data Appointment Requests

Patient List

Name: Achal Parikh
Email: achalparikh@gmail.com
Contact: 123456789
Address: A10, DAIICT
City: Ahmedabad

Name: Dhruvit Jasapara
Email: dhruvitjasapara@gmail.com
Contact: 123456798
Address: A11 DAIICT
City: Gandhinagar

Name: Hardik M
Email: hardikmadhwani@gmail.com
Contact: 123456879
Address: A12 DAIICT
City: Gandhinagar

SHOW PAST REPORTS VIEW MEDICINE PRESCRIPTION ADD MEDICINE PRESCRIPTION

Medicine Prescription

Medicine
Diominic DCA

Prescribed Till
05/15/2021

Medicine Time
☐ Morning ☒ Afternoon ☐ Night SUBMIT

Medicine Added

Transferring data from localhost...

Health+ Hi, Dr. Kirtan Delwadia LOGOUT

Dashboard View Data Appointment Requests

Patient List

Name: Achal Parikh
Email: achalparikh@gmail.com
Contact: 123456789
Address: A10, DAIICT
City: Ahmedabad

Name: Dhruvit Jasapara
Email: dhruvitjasapara@gmail.com
Contact: 123456798
Address: A11 DAIICT
City: Gandhinagar

Name: Hardik M
Email: hardikmadhwani@gmail.com
Contact: 123456879
Address: A12 DAIICT
City: Gandhinagar

SHOW PAST REPORTS VIEW MEDICINE PRESCRIPTION ADD MEDICINE PRESCRIPTION

Diominic DCA
Dr. Kirtan Delwadia
Prescribed Till: 15/5/2021
Morning : X
Afternoon : X
Night : X

SHOW PAST REPORTS VIEW MEDICINE PRESCRIPTION ADD MEDICINE PRESCRIPTION

Transferring data from localhost...

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 .

Health+ Hi, Hardik Madhwani LOGOUT

Dashboard
Default Doctor
Add Data
View Data
Book Appointment

No default doctor set yet.
We would suggest you to select a default doctor, so that a doctor can be notified if there is some problems with your health conditions.

List of Doctors

Smit Mangukiya
smitmangukiya@gmail.com
SELECT AS DEFAULT

Kirtan Delwadia
kirtandelwadia@gmail.com
SELECT AS DEFAULT

Health+ Hi, Hardik Madhwani LOGOUT

Dashboard
Default Doctor
Add Data
View Data
Book Appointment

Your default doctor's email id is smitmangukiya@gmail.com

List of Doctors

Smit Mangukiya
smitmangukiya@gmail.com
SELECT AS DEFAULT

Kirtan Delwadia
kirtandelwadia@gmail.com
SELECT AS DEFAULT

Default Doctor Changed