



# CURA-HMS



# AGENDA

# AGENDA

- Improvements from Professor Feedback
- Problem Statement
- Project description
- Team Aggrement
- Personas
- Sprint 5 Recap
- Architecture Diagram
- Technologies
- Algorithms
- Product Backlog
- Sprint Backlog
- Metrics
- Retrospective
- Sprint 6
- Project demo
- Live Application

# IMPROVEMENTS FROM PROFESSOR FEEDBACK

## Feedback

- Story Points Missing.
- Mention Diagram name.
- Make theme consistent .
- Title for every slide and manage color coordination.
- Mention sprint number in sprint backlog.
- Remove place column from user stories and acceptance criteria.
- Sprint backlog should have story points.
- Edit burndown charts, it should have only completed stories.

## Improvements

- Story points mentioned to every user story.
- Mentioned diagram name.
- Maintained theme consistency and color coordination.
- Architectural Diagram mentioned.
- Mentioned sprint number in sprint backlog.
- Removed place column from user stories and acceptance criteria.
- Added story points to sprint backlog.
- Edited burndown charts with completed 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

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

CURA 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.



# TEAM WORKING AGGEMENT

## TEAM AGREEMENT



### Introduction

The purpose of this team working agreement is to outline standardized expectations for the Lightning Bolt project concerning, but not limited to, the working relations and group structure among team members in CS-691. The contents herein addressed are:

1. Communication
2. Decision making
3. Responsibility
4. Participation
5. Leadership
6. Consequences

### The members of the team are:

1. Sai Teja ~~Koribilli~~
2. Jigar J Shah
3. ~~Shivaash Tomar~~
4. ~~Nikhil Kasireddy~~
5. Mounika Krishna ~~Jhalla~~
6. Kuldeep Raj Kaluvala
7. Bindu ~~Valupattti~~

### Communication:

Communication between team members shall be through e-mail, phone conversations, and weekly team meetings. Members will check their e-mail once daily and reply when requested or necessary. Team meetings are scheduled every Tuesday evening at 6:00 pm. If a member cannot attend a team meeting, they must communicate to all members 24 hours prior to the meeting. Failure to communicate their absence will result in a strike (see "Consequences" below).

### Decision Making

All ideas and directions will be kept open until a final consensus decision is made by the group. Final ideas and decisions will be adopted in one of two ways: secret ballot or coin toss. Failure to communicate or acting on a decision not sanctioned by the entire team, will result in one strike. (Please refer to "Consequences" section.)

### Responsibility

Members of the team are expected to complete all tasks assigned to them by the due date. If unforeseen obstacles prevent task completion, this will be handled accordingly. Difficult or unclear

responsibilities must be voiced to other team members swiftly so that they can be clarified or redefined.

### Leadership

Leadership is strictly informal with a democratic debate system used for decision-making. A primary meeting facilitator will be assigned prior to each meeting. The facilitator will be responsible for compiling an agenda and directing the smooth flow of the meeting. Natural leadership will evolve over time, and this working agreement shall be edited to accommodate such future logistical changes.

### Group Progress

The group will create a timeline that includes dates for expected completion of work and other group objectives. This timeline will help the group to determine progress and how rules should be enforced regarding participation of each group member.

### Consequences

Consequences will be based on a strike program with three strikes resulting in a probationary status and four strikes resulting in removal from the team. While on probation the team member must demonstrate his/her ongoing commitment to the team by writing an explanatory paper and requesting reinstatement to the team.

### Strikes may be given for any one of the following reasons:

1. Missed meetings without either communication 24 hours prior or a legitimate conflict.
2. Failure to abide by the rules presented in this working agreement.
3. Low commitment and substandard work presented in assigned tasks.

### Summary

The ideas and requirements set forth in this working agreement are established to provide the best possible working conditions for completing the assigned project.

If you have any questions concerning this memo, or the contents therein, please direct them to the group secretary:

Sai Teja ~~Koribilli~~  
[sk30386n@pace.edu](mailto:sk30386n@pace.edu)  
(775) 467-8291



# PERSONAS

# PERSONA 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.



# PERSONA 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

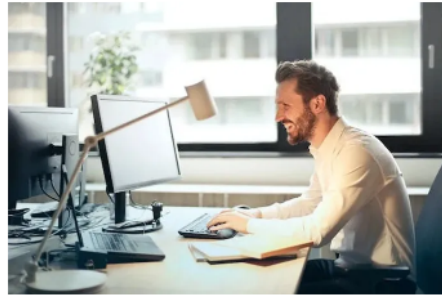
- Every time Mary visits the hospital an appointment forms has to be filled and she is allotted a different doctor.
- She has to wait for long hours to visit the doctor.
- Every week her records get updated which becomes troublesome for her to manage.

## 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.



# PERSONA 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 traveling.

## 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



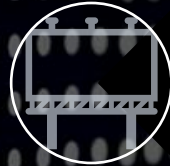
## REGISTRATION

- 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

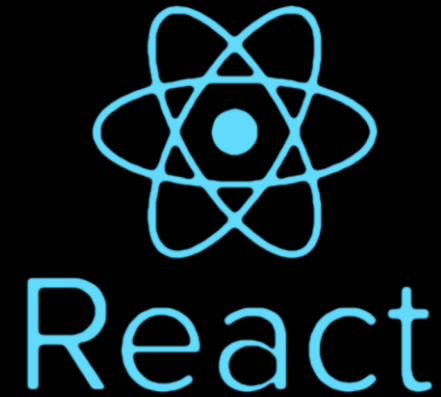
- User can schedule his appointment with doctor through this



JAVA SCRIPT



CUCUMBER



GIT HUB



# ALGORITHM

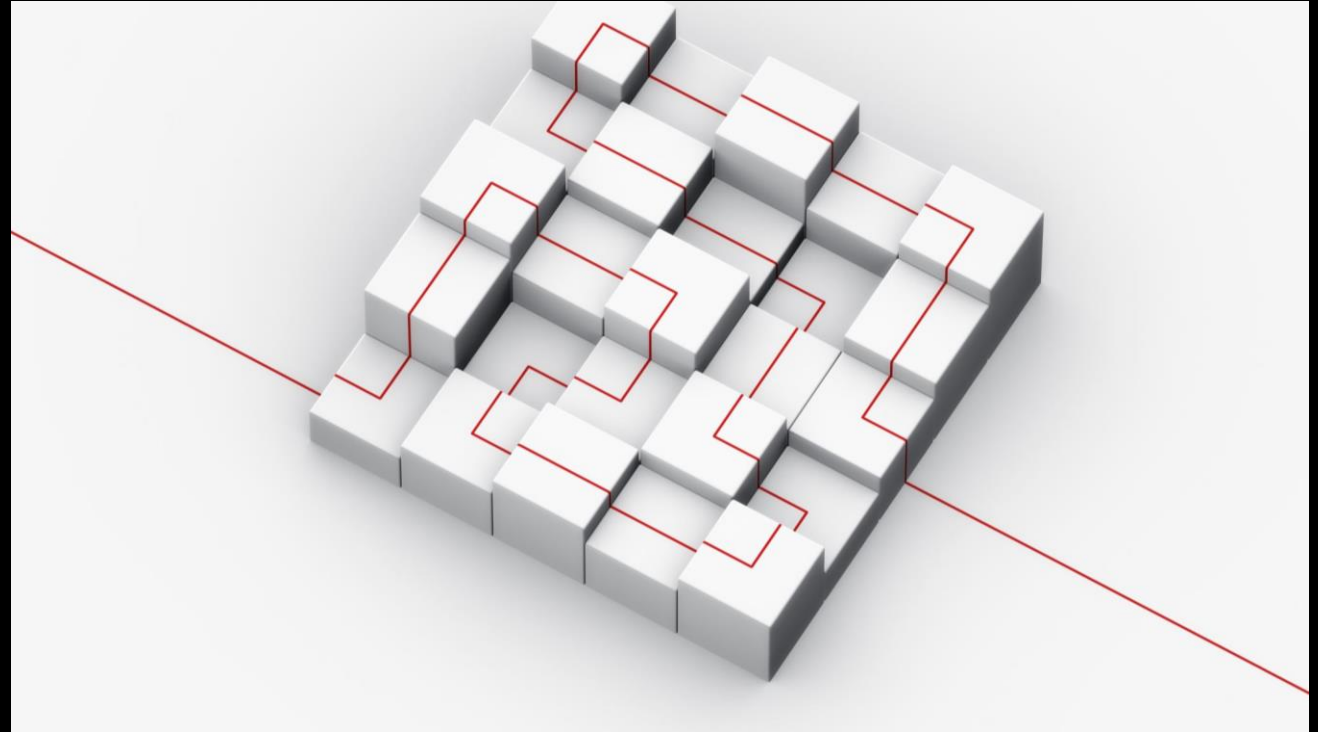
- The proposed system has five modules for doctors, admin, pathologist, inventor and patients providing facilities of appointments schedules, payment, viewing online information, register on hospital website. The whole process of information sharing and processing in this systems is automated through Decision Tree ID3 algorithm

## **What is ID3 Algorithm ?**

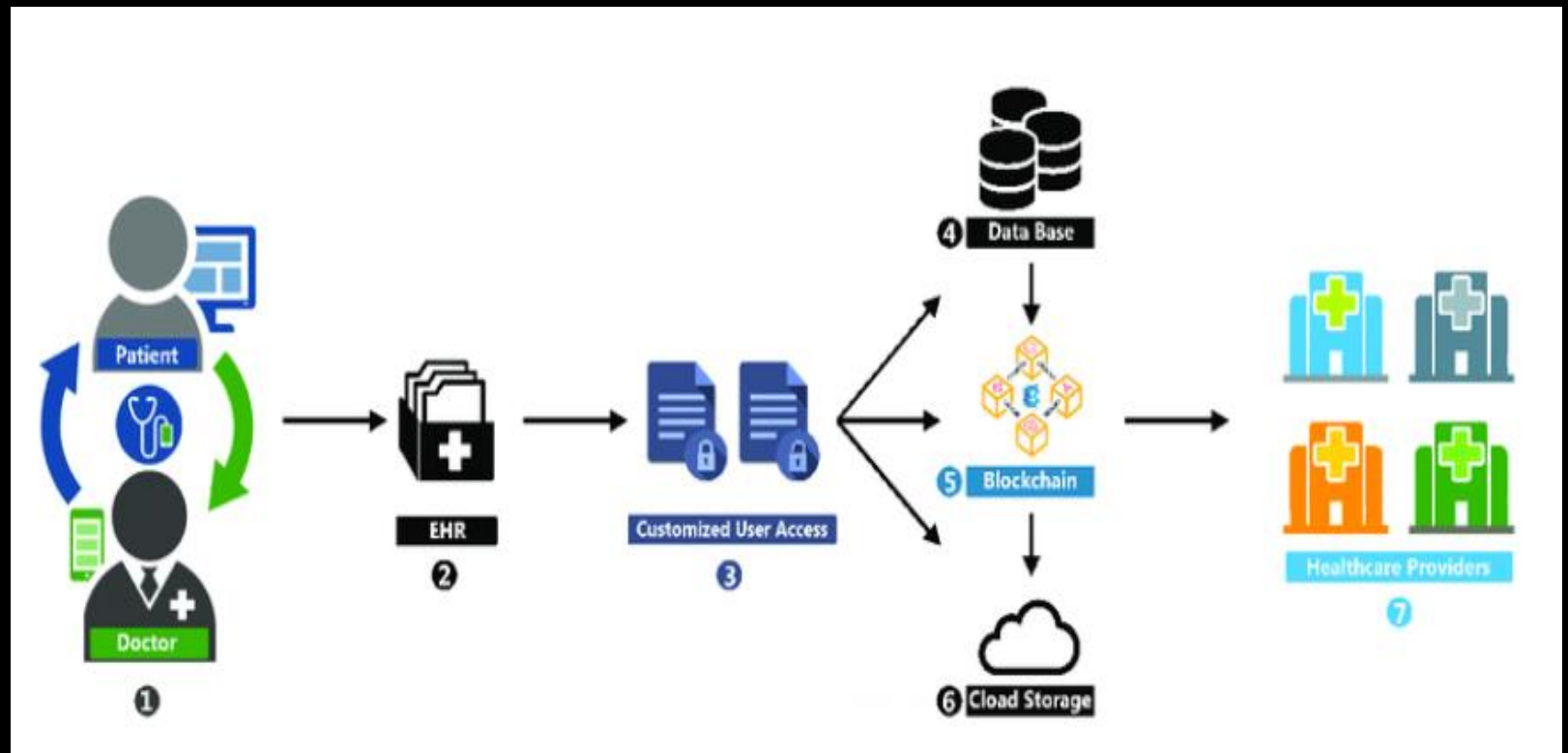
- ID3 stands for Iterative Dichotomiser 3 and is named such because the algorithm iteratively (repeatedly) dichotomizes(divides) features into two or more groups at each step.
- ID3 uses a top-down greedy approach to build a decision tree. In simple words, the top-down approach means that we start building the tree from the top and the greedy approach means that at each iteration we select the best feature at the present moment to create a node. Attempts to create the smallest possible decision tree.



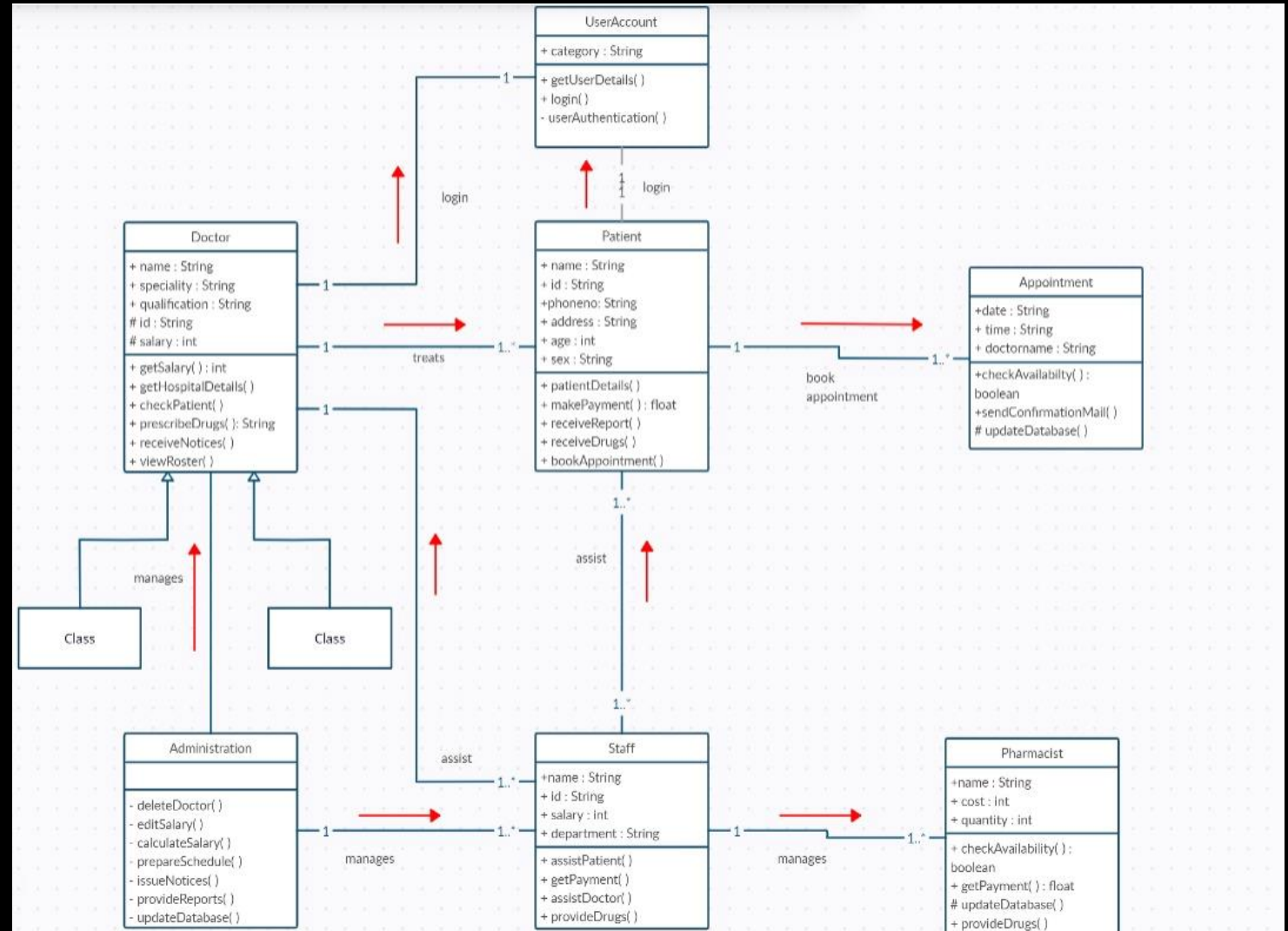
# ARCHITECTURAL DIAGRAM



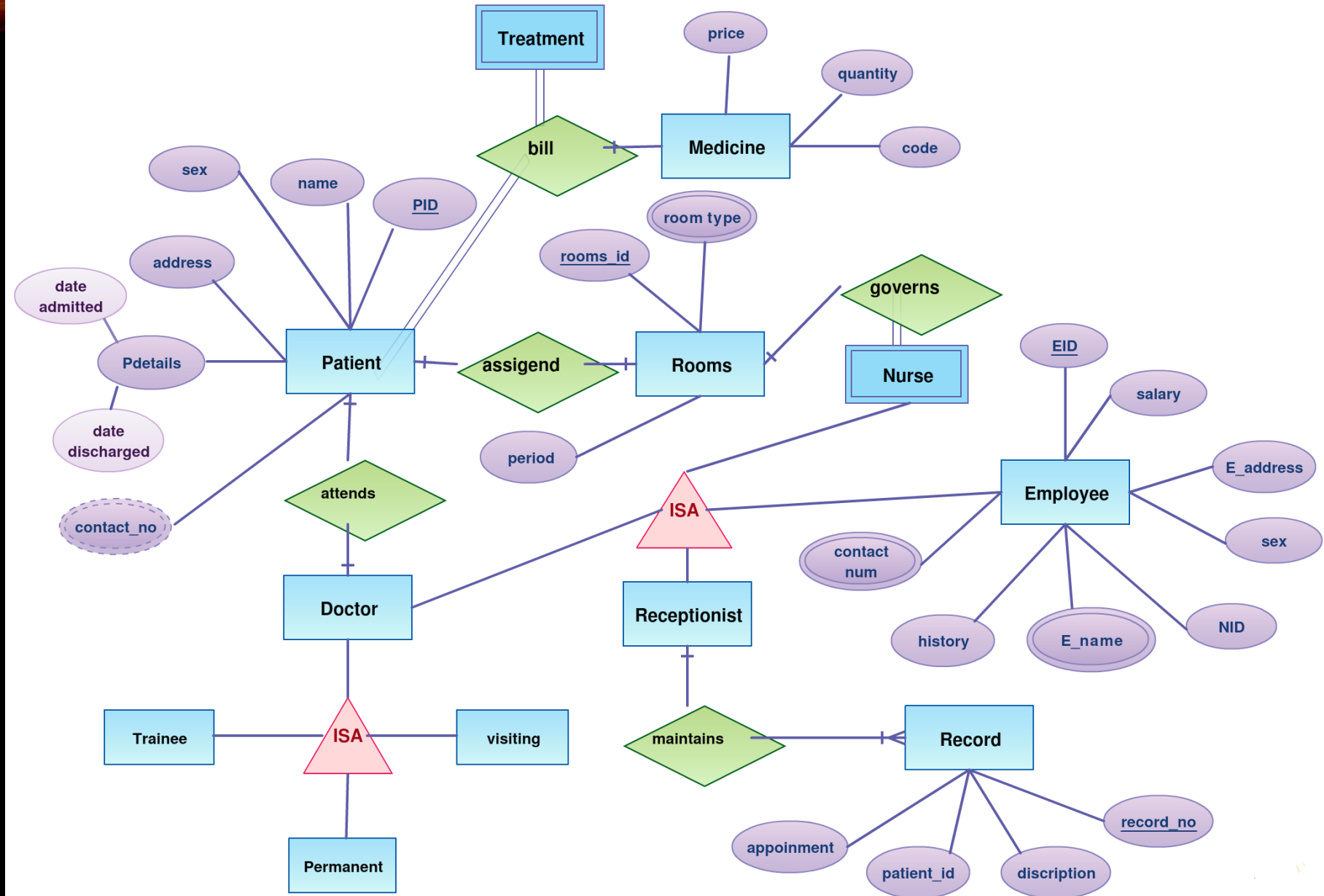
# CONCEPTUAL ARCHITECTURAL DIAGRAM



# CLASS DIAGRAM

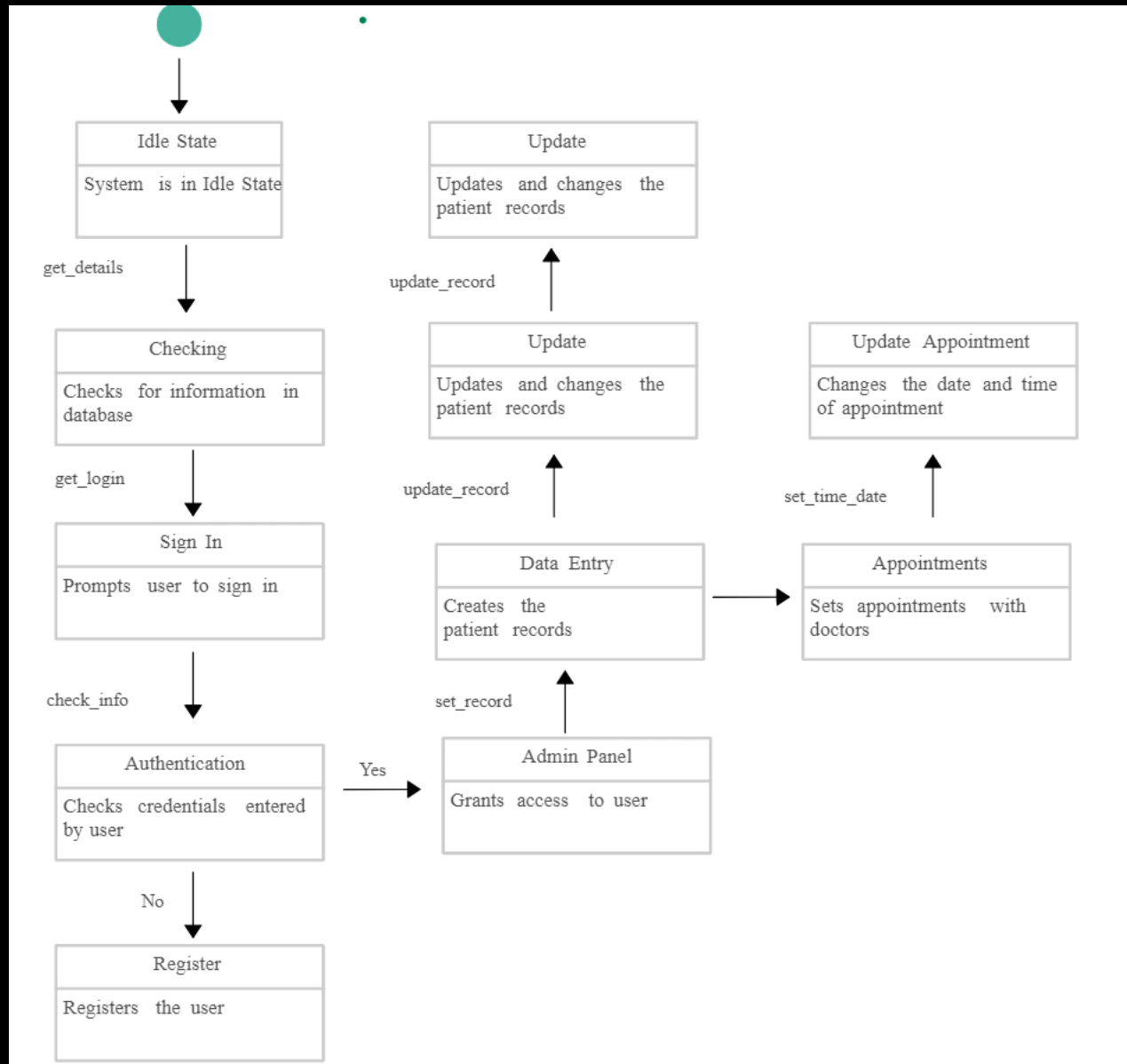


# ER DIAGRAM

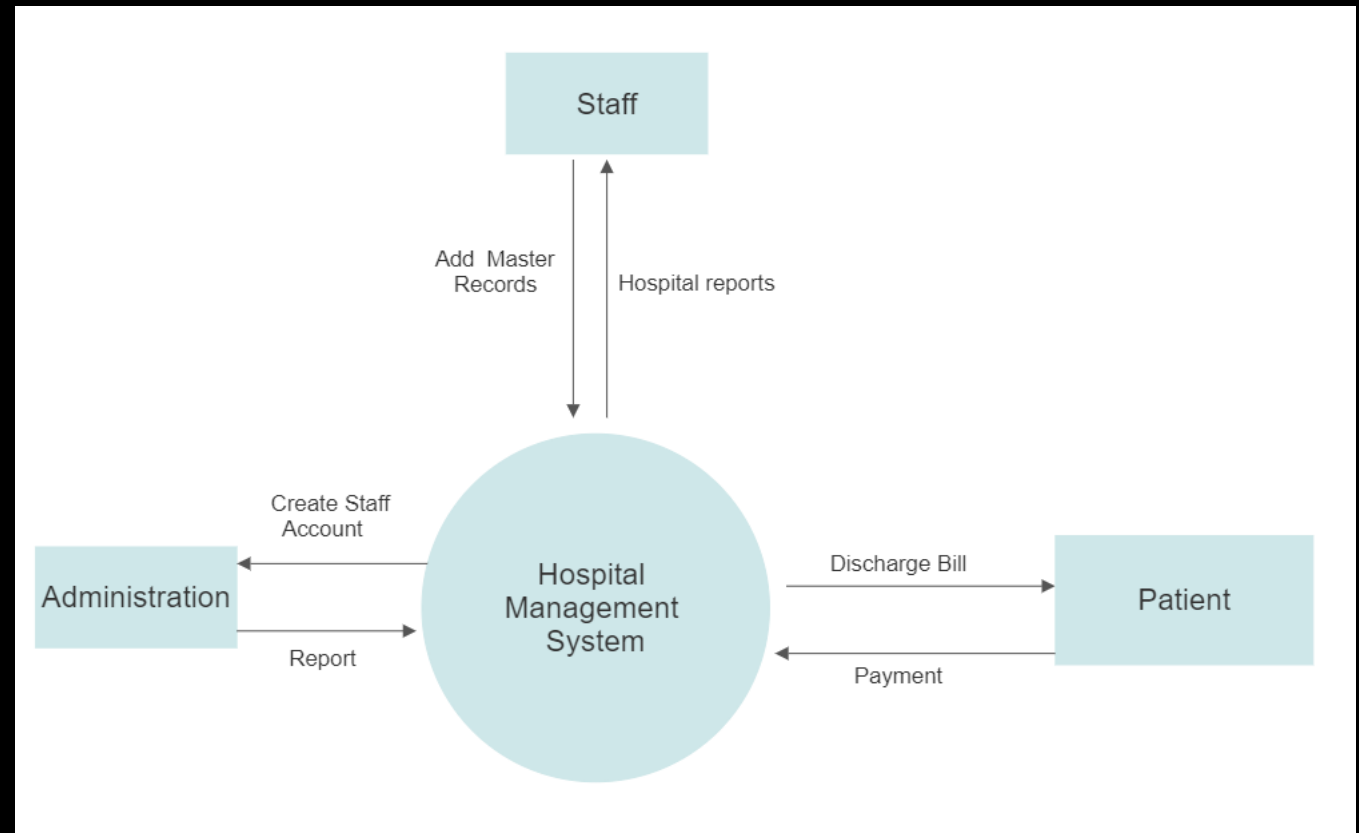




# STATE DIAGRAM



DATAFLOW  
DIAGRAM  
LEVEL 0



# SPRINT4 RECAP

- SCHEDULE
- Multiple features like add data
- Created Proper UI

# SPRINT 4 VS SPRINT 5

## SPRINT 4

- SCHEDULING THE APPOINTMENTS.
- MULTIPLE FEATURES LIKE ADDING DATA.
- CREATED PROPER UI ALONG WITH UPDATING THE FEATURES TO THE RESPECTIVE ROLES ACCORDINGLY.

## SPRINT 5

- SURFING THROUGH THE OPTIONS ACCORDING TO THE ROLE OF THE PERSON USING THE APPLICATION.
- UPDATING THE CURRENT PROFILE STATUS BY UPLOADING FILES.



# PRODUCT BACKLOG

CURA

# PRODUCT BACKLOG

Issue Type	ID	Name
Story	CURA-29	As a Doctor, I want to see my particulars/schedule/profile on the application so that I can plan my duties at hospital .
Story	CURA-30	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 my appointment with doctor.
Story	CURA-31	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.
Story	CURA-32	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-33	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.
Story	CURA-34	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.
Story	CURA-36	As a Staff, I want to check room availability and manage rooms according to requirement so that it will be very helpful to doctors.
Story	CURA-37	As a Patient, I want to registers patient's for admittance to the hospital.
Story	CURA-38	As a Patient, I want to manages patient financial operations, including billing and insurance.
Story	CURA-39	As a Staff, I want to know the ward management which helps caregivers plan, track, and manage the various departments in the hospital so that it will very helpful to patients.

The background features abstract, flowing, ribbon-like shapes in vibrant red and cyan colors against a solid black background. The shapes appear to be moving or flowing across the frame, creating a sense of dynamic energy.

# SPRINT BACKLOG

# SPRINT BACKLOG 5

Issue Type	Key	Name	Story Points Estimate
Story	CURA - 39	As a patient, I want to able to search on the app, so that I can find the necessary information .	3
Story	CURA - 40	As a patient, I want to update my profile and also upload reports so that doctor can know the patient condition.	3
Story	CURA - 41	As an admin, I want to see all the doctor's list in the application so that, I can manage the system according to my need.	3



# USER STORIES AND ACCEPTANCE CRITERIA



# USER STORIES & ACCEPTANCE CRITERIA

USER STORY ID	SUMMARY	STORY POINTS
CURA-29	<p><b>As a Doctor,</b> <b>I want</b> to see my particulars/schedule/profile on the application <b>so that</b> I can plan my duties at hospital .</p> <p><b>Scenario</b> : Doctor wants to check his schedule <b>Given</b> I logged as Doctor <b>When</b> I open the application <b>then</b> as a doctor see the appointment details per day/week/month <b>and</b> also see the details of the patients .</p>	3
CURA-30	<p><b>As a Patient,</b> <b>I want</b> to confirm whether my appointment with the doctor is set up or no <b>so that</b> I can have an idea about my appointment with doctor</p> <p><b>Scenario</b> : Patient wants to check with his appointment details <b>Given</b> I logged as Patient <b>When</b> I open the application and go to this page <b>then</b> see my appointment details with the doctor <b>and</b> I plan accordingly.</p>	3
CURA-31	<p><b>As a Patient,</b> <b>I want</b> to submit my symptoms/previous history documents in the portal for assessment <b>so that</b> I may receive a accurate determination</p> <p><b>Scenario</b> : Patient wants to upload his previous history documents &amp; symptoms <b>Given</b> I logged as Patient <b>When</b> I open the application and go to this page <b>then</b> see the browse option for uploading the documents <b>and</b> see the page to enter the details of my previous history &amp; symptoms.</p>	3
CURA-32	<p><b>As an Inventor,</b> <b>I want</b> to know whether the supplies are as per the requirement or no, <b>so that</b> I can re-stock them.</p> <p><b>Scenario</b> : Inventor wants to see the list of stock <b>Given</b> I'm in a role of Inventor or logged-in inventor <b>When</b> I open the web application <b>then</b> see the inventory supply details page, clicking on the page I should be able to see all the inventory details <b>and</b> option to restock</p>	3

# USER STORIES & ACCEPTANCE CRITERIA

User Story ID	Summary	Story Points
CURA-33	<p>As a Pathologist, I <b>want</b> to know whether samples of the patient are correctly entered or no, <b>so that</b> there is no confusion with patient's details with others.</p> <hr/> <p><b>Scenario</b> : Pathologist wants to check patient's samples <b>Given</b> I am in a role of logged-in Pathologist <b>When</b> I open web-application and go to this page <b>then</b> verify the patient's samples entered correctly or not</p>	3
CURA-34	<p>As an Admin, I <b>want</b> to navigate to doctor/staff/nurse section to check the log-in time <b>so that</b> I can verify whether every doctor/nurse/staff is attending the hospital on time.</p> <hr/> <p><b>Scenario</b>: Admin wants to check the login &amp; log-out time of hospital staff <b>Given</b> I logged as Admin <b>When</b> I open the portal <b>then</b> in the system I can check total hour a doctor/staff/nurse spends on seeing patients <b>and</b> also verify doctor/staff/nurse time.</p>	3
CURA-35	<p>As a Staff, I <b>want</b> to check room availability and manage rooms according to requirement <b>so that</b> it will be very helpful to doctors.</p> <hr/> <p><b>Scenario</b>: Staff wants to check availability of rooms at hospital <b>Given</b> I am in role of logged-in staff <b>When</b> I open the portal <b>then</b> click on this page so I can able to verify availability rooms <b>and</b> manage them.</p>	3
CURA-36	<p>As a Patient, I <b>want</b> to registers patient's for admittance to the hospital.</p> <hr/> <p><b>Scenario</b>: Patient wants to easy way for registration <b>Given</b> I am in role of logged-in patient <b>When</b> I open application for first time <b>then</b> I see a link as Register Now then clicking on the link redirects to the registration form page <b>and</b> it will be very easy for patients to register in application.</p>	3

# USER STORIES & ACCEPTANCE CRITERIA

User Story ID	Summary	Story Points
CURA-37	<p><b>As a Patient,</b> <b>I want</b> to manages patient financial operations, including billing and insurance.</p> <hr/>	3
	<p><b>Scenario</b> : Patient wants to know about financial operations &amp; insurance policies <b>Given</b> I am in role of logged-in patient <b>When</b> I open the application I will be able to see all plans included <b>then</b> I able to should select my insurance plan <b>and</b> also have other related financial operations</p> <hr/>	
CURA-38	<p><b>As a Staff,</b> <b>I want</b> to know the ward management which helps caregivers plan, track, <b>and</b> manage the various departments in the hospital <b>so that</b> it will very helpful to patients.</p> <hr/>	3
	<p><b>Scenario</b> : Staff wants to know caregivers plan in hospital <b>Given</b> I am in role of logged-in staff <b>When</b> I open the application <b>then</b> click on this page I can able to verify plans <b>and</b> able to track them.</p> <hr/>	



# TEST CASES

Test ID	User Story ID	Test Case	Current State	Test Data	steps to follow	Expected Result
TS-11	CURA-34	navigate to doctor section	admin logged into his application	Email:- test@cura.com pwd:- <u>Qura</u>	admin->doctor_section	admin should be able to navigate to doctor section to check <u>their</u> in&out times
TS-12	CURA-34	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 <u>their</u> in&out times
TS-13	CURA-34	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 <u>their</u> in&out times
TS-14	CURA -29	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
TS-15	CURA -30	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
TS-16	CURA -31	Uploading patient details page	User login into the application as a patient	Email:- aabc@gmail.com pwd:- abc	patients->symtoms	user should be able to upload his previous medical documents and symptoms details

# TEST CASES

Test ID	User Story ID	Test Case	Current State	Test Data	steps to follow	Expected Result
TS-17	CURA -32	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
TS-18	CURA -33	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
TS-20	CURA -16	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
TS-21	CURA -35	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
TS-22	CURA -35	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
TS-23	CURA -38	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
TS-24	CURA -37	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
TS-25	CURA -36	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

# TEST CASES

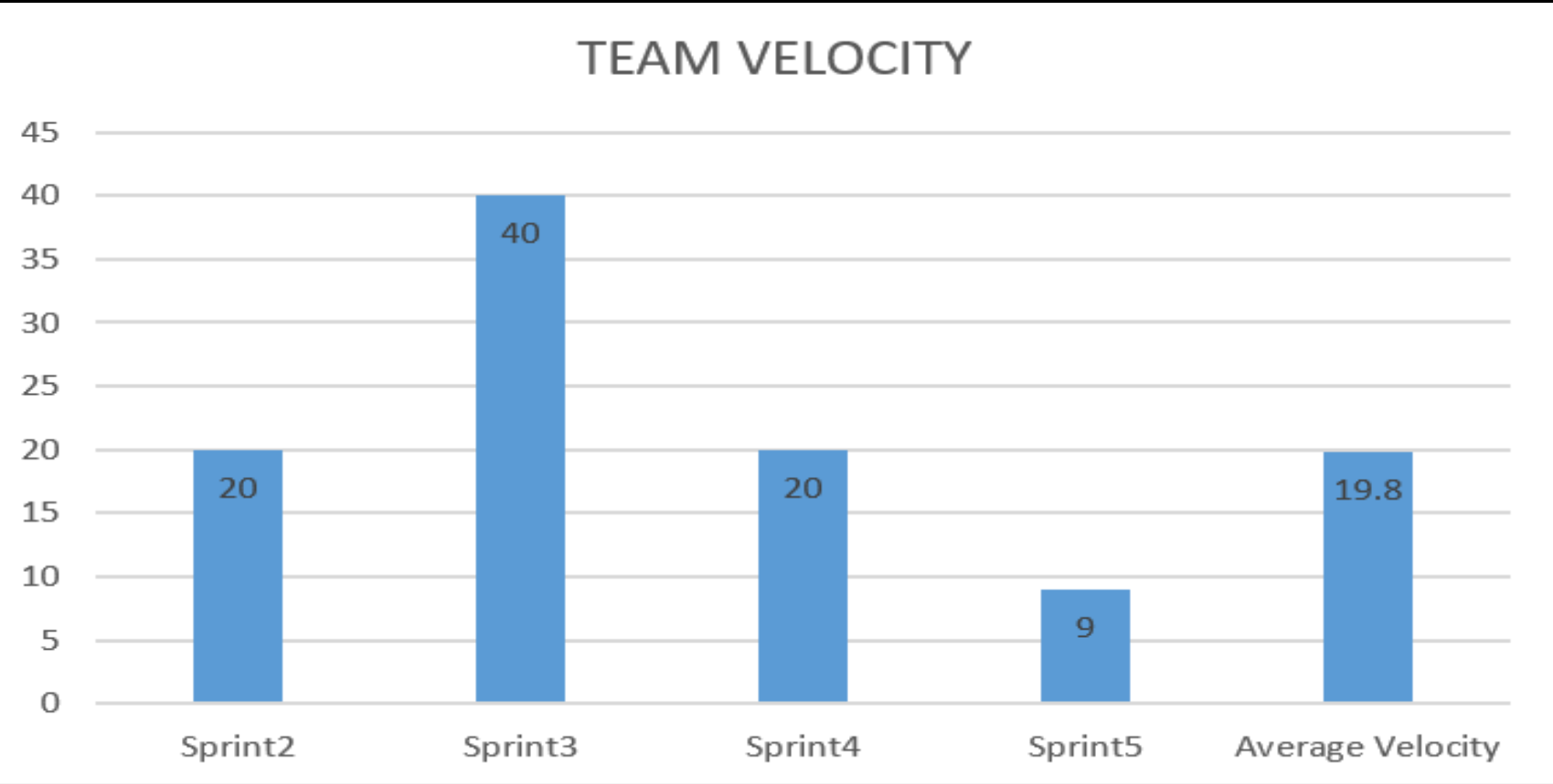
Test ID	User Story ID	Test Case	Current State	Test Data	steps to follow	Expected Result
TS-26	CURA-32	order supply stock	user logged in as inventor	Email:- testinventor@cura.com pwd:- <u>Qura</u>	inventor->supply-> order	inventor should be able to place stock order successfully
TS-27	CURA-35	reserving a room	user logged in as staff	Email:- teststaff@cura.com pwd:- <u>Qura</u>	staff->rooms->reserve	staff should be able to reserve a room for upcoming operation or patient
TS-28	CURA-27	updating patient test data	user logged in as pathologist	Email:- pathologytest@cura.com pwd:- <u>Qura</u>	pathologist->patient->update data	pathologist should be able to update patients' data without any problem
TS-29	CURA -28	creating new record	user logged in as pathologist	Email:- aabc@gmail.com pwd:- abc	pathologist->patient->add patient	pathologist should be able to add new patient in test data records

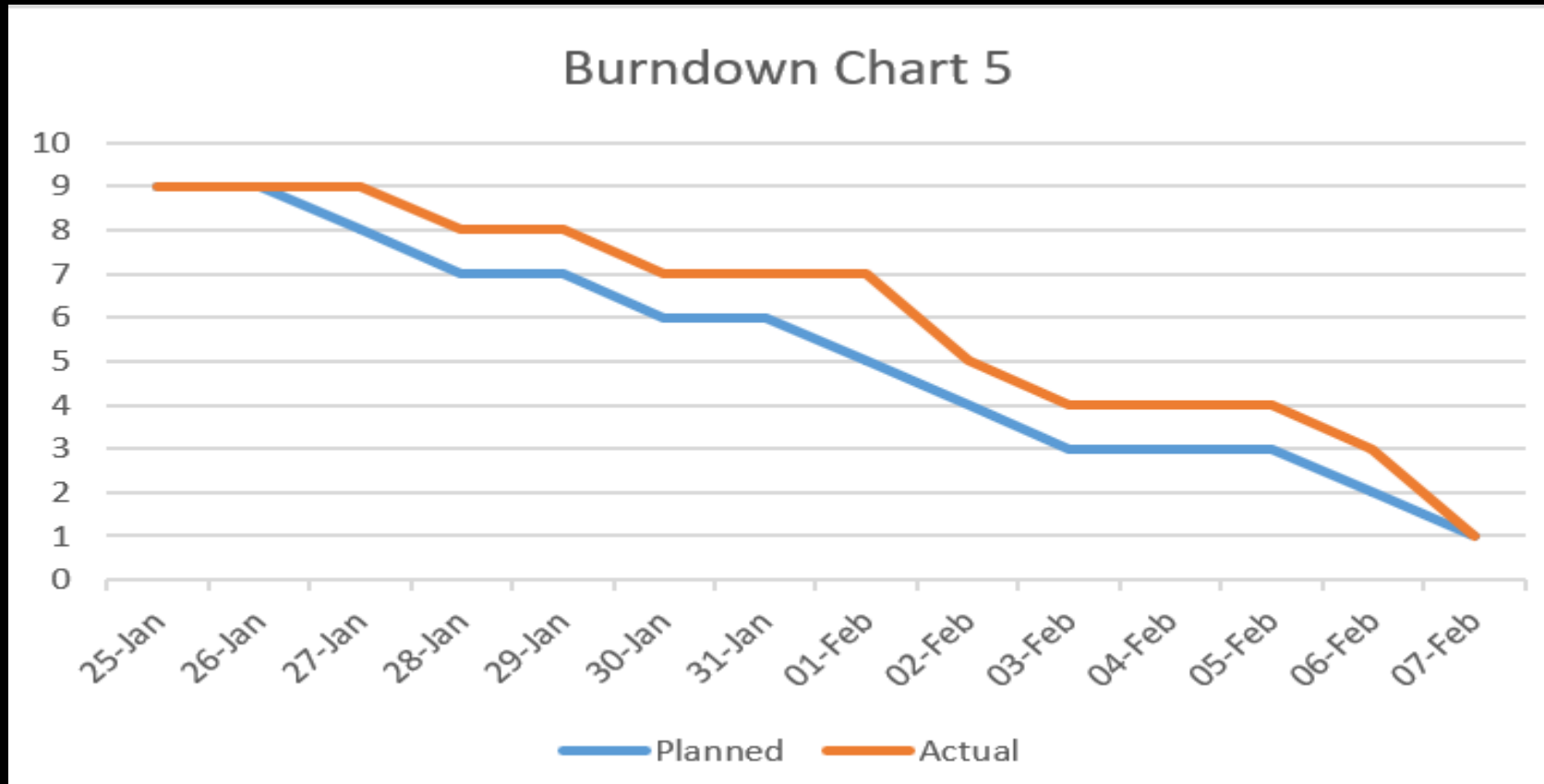
# STORIES COMPLETED AND NOT COMPLETED

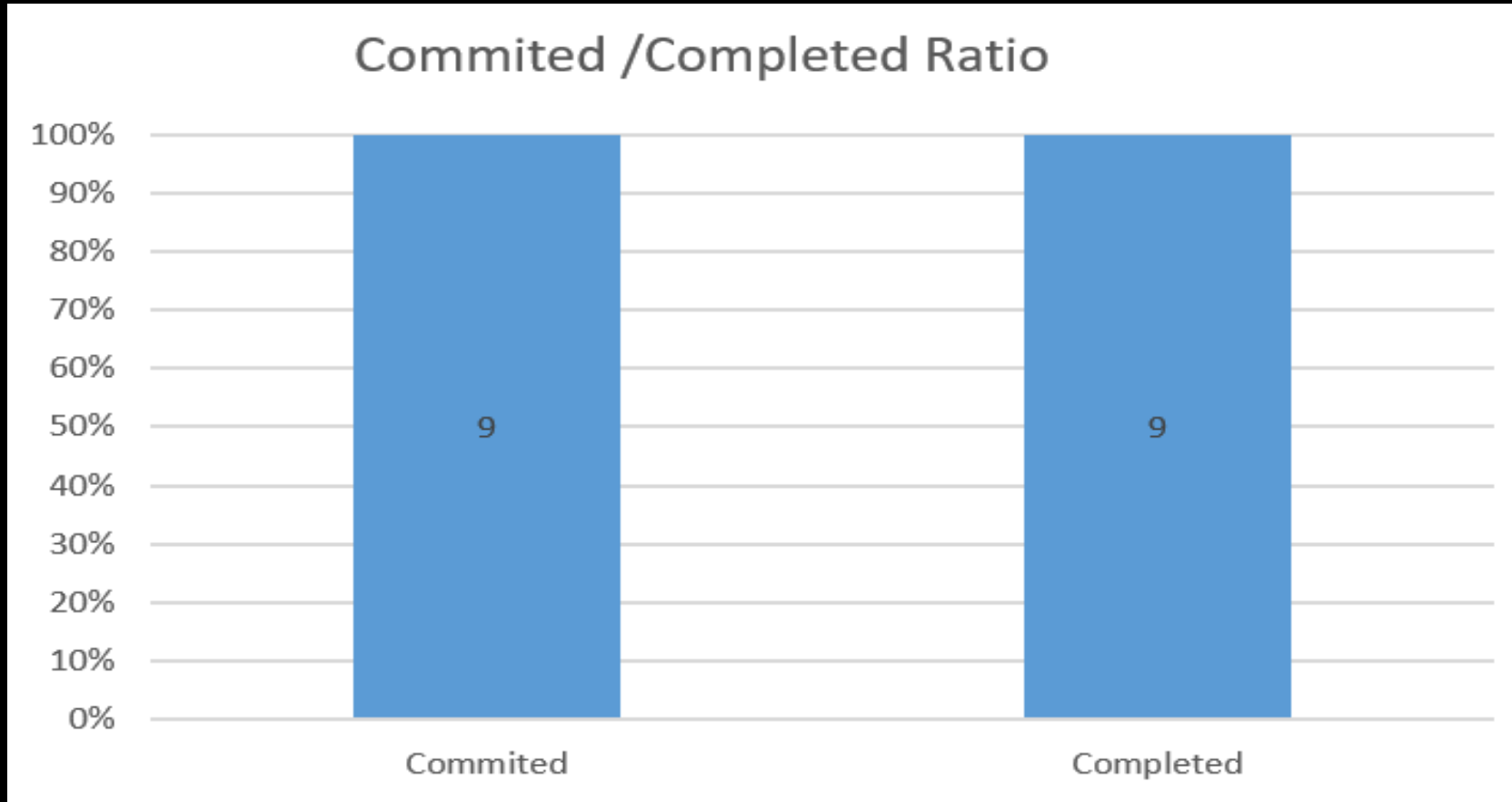
Issue Type	Key	Name	Story status
Story	CURA - 39	As a patient, I want to able to search on the app, so that I can find the necessary information .	Completed
Story	CURA - 40	As a patient, I want to update my profile and also upload reports so that doctor can know the patient condition.	Completed
Story	CURA - 41	As an admin, I want to see all the doctor's list in the application so that, I can manage the system according to my need.	Completed



# METRICS









# Retrospectives

- What went well??

- Team completed the task before due date.
- Team mates participates actively in team meeting calls

- What didn't went well??

- Avoid delaying work
- Facing difficulty in implementation part

- What next??

- Team members need to interact more in group meeting
- Set small targets to complete task more efficiently



# SPRINT 6

# STORIES PLANNED FOR SPRINT 6

Issue Type	Key	Name	Status	Story Points Estimate
Story	CURA - 42	As a pathologist I should be able to see the medication given to the patient previously so , when new medicines are prescribed to the patient the old prescription is updated.	To Do	3
Story	CURA - 43	As a patient, I want to able to download the prescriptions for future purpose.	To Do	3
Story	CURA - 44	As an admin, I want to check the login and log out time of all Doctors/Staff/Inventors etc.	To Do	3

Cura Hospitals

Logout

Welcome Kenny Sebastian

Dashboard

Book Appointment

Appointment History

Create an appointment

Doctors:

Ganesh

Consultancy Fees

550

Date

10/10/2022

Time

10:00

Create new entry

Cura Hospitals

HOMEABOUT USCONTACT

🚀

Welcome

PatientDoctorAdmin

Register as Patient

First Name \*

Last Name \*

Your Email \*

Your Phone \*

Password \*

Confirm Password \*

♂ Male ♀ Female

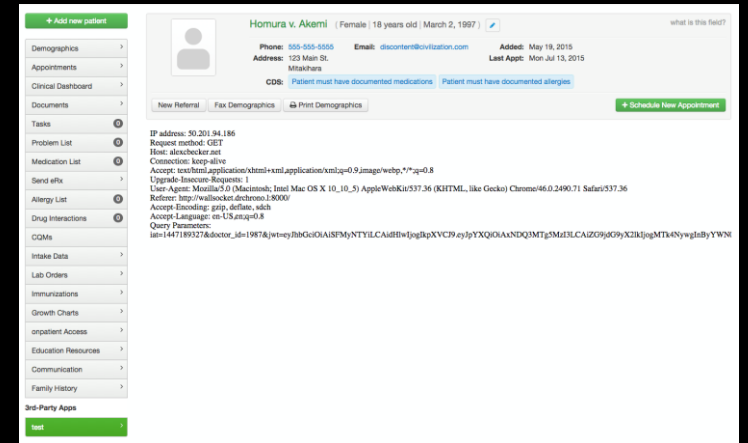
Already have an account?

Register





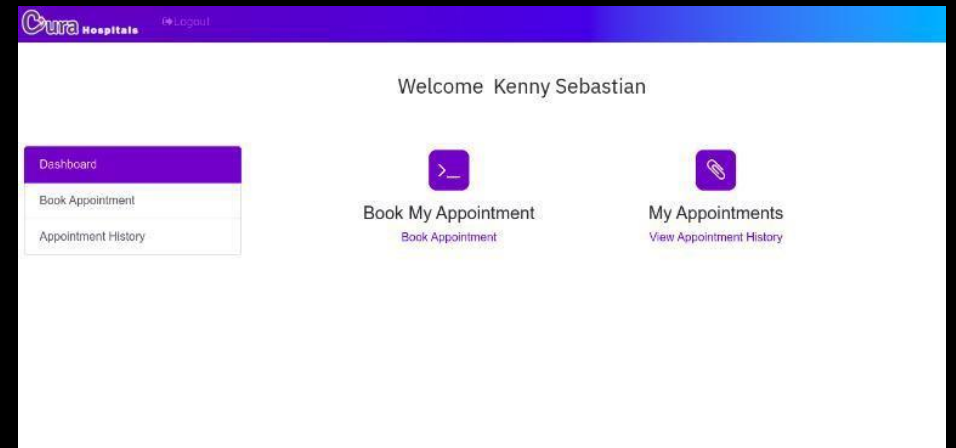
# HUMAN / API



# GITHUB LINK

<https://github.com/SaiTejji/HMS/wiki/CURA---HMS>

# LIVE APPLICATION DEMO



The screenshot shows the Cura Hospitals dashboard for user Kenny Sebastian, displaying a table of appointments. The sidebar on the left includes links to Dashboard, Book Appointment, and Appointment History, with Appointment History being the active page. The table has four columns: Doctor Name, Consultancy Fees, Appointment Date, and Appointment Time.

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

