

## A doctor in a white coat is shown from the chest down, holding a stethoscope. The background is a blurred clinical setting. Overlaid on the left side is a digital graphic consisting of a network of interconnected hexagons. Some hexagons are highlighted in blue and contain white icons representing various medical concepts: a group of people, a person with a heart, a brain, a DNA helix, a hand holding a heart, a hand holding a pulse line, a person's head, a hand holding a heart, a hand holding a pulse line, a person's head, a hand holding a heart, and a hand holding a pulse line.

Prof: Henry Wong

A hand is shown interacting with a glowing digital interface, symbolizing technology and innovation. The background is a dark blue gradient with intricate, glowing circuit patterns and a central glowing square element. The hand is positioned on the right side, with the index finger pointing towards the center of the glowing square. The overall aesthetic is futuristic and high-tech.

# AGENDA



# AGENDA

- Improvements from Professor Feedback
- Team Member Roles and Responsibilities
- Problem Statement
- Project description
- Personas
- MVP
- Technologies
- Architecture Diagram
- Sprint 2 Recap
- Product Backlog
- Sprint Backlog
- Metrics
- Retrospective
- Sprint 4

# IMPROVEMENTS FROM PROFESSOR FEEDBACK

- MVP is enhanced.
- Personas were stated with more content.
- Architectural diagram is implemented.
- Worked on sprint and product backlog along with acceptance criteria and user stories.
- Added more test cases and made them precise.
- Metrics were calculated as per the completed acceptance criteria and user stories.



# MEET OUR TEAM



SAI TEJA KORIBILLI

SCRUM MASTER  
DATA BASE ADMINISTRATOR



BINDU VALISETTY

UI/UX DEVELOPER



KULDEEP KALUVALA

DEVELOPER



MOUNIKA THALLA

PROJECT MANAGER

# MEET OUR TEAM



SHIVANSH TOMAR

DEVELOPER



NIKHIL

QUALITY  
ANALYST ENGINEER



JIGAR SHAH

DEVELOPER

# PROBLEM STATEMENT

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Most hospitals are still facing several challenges with Hospital Management System because some of them are still using manual processes, while those who are using computerized method are also facing the challenge of adjusting to it. Like:

- The high cost of software development and deployment.
- Complex design in terms of User Interface and User Experience (UI/UX Design)
- Fear of data security breach.
- Difficulty in migrating from manual processes, because both staff and patients are used to the manual processes and so are unable to speedily cope with the new system.
- Lack of IT-friendly medical personnel is also presenting several challenges.
- A Huge influx of patients visiting government hospitals makes the process of migrating to automated processes highly difficult. They do not have the patience to wait for registration and data entry and often fail to understand the functioning of automated processes.



# PROJECT DESCRIPTION

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HMS helps to automate routine tasks, optimize staff coordination, improve communication, distribute the workload, store different types of information, and provide financial and HR management.

A hospital management system (HMS) is a tool that collects data about patients, doctors, staff, hospital administrative details in one software. One of the biggest advantages of developing a hospital management system is that it makes the whole process paperless.

Finances are another essential side of the hospitals. Apart from administrative, operational, and medical services, healthcare units must cope with billing and insurance operations. Integrating a financial system into a medical organization is vital for its sustainable financial performance.



The image is a composite. On the left, three business professionals (two women and one man) are shown from the waist up, holding large puzzle pieces. The woman on the far left has curly hair and is wearing a light-colored blazer. The man in the middle has short blonde hair and is wearing a dark suit. The woman on the right has blonde hair and is wearing a light-colored blazer. They are all smiling. The puzzle pieces they are holding are blue, green, and yellow. The word 'PERSONAS' is written in white capital letters across the middle of the image, partially overlapping the puzzle pieces. On the right side of the image, there is a close-up of a woman with long brown hair wearing white earmuffs and blowing snow from her hands. She is wearing a dark jacket and a scarf. The background of the right side is a snowy, out-of-focus scene.

PERSONAS

# PERSONAS 1



## Demographics

*Name* : Disha Shah

*Location* : New York

*Age* : 28

*Occupation* : Doctor

## Bio

Disha is a young doctor working at Newyork health center. On daily basis she booked for 30-40 appointments and also attends the emergency patients. She ensures every patient of her treated with correct medication and attention.

## Interests

- She loves to stay updated about new medicines and procedures in the medical field.
- She loves to attend music concerts.

## Frustrations

- She attends approximately 40 patients in a day, so it is hectic to keep up with the provided schedule.
- Mixing of patient's information may happen resulting in wrong medication.

## Goals

- Needs correct information of the patients receives appropriate medication and treatment.
- By using the CURA Hospital Management System, Disha is aided with correct records of the patient.
- Need to have proper inventory information, by using CURA Hospital Management System, Disha has records of the inventory.



# PERSONAS 2



## Demographics

*Name* : Mary

*Location* : New York

*Age* : 81

## Bio

Mary lives in New York suffering from Asthma, Lyme diseases and she has to undergo monthly check-ups with the Doctor.

## Interests

- She loves Jazz Music
- She is Die-hard of New York Knicks & frequently goes to matches to cheer them.

## Frustrations

- Every time Mary visits the hospital an appointment forms has to be filled and she is allotted a different doctor.
- She has to wait for long hours to visit the doctor.
- Every week her records get updated which becomes troublesome for her to manage.

## Goals

- Needs to fill up the form only once during registration on CURA which saves her time and effort from filling the form every time.
- Through CURA she can book appointment with the preferred doctor.
- CURA provide proper slots to Mary, so she does not have to wait in queues & can also choose online consultation.

# PERSONAS 3



## Demographics

*Name* : Tyler

*Location* : New York

*Age* : 38

*Occupation* : Admin

## Bio

Tyler is 38 years old residence of New York working as an Admin who manages the New York Health Center in various ways. He ensures proper stock of medicines and equipment needed in the hospital.

## Interests

- He loves pets and frequently visits shelter care on holidays.
- He is shutterbug and loves travelling.

## Frustrations

- He manages appointments, inventory and other records on different platforms making it disordered for him.
- He has to be in the hospital to ensure the proper management of the hospital.

## Goals

- Needs a single platform where he can manage appointments, Doctor's profile and inventory.
- This problem is solved by CURA Hospital Management System so he can have records of patients, update doctor's profile and also, he allows to simplify all these tasks and remotely as well.

# MINIMUM VIABLE PRODUCT



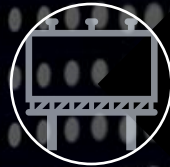
## REGISTRATION

- User can register into CURA through this



## LOGIN PAGE

- User can log into CURA through this



## HOME

- User can surf through CURA features through this



## SCHEDULING

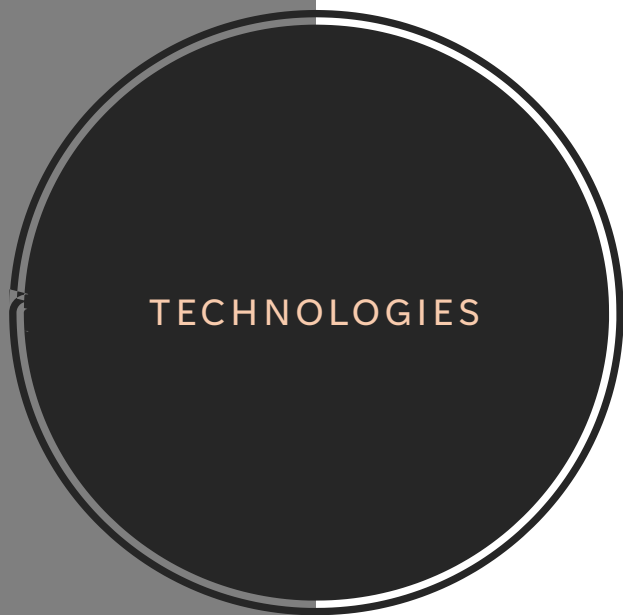
- User can plan his schedule using this and work accordingly



## APPOINTMENTS

- User can schedule his appointment with doctor through this

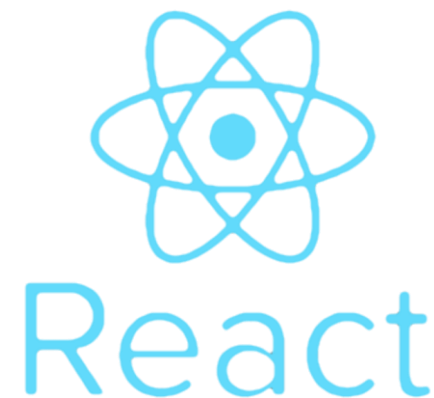




JAVA SCRIPT



CUCUMBER



GIT HUB



Jira

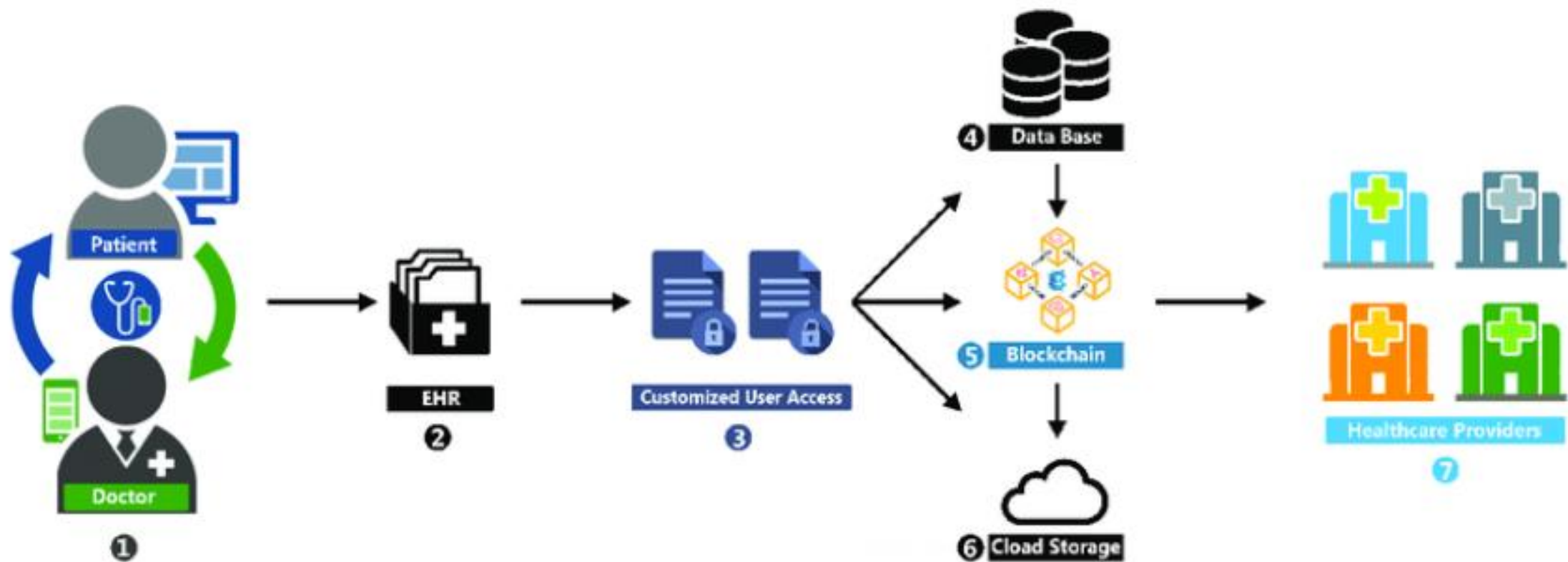


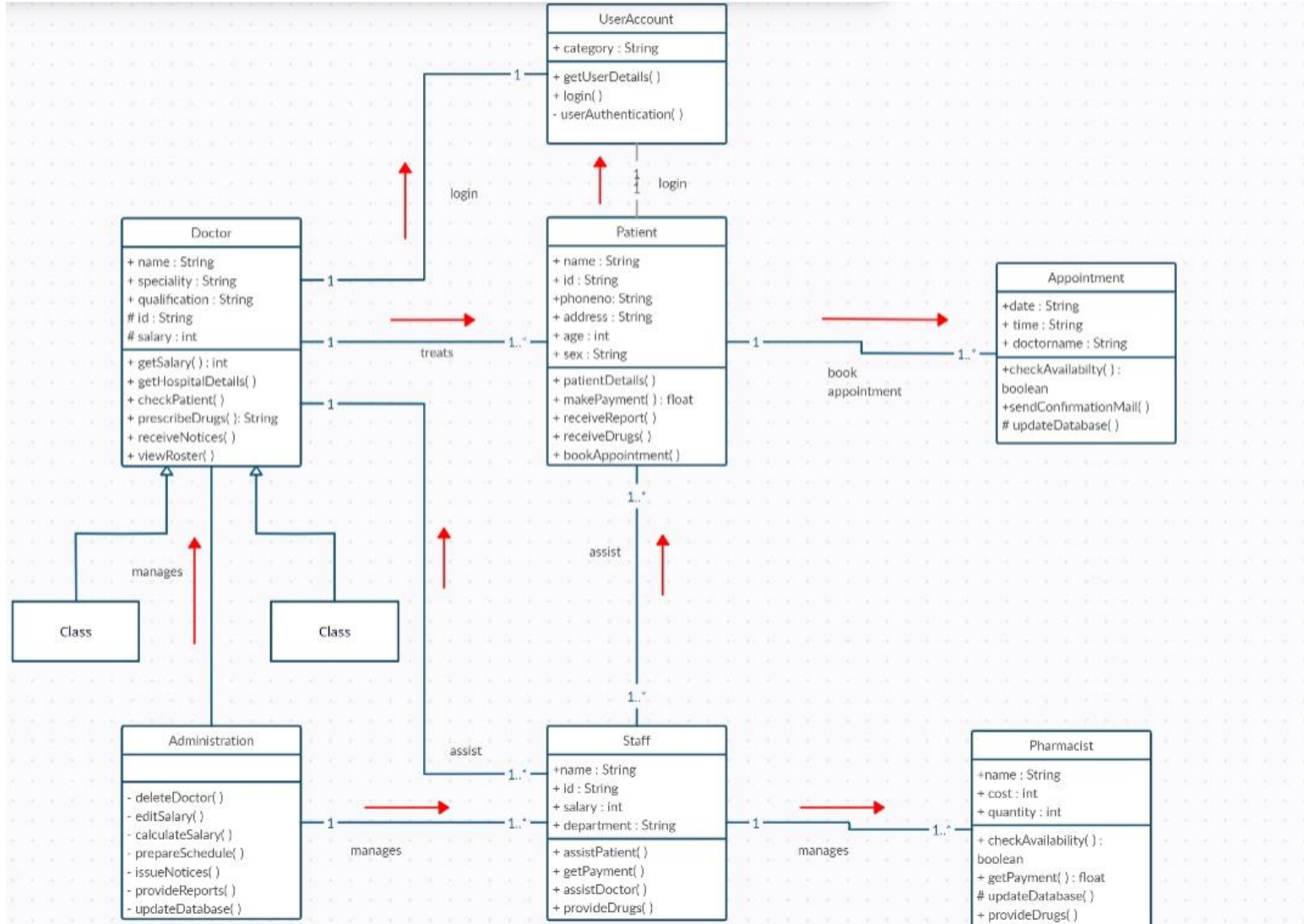
mongoDB

A 3D architectural diagram featuring a grid of dark gray rectangular blocks arranged in a stepped, isometric pattern. Red lines are drawn across the top surfaces of the blocks, forming a network of paths. The background is a dark gray circle on a lighter gray field, with orange vertical bars on the left and right edges.

# ARCHITECTURE DIAGRAM







# CLASS DIAGRAM of CURA



## SPRINT 2 VS SPRINT 3

### SPRINT 2

- REGISTRATION
- LOGIN
- BASIC UI

### SPRINT 3

- SCHEDULE
- APPOINTMENTS
- PROFILE UPDATION



# PRODUCT BACKLOG



▼ Backlog (16 issues)

0 0 0 Create sprint

Quickstart

CURA-10 As an admin, I want to navigate to doctor/staff/nurse section to check the log-in time whether every doctor/nurse/staff is attending the hospital on ti...

TO DO



CURA-11 As an admin/patient/doctor, I want to return to the homepage so that I can re-read the application mission statement, disclaimer, etc..

TO DO



CURA-12 As an admin, I want to navigate to the patient/doctor/staff section and see all the particulars of that person are shown on the application without any...

TO DO



CURA-13 As a doctor, I want to see my particulars/schedule/profile on the application without any errors.

TO DO



CURA-14 As a Patient, I want to confirm whether my appointment with the doctor is set up or no so that I can have an idea about the appointment with the d...

TO DO



CURA-15 As a Patient, I want to submit my symptoms/previous history documents in the portal for assessment so that I may receive a accurate determination.

TO DO



CURA-16 As an Inventor, I want to know whether the supplies are as per the requirement or no, so that I can re-stock them.

TO DO



CURA-17 As a Pathologist, I want to know whether samples of the patient are correctly entered or no, so that there is no confusion with patient's details with ...

TO DO



CURA-18 As an Admin, I want to navigate to billing section to check whether the bills produced are accurate or not.

TO DO



CURA-19 As a User, I want to know that I have reached the correct page to use CURA application so that I can be sure I am uploading my details to the correc...

TO DO



CURA-20 As a Staff, I want to check room availability and manage rooms according to requirement.

TO DO



CURA-21 As a Staff, I want to know the operation rooms availability and assign to the specific doctor.

TO DO



CURA-22 As a Staff, I want to know the ward management which helps caregivers plan, track, and manage the various departments in the hospital.

TO DO



CURA-23 As a User, I want to registers patient's for admittance to the hospital.

TO DO



CURA-24 As a Patient, I want to manages patient financial operations, including billing and insurance.

TO DO



CURA-25 As a Patient, I want a module which helps with the fast registration of patients admitted to the ER.



# SPRINT BACKLOG

Issue Type	Id	Name
Story	CURA-16	As an Inventor, I want to know whether the supplies are as per the requirement or no, so that I can re-stock them.
Story	CURA-18	As an Admin, I want to navigate to the billing section to check whether the bills produced are accurate or not.
Story	CURA-20	As a Staff, I want to check room availability and manage rooms according to requirements.

# USER STORIES & ACCEPTANCE CRITERIA

ID	Summary	Acceptance Criteria	Place
CURA-10	As an Admin, I want to navigate to doctor/staff/nurse section to check the log-in time so that I can verify whether every doctor/nurse/staff is attending the hospital on time.	When I open the portal then in the system I can check total hour a doctor/staff/nurse spends on seeing patients and also verify doctor/staff/nurse time.	Admin
CURA-11	As an Admin/patient/doctor, I want to return to the homepage so that I can re-read the application mission statement ,disclaimer etc.	When I login into application then in the system I should be easy to return homepage so it will be easy for access the application.	Admin
CURA-12	As an Admin, I want to navigate to the patient/doctor/staff section and see all the particulars of that person are shown on the application without any glitch.	When I open the page then it should display the details of patient/doctors/staff section and confirm the page is loaded with the details	Admin
CURA-13	As a Doctor, I want to see my particulars/schedule/profile on the application without any errors.	When I open the application then as a doctor see the appointment details per day/week/month and also see the details of the patients.	Appointments
CURA-14	As a Patient, I want to confirm whether my appointment with the doctor is set up or no so that I can have an idea about the appointment with the doctor.	When I login as Patient and go to this page then see my appointment details with the doctor	Appointments
CURA-15	As a Patient, I want to submit my symptoms/previous history documents in the portal for assessment so that I may receive a accurate determination.	When I login as Patient and go to this page then see the browse option for uploading the documents and also see the page to enter the details of my previous history and symptoms.	Medical Records



# USER STORIES & ACCEPTANCE CRITERIA

ID	Summary	Acceptance Criteria	Place
CURA-17	As a Pathologist, I want to know whether samples of the patient are correctly entered or no, so that there is no confusion with patient's details with others.	When I login as Pathologist and goto this page then verify the patient's samples entered coreectly or not.	Medical Records
CURA-19	As a Patient, I want to know that I have reached the correct page to use CURA application so that I can be sure I am uploading my details to the correct portal.	When I login as Patient then open this page then I should able to enter all details and my profile should be saved for future purpose.	Profile
CURA-21	As a Staff, I want to know the operation rooms availability and assign to the specific doctor.	When I login as Staff then click on this page I can able to verify availabilyof operation rooms and assigns to particular doctor .	Rooms
CURA-22	As a Staff, I want to know the ward management which helps caregivers plan, track, and manage the various departments in the hospital.	When I login as Staff then click on this page I can able to verify plans and able to track them.	Management
CURA-23	As a Patient, I want to registers patient's for admittance to the hospital.	When I login as Patient for first time then I see a link as Register Now and clicking on the link redirects to the registration form page	Registration
CURA-24	As a Patient, I want to manages patient financial operations, including billing and insurance.	When I open the application I will be able to see all plans included then I able to should select my insurance plan.	Billing
CURA-25	As a Patient, I want a module which helps with the fast registration of patients admitted to the ER.	When I login I see a Register Now link and check box admitted to ER. Enabling the check box takes to faster registration form with minimum information.	Registration

# TEST CASES

Test ID	User Story ID	Test Case	Current State	Test Data	steps to follow	Excepted Result	Result
TS-10	CURA-10	navigate to doctor section	admin logged into his application	Email:- test@cura.com pwd:- Qura	admin->doctor_section	admin should be able to navigate to doctor section to check their in&out times	PASS
TS-10	CURA-10	navigate to staff section	admin logged into his application	Email:- test@cura.com pwd:- Qura	admin->staff_section	admin should be able to navigate to staff section to check their in&out times	PASS
TS-10	CURA-10	navigate to nurse section	admin logged into his application	Email:- test@cura.com pwd:- Qura	admin->nurse_section	admin should be able to navigate to nurse section to check their in&out times	PASS
TS-11	CURA-11	return to homepage	User login into the application as doctor	Email:- doc1@cura.com pwd:- doc	login->dashboard-> use back option	User should able to return back to homepage	PASS
TS-12	CURA-12	loading doctors details page	admin logged into his application	Email:- test@cura.com pwd:- Qura	admin->doctor_section->profile	admin should be able to see all the details of doctor after navigating to doctor section	PASS
TS-12	CURA-12	loading staff details page	admin logged into his application	Email:- test@cura.com pwd:- Qura	admin->staff_section->profile	admin should be able to see all the details of staff member after navigating to doctor section	PASS
TS-12	CURA-12	loading nurse details page	admin logged into his application	Email:- test@cura.com pwd:- Qura	admin->nurse_section->profile	admin should be able to see all the details of nurse after navigating to doctor section	PASS
TS-13	CURA -13	loading appointment details page	User login into the application as a doctor	Email:- aabc@gmail.com pwd:- abc	doctor->schedules	User should be able to see his schedules and patient details	PASS
TS-14	CURA -14	loading appointment details page	User login into the application as a patient	Email:- aabc@gmail.com pwd:- abc	patients->appointments	User should be able to see his appointment details	PASS
TS-15	CURA -15	Uploading patient details page	User login into the application as a patient	Email:- aabc@gmail.com pwd:- abc	patients->symptoms	user should be able to upload his previous medical documents and symptoms details	PASS

# TEST CASES

TS-16	CURA - 16	Loading inventory supply details page	User logged into the application as inventor	Email:- aabc@gmail.com pwd:- abc	inventor->supply	User should be able to see all inventory supply details	PASS
TS-17	CURA - 17	Loading patients test sample data details page	User logged into the application as pathologist	Email:- aabc@gmail.com pwd:- abc	pathologist-> sample test data	User should be able to see all patients test sample data for examining	PASS
TS-18	CURA - 18	navigate to billing section	User logged into the application as admin	Email:- aabc@gmail.com pwd:- abc	admin->bill	User should be able to navigate to billing section to check billing data accurate or not	PASS
TS-19	CURA - 19	editing profile data	User logged into the application as patient	Email:- aabc@gmail.com pwd:- abc	patient->profile	User should be able to edit and save his profile information	PASS
TS-20	CURA - 20	check room availability	User logged into the application as staff	Email:- aabc@gmail.com pwd:- abc	staff->rooms	User should be able see the list of available room details	PASS
TS-21	CURA - 21	assigning room to the specific doctor.	User logged into the application as staff	Email:- aabc@gmail.com pwd:- abc	staff->rooms->assign	User should be able to assign room to a doctor	PASS
TS-22	CURA - 22	loading details of members in different departments	User logged into the application as staff	Email:- aabc@gmail.com pwd:- abc	staff->departments->profile	User should the able see different department members details	PASS
TS-24	CURA - 24	Selecting insurance plan	User logged into the application as patient	Email:- aabc@gmail.com pwd:- abc	patient->insurance plan	User should be able to see all available insurance plans and select one of them	PASS
TS-25	CURA - 25	loading quick registration form	User logged into the application as patient	Email:- aabc@gmail.com pwd:- abc	patient->check box->min registration form	User should be able to click check box and should taken to minimal information registration form	PASS

# Stories

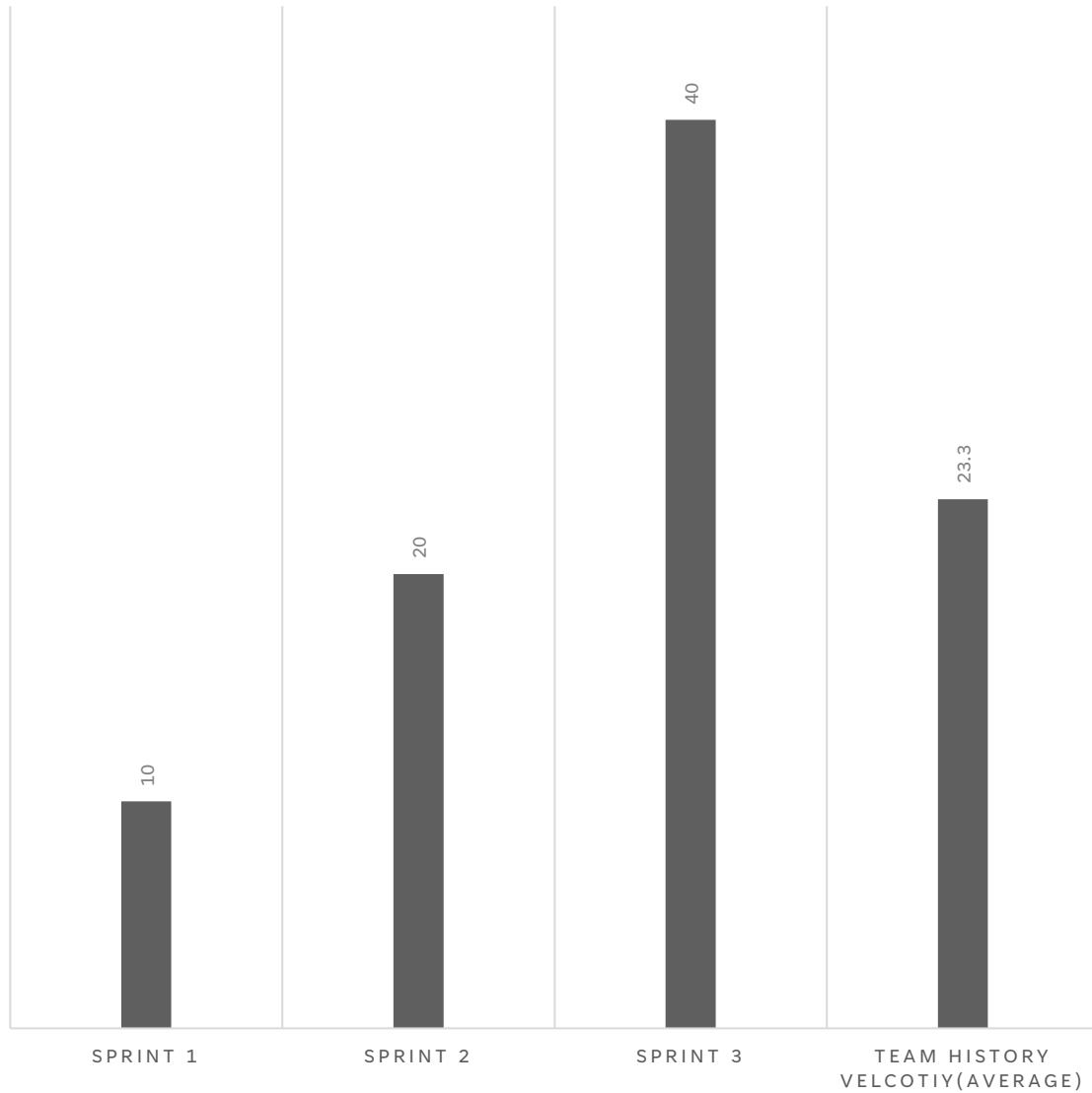
## Completed

- ◆ As a patient, I want to register and sign in successfully, so that I can store all my account details.
- ◆ As a patient, I want to book an appointment.
- ◆ As a doctor, I want to go-through the appointments list.

## Incomplete

- ◆ As an Inventor, I want to know whether the supplies are as per the requirement or no, so that I can re-stock them.
- ◆ As an Admin, I want to navigate to the billing section to check whether the bills produced are accurate or not.
- ◆ As a Staff, I want to check room availability and manage rooms according to requirements.

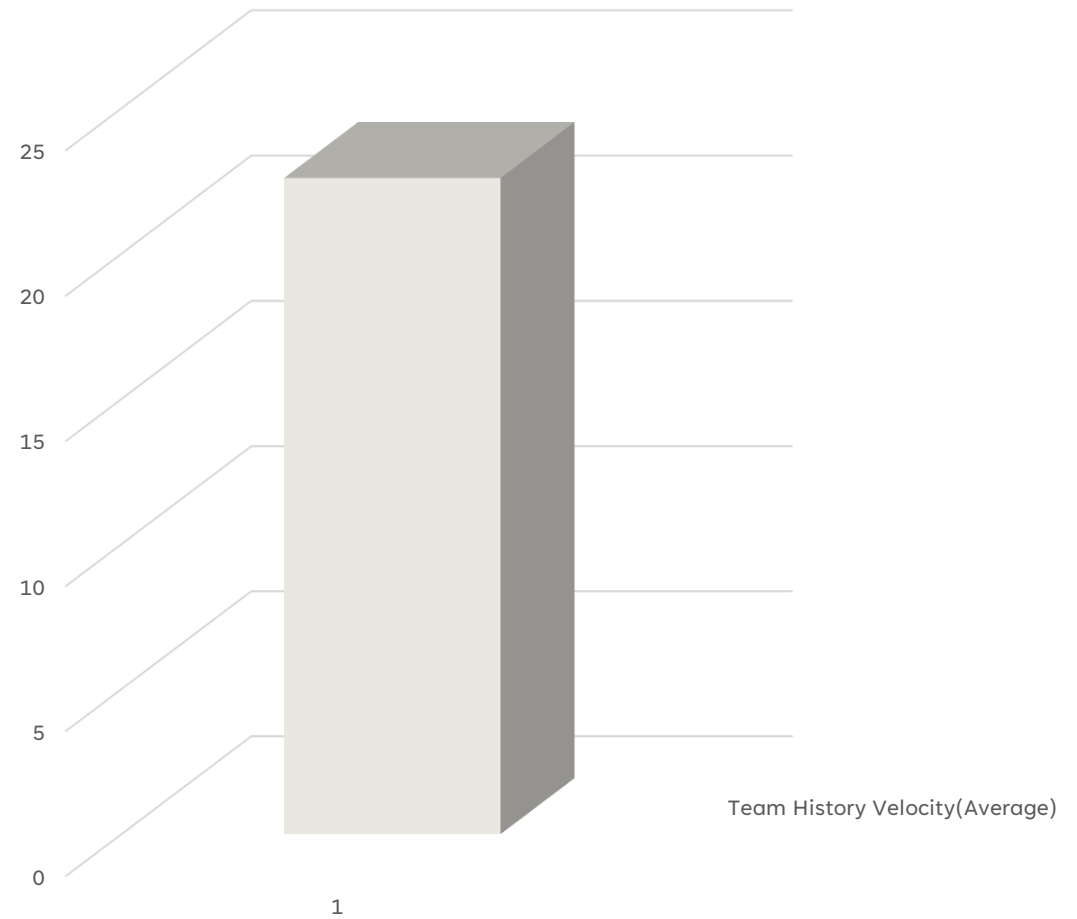
# METRICS



# Team Velocity

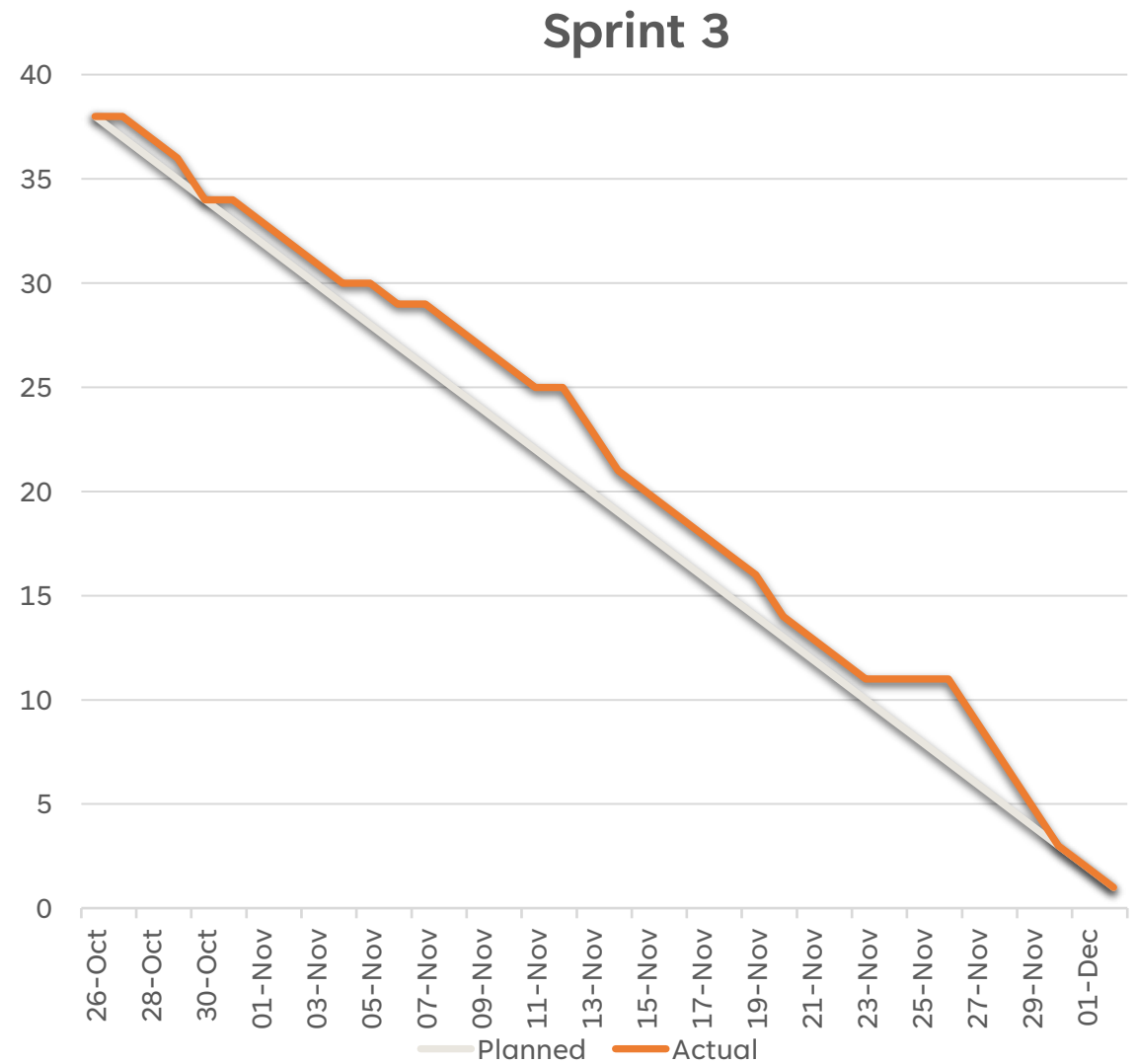
# Team History Velocity

Team History Velocity(Average)

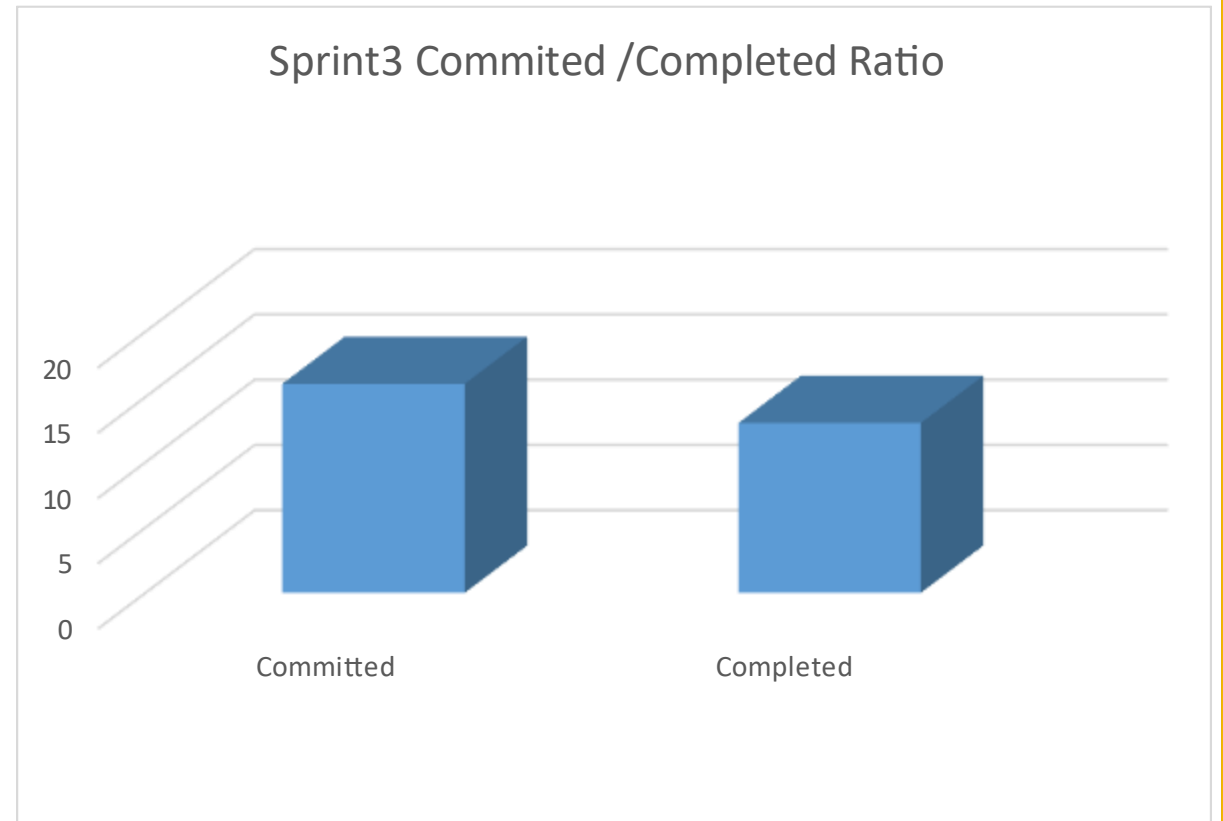




# Burndown chart



# COMMITTED/ COMPLETED RATIO





# RETROSPECTIVES

## WHAT WENT WELL

1. TEAM STARTED WORKING IN PAIRS TO COMPLETE THE TASK
2. TEAM SCHEDULED THE FREQUENT STATUS CALL FOR THE ASSIGNED USER STORIES WHICH HELPED US TO COMPLETE THE TASK EFFECTIVELY
3. GOOD COMMUNICATION WAS THERE IN BETWEEN THE TEAM MEMBERS.

## WHAT DID NOT WENT WELL??

1. SYNCRONIZATION STILL MISSING BETWEEN TEAM MEMBERS WHICH WE FOUND IN TEAM MEETINGS.
2. TEAM MEMBERS SHOULD MORE RESPONSIBLE FOR THEIR ASSIGNED TASK.
3. TEAM SHOULD COMPLETE THEIR WORK BEFORE DUE DATE..

## WHAT'S NEXT

1. WE WILL SCHEDULE DAILY STATUS CALL.
2. OPTIMUM USAGE OF TEAM MEETING'S.
3. TEAM MEMBER SHOULD HAVE PROPER INSIGHTS OF PICKING UP THE USER STORIES.

miro

# SPRINT 4 - STORIES PLANNED AND COMMITTED

CURA Sprint 4

Add dates

(10 issues)

0

0

0

Start sprint

...

CURA-2

Complete Technical Paper

IN PROGRESS

MT

CURA-3

Home Page of Cura - Frontend

IN PROGRESS

JS

CURA-4

Setup Backend Database

TO DO

ST

CURA-5

Develop 4 Portals - Frontend

TO DO

KK

CURA-6

Research on AWS Deployment

TO DO

S

CURA-26

As a pathologist, I want to update the patient test details on to the portal.

TO DO

CURA-27

As a pathologist, I should be able to create new patient ID and update his details to the portal.

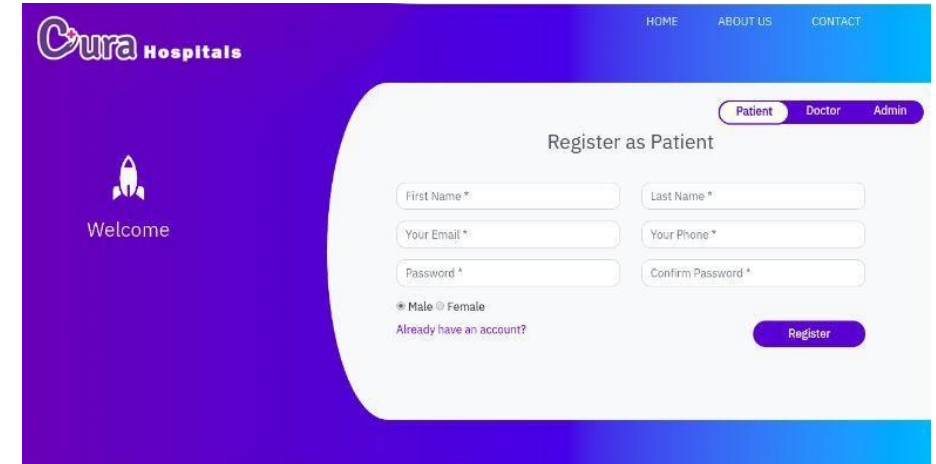
TO DO

CURA-28

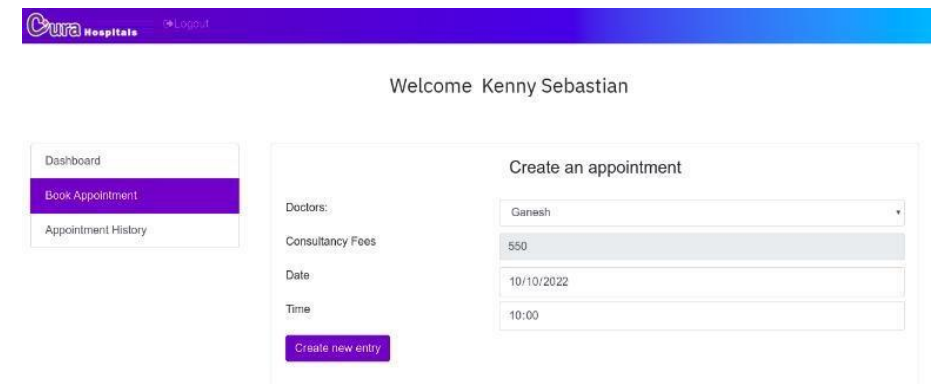
As a patient, I would like to pay partial payments.

TO DO

# APPLICATION SCREENSHOT



The screenshot shows the 'Cura Hospitals' registration page. The header includes the logo and navigation links: HOME, ABOUT US, and CONTACT. Below the header, there are tabs for 'Patient', 'Doctor', and 'Admin', with 'Patient' selected. The main heading is 'Register as Patient'. The form contains the following fields: First Name \*, Last Name \*, Your Email \*, Your Phone \*, Password \*, and Confirm Password \*. There are radio buttons for 'Male' and 'Female', with 'Male' selected. A link 'Already have an account?' is present. A 'Register' button is at the bottom right.



The screenshot shows the user dashboard for 'Kenny Sebastian'. The header includes the logo and a 'Logout' link. The main heading is 'Welcome Kenny Sebastian'. On the left, there is a sidebar menu with 'Dashboard', 'Book Appointment', and 'Appointment History'. 'Book Appointment' is selected. The main content area is titled 'Create an appointment' and contains the following fields: Doctors (dropdown menu with 'Ganesh' selected), Consultancy Fees (text input with '550'), Date (text input with '10/10/2022'), and Time (text input with '10:00'). A 'Create new entry' button is at the bottom left.

# HUMAN API



+ Add new patient

Demographics >

Appointments >

Clinical Dashboard >

Documents >

Tasks 0

Problem List 0

Medication List 0

Send eRx >

Allergy List 0

Drug Interactions 0

CQMs

Intake Data >

Lab Orders >

Immunizations >

Growth Charts >

onpatient Access >

Education Resources >

Communication >

Family History >

3rd-Party Apps

test >

Homura v. Akemi (Female | 18 years old | March 2, 1997) [what is this field?](#)

Phone: 555-555-5555

Email: discontent@civiliation.com

Added: May 19, 2015

Address: 123 Main St.  
Mitakihara

Last Appt: Mon Jul 13, 2015

CDS: Patient must have documented medications

Patient must have documented allergies

New Referral

Fax Demographics

Print Demographics

+ Schedule New Appointment

IP address: 50.201.94.186

Request method: GET

Host: alexcbecker.net

Connection: keep-alive

Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,\*/\*;q=0.8

Upgrade-Insecure-Requests: 1

User-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10\_10\_5) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/46.0.2490.71 Safari/537.36

Referer: http://wallsocket.drchrono.l:8000/

Accept-Encoding: gzip, deflate, sdch

Accept-Language: en-US,en;q=0.8

Query Parameters:  
iat=1447189327&doctor\_id=1987&jwt=eyJhbGciOiAiSFMyNTYiLCJhdHlwIjogIkpXVCJ9.eyJpYXQiOiAiNDQ3MTg5MTg5IiwiaWF0IjogMTk4NjYyYWNt

## API USED

# GITHUB LINK

[HTTPS://GITHUB.COM/SAITEJJJ/HMS/WIKI/CURA---HMS](https://github.com/saitejJJ/HMS/wiki/CURA---HMS)



# LIVE APPLICATION DEMO


Cura Hospitals [Logout](#)

Welcome Kenny Sebastian

Dashboard


Book Appointment

Appointment History



Book My Appointment

[Book Appointment](#)



My Appointments

[View Appointment History](#)

Cura Hospitals [Logout](#)

Welcome Kenny Sebastian

Dashboard

Book Appointment

Appointment History

Doctor Name	Consultancy Fees	Appointment Date	Appointment Time
Ganesh	550	2022-10-10	10:00:00



# THANK YOU

- Sai Teja Koribilli
- Jigar Shah
- Mounika Thalla
- Kuldeep Raj
- Bindu Valishetti
- Nikhil
- Shivansh Tomar