

JNU HEALTHCARE INFORMATION SYSTEM

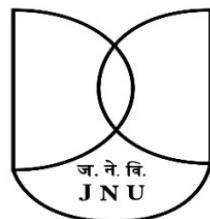
*A project report is submitted to the Jawaharlal Nehru University
in the partial fulfillment of the requirements for the award of the degree of*

MASTER OF COMPUTER APPLICATIONS

BY

Amrita Sukul(20/10/JC/021) Brijendra Yadav(20/10/JC/011)

Sarita Kumari(20/10/JC/024) Shivani (20/10/JC/002)



SCHOOL OF COMPUTER SYSTEM & SCIENCES

JAWAHARLAL NEHRU UNIVERSITY

NEW DELHI – 110067

JUNE 2022



SCHOOL OF COMPUTER AND SYSTEMS SCIENCES
JAWAHARLAL NEHRU UNIVERSITY
NEW DELHI - 110067

DECLARATION

This is to certify that the project entitled "***JNU Healthcare Information System***" is being submitted to the School of Computer and System Sciences, Jawaharlal Nehru University, New Delhi, in partial fulfillment of the requirements for the award of the degree of ***Master of Computer Applications***, is a record of bonafide work carried out by us.

This report or a similar report on this topic has not been submitted in part or full to any University or Institution for the award of any degree or diploma.

Amrita Sukul

Brijendra Yadav

Sarita Kumari

Shivani

CERTIFICATE BY PROJECT GUIDE

This is to certify that the Project entitled, “**JNU HEALTHCARE INFORMATION SYSTEM**” is a bonafide work done by **AMRITA SUKUL (20/10/JC/021)**, **BRIJENDRA YADAV (20/10/JC/011)**, **SARITA KUMARI (20/10/JC/024)**, **SHIVANI (20/10/JC/002)** in partial fulfillment of MCA course and has been carried out under my direct supervision and guidance. It is certified that the declaration made by the students is correct to the best of my knowledge.



Signature of the Supervisor

Dr. VIR BAHADUR SINGH

Professor

School of Computer & Systems Sciences
Jawaharlal Nehru University New Delhi

Date:

Signature of the Supervisor

Dr. PIYUSH PRATAP SINGH

Associate Professor
School of Computer & Systems Sciences
Jawaharlal Nehru University New Delhi
Date:

ACKNOWLEDGEMENT

We have the honour of submitting this project report on "**JNU HEALTHCARE INFORMATION SYSTEM**" for the successful completion of my Master's Degree in Computer Applications (M.C.A) from **JAWAHARLAL NEHRU UNIVERSITY, New Delhi**. I am indebted to my lecturers and department for providing necessary cooperation. My special thanks are conveyed to Hon'ble Dean of the **School of Computer System and Sciences**, Prof. T.V. Vijay Kumar. His special interest in bringing up advancements in this corresponding department helped in concluding the project. An overwhelming thanks to our Supervisor Dr. Piyush Pratap Singh, who played a dynamic role in providing me his helping hand to give the project the complete meaning.

I wish to acknowledge my adorable and enthusiastic guide Prof. V.B. Singh who gave me expertise guidance and valuable cooperation throughout the work. His wise suggestions, mellow criticism and above all unflinching moral support acted as a catalyst in the development and completion of the project. My infinite thanks go to him for enumerable suggestions and helping ascent, guiding me in a right path to complete the project and giving it a final outlook.

Finally, thank one and all who helped us obviously or in disguise for preparation and completion of this work.

Tables of Contents

1. Introduction
2. Problem Definition
3. Process Model
4. Requirements Analysis
 - i. Functional Requirements
 - ii. Non-functional Requirements
5. Data Dictionary
6. Project Plan
7. Modules
 - i. Admin module
 - ii. Doctor module
 - iii. Patient module
 - iv. ChatBot
 - v. Medicine Store
 - vi. About Us
 - vii. Contact Us
8. Data Flow Diagram
 - i. Zero level DFD
 - ii. First Level DFD
 - iii. Second Level DFD
 - iv. Used Case Diagram
 - v. E-R Diagram
9. Testing
10. Conclusion
11. Future Work

INTRODUCTION

A **healthcare information system (HIS)** enables health care organizations to collect, store, manage, analyze, and optimize patient treatment histories and other key data. These systems also enable healthcare providers to easily get information which they can use for improving health service effectiveness and efficiency through better management at all levels of health services. This information can also be used to predict community health trends at macro level.

This information systems provide a common source of information about a patient's health history, and doctors schedule timing. The system has to keep data in a secure place and controls who can reach the data in certain circumstances.

PROBLEM DEFINITION

Since Hospital is associated with the lives of common people and their day-to-day routines so we decided to work on this project. In **JNU** we have a **semi-automatic system** for **healthcare facilities** and most of the work is done manually. The manual handling of the record is time consuming and highly prone to error.

1. Information about Patients is done by just writing the Patients name, age and gender. Whenever the Patient comes up his information is stored freshly.
2. Bills are generated by recording price for each facility provided to patient on a separate sheet and at last they all are summed up.
3. Diagnosis information to patients is generally recorded on the document, which contains Patient information. It is destroyed after some time period to decrease the paper load in the office.
4. Information about various diseases is not kept as any document. Doctors themselves do this job by remembering various medicines.

The **purpose of this project is to fully automate it and make online**, the process of day-to-day activities like

1. **Admission of New Patient (Registration)**
2. **Appointment for the doctor, Assign a doctor**
3. **OPD (Treatment or Refer)**
4. **Patient will get a doctor prescription**
5. **Patient will take medicine**
6. **Discharge of Patient**

7. **Finally, report will be generated** for a particular doctor with the details of patient, the doctor has treated and also the number of patients which has referred

8. **Patient login, Doctor login, Admin login** with different level of authorization

We have tried our best to make the complicated process JNU Healthcare Information System as simple as possible using **Structured & Modular technique**. We have tried to design the software in such a way that user may not have any difficulty in using this package & **further expansion is possible without much effort**. Even though we cannot claim that this work to be entirely exhaustive, the main purpose of our exercise is to perform each Hospital's activity in computerized way rather than manually which is time consuming.

We are confident that this software package can be readily used by non-programming personal avoiding human handled chance of error.

PROCESS MODEL

Here, the process model used for the automation of JNU Healthcare Center to JNU Healthcare Information System (**JHIS**) is **Prototype Model**.

The **Prototyping Model** is one of the most popularly used **Software Development Life Cycle Models (SDLC models)**. This model is used when the customers do not know the exact project requirements beforehand. In this model, a prototype of the end product is first developed, tested and refined as per customer feedback repeatedly till a final acceptable prototype is achieved which forms the basis for developing the final product.

In this process model, the system is partially implemented before or during the analysis phase thereby giving the customers an opportunity to see the product early in the life cycle. The process starts by interviewing the customers and developing the incomplete high-level paper model. This document is used to build the initial prototype supporting only the basic functionality as desired by the customer. Once the customer figures out the problems, the prototype is further refined to eliminate them. The process continues until the user approves the prototype and finds the working model to be satisfactory.

The customers get to see the partial product early in the life cycle. This ensures a greater level of customer satisfaction and comfort.

New requirements can be easily accommodated as there is scope for refinement.

Missing functionalities can be easily figured out.

Errors can be detected much earlier thereby saving a lot of effort and cost, besides enhancing the quality of the software.

The developed prototype can be reused by the developer for more complicated projects in the future.

REQUIREMENT ANALYSIS

User Requirements:

- The dashboard will be accessible with all user types. Here they will perform respective tasks according to their permission levels.
- User needs to create an account to avail all the services.
- Must have a valid id and password for login.

System Requirements:

➤ Hardware Requirements:

- Installed RAM: - 8 GB and above.
- Processor: - Dual core, I3 and above.
- System Type: - 64-bit operating system, x64-based processor
- Processor Speed: - 2.4GHZ
- Monitor: - Color Monitor
- Hard disk: - 200 GB and above.
- Cache: - 512 KB
- Printer: - Laser Printer
- Mouse, Keyboard

➤ Software Requirements:

- Operating System: Windows 10 and above.
- Tools: Django Framework (Python Language)
- Database dbs2lite (Django built-in dB)
- HTML, CSS, Bootstrap

Functional Requirements

It contains registration process, report generation and Database.

- Adding Patients
- Deleting Patients
- Information of the Patients
- Availability of medicine
- Mandatory Patient Information
- Updating information of the Patient

Non-functional Requirements

It contains security, performance, maintainability and reliability.

➤ Security:

- Patient Identification: The system needs the patient to recognize herself or himself while login.
- Login id and Password: Any users who makes use of the system need to hold a login id and password.
- Modifications: Modifications like insert, delete or update in database can be synchronized quickly and executed.
- Administrator Rights: The administrator can view as well as alter any information in the system.

➤ Performance:

- Response Time: The system provides response in just one second.
- Capacity: The system needs to support at least 1000 people at once.
- User-Interface: The user interface acknowledges within five seconds.

- Conformity: The system needs to ensure that the guidelines of the Microsoft accessibilities are followed.

➤ **Maintainability:**

- Back up
- Errors

➤ **Reliability:**

- Availability: The system is available all the time.

DATA DICTIONARY

User:

Username, FirstName, LastName, Staff status

Appointments:

PatientId, DoctorId, PatientName, DoctorName,
AppointmentDate, Description, A_data (Admit Date), Time

Doctors:

User, Profilepic, Address, Mobile, Department

Patient Discharge Details:

PatientId, PatientName, AssignedDoctorName, Address,
MF(Medicine/Refer).

Patient:

User, Profilepic, Address, Mobile, Symptoms, Assigned DoctorId

PROJECT PLAN

Project Planning is part of the project management, which relates to the use of schedules such as Gantt charts to plan and subsequently report progress within the project environment. Initially the project scope is defined and the appropriate methods for completing the project are determined. Following this step, the duration for various tasks necessary to complete this project are listed and grouped into a breakdown structure. Once we examine that the product is feasible, we undertake project planning. The table below describes how we planned our project:

S.No.	Task Name	Duration	Start Date	Finish Date
1.	Planning	10 days	01/03/2022	10/03/2022
2.	Design	21 days	11/03/2022	31/03/2022
3.	Coding	50 days	01/04/2022	20/05/2022
4.	Testing	25 days	21/05/2022	14/06/2022
5.	Delivery	3 days	15/06/2022	18/06/2022

MODULES

Here in total, we have four modules on which we have done our work.

- 1. Registration**
- 2. OPD**
- 3. Medicine Store**
- 4. ChatBot**

But here we are focusing mainly on two modules:

Registration:

Admin registration

Doctor's registration

Patient registration

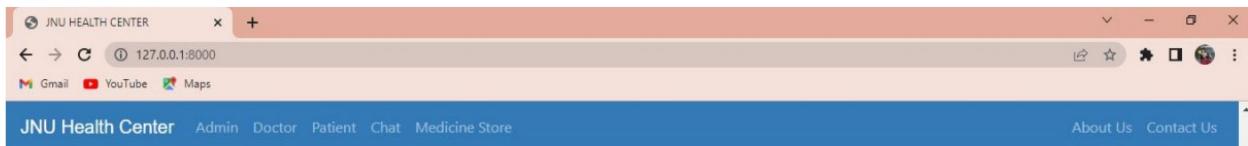
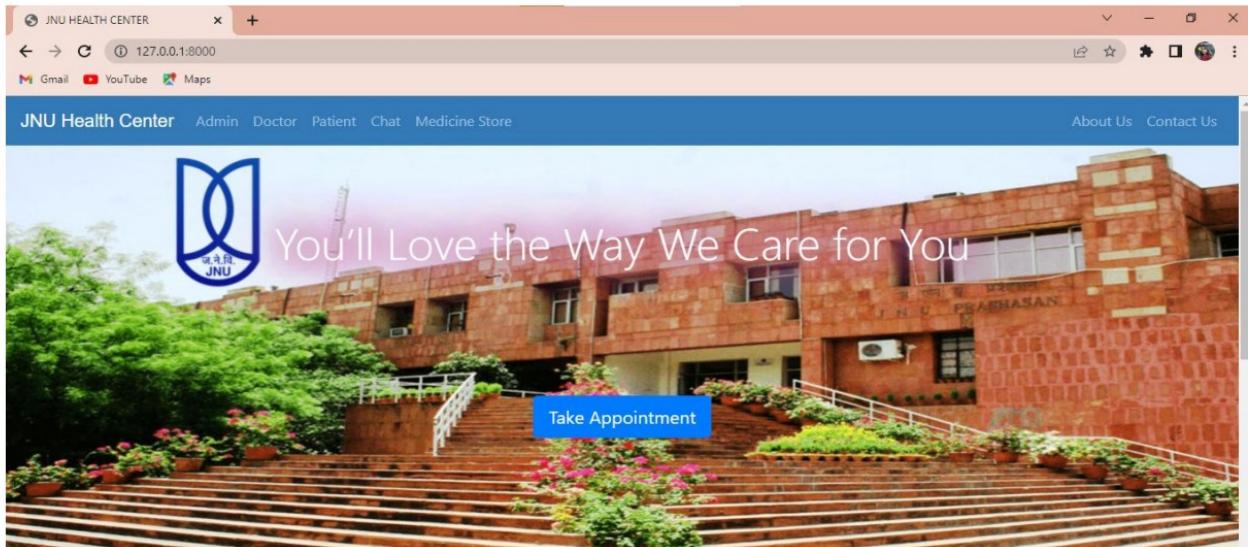
OPD:

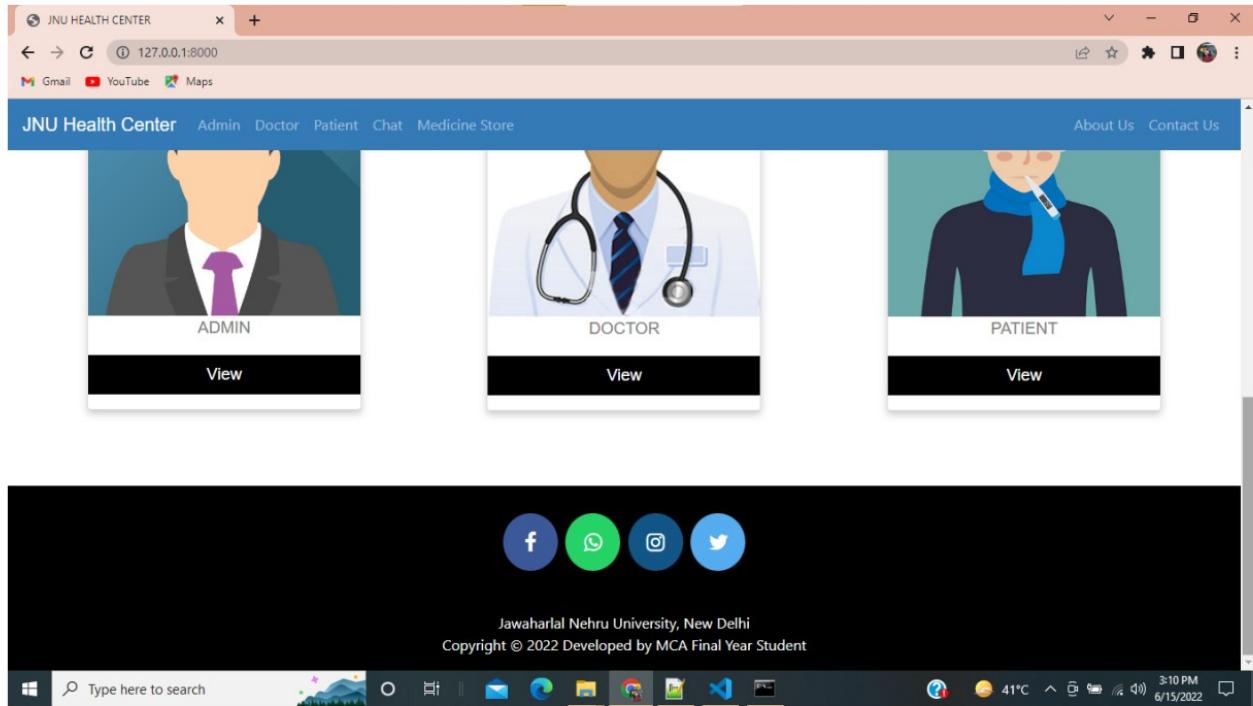
Book Appointment

Generate Report (Refer or given medicine)

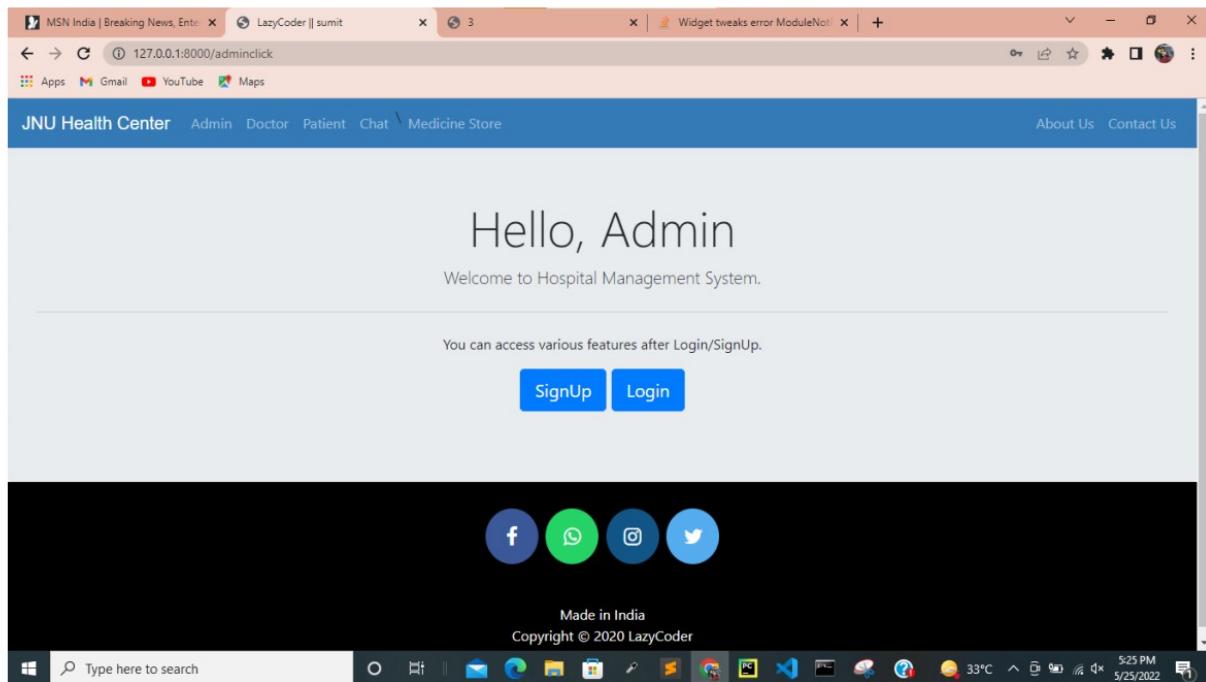
Live status of patient under a particular doctor etc.

Dashboard: It is available to every type of users but they can access their respective module only according to permission levels.





Admin Click: After clicking on admin, it is the first page which is opened and ask for login/signup.



Admin Register: Here admin can be registered if he/she is not registered yet. While registration he/she needs to enter the following details:

- **Name** (First name + Last name)
- **Username**
- **Password**

Add New Admin To Hospital

Sarita Kumari

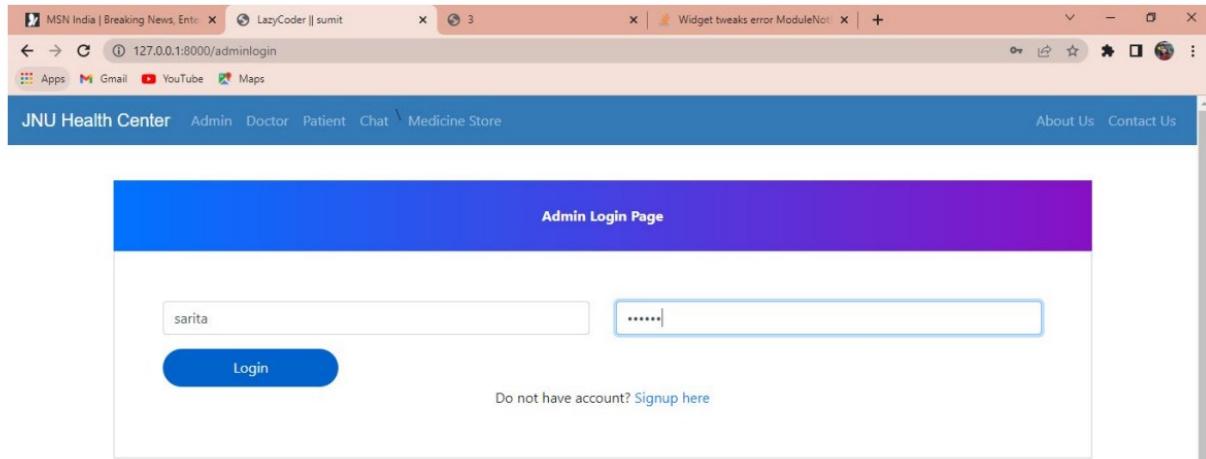
sarita *****

Submit

Already have an account? [Login here](#)

Admin Login: Here admin can login if it is existing user or else it can come here after signup. While login he/she has to enter following details:

- **Username**
- **Password**



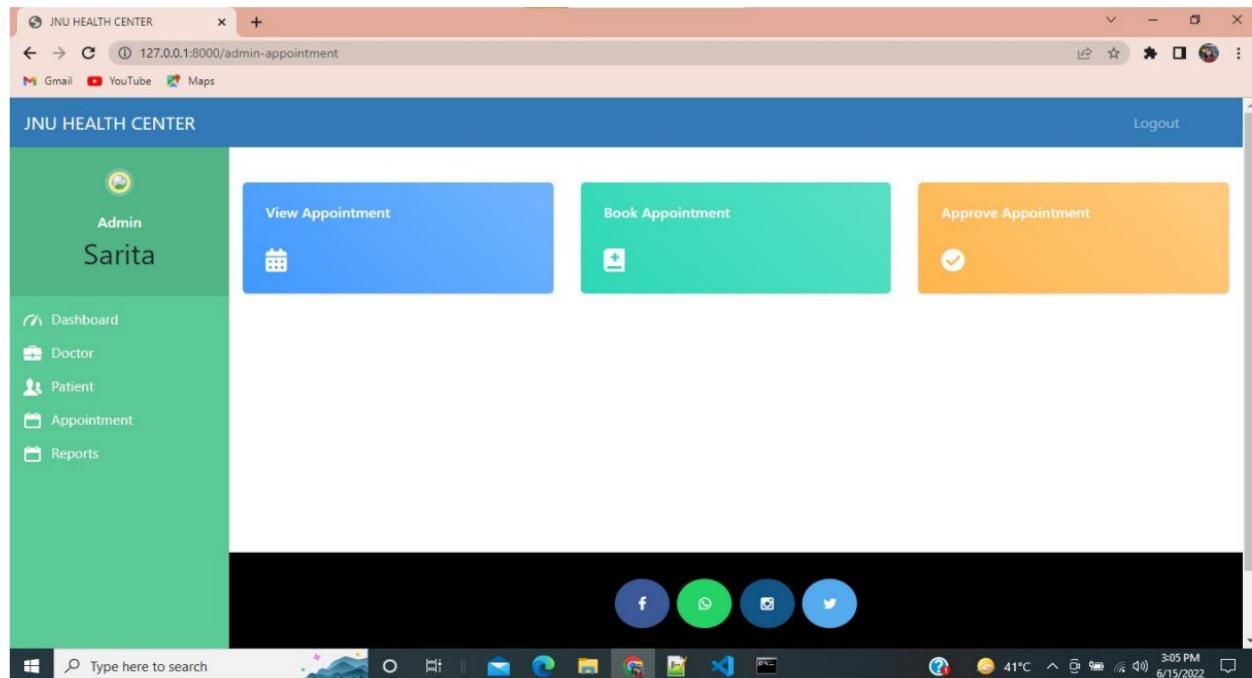
Admin Dashboard: After login this dashboard will open which tells about the **details of doctor, patient and appointments.**

A screenshot of the 'JNU HEALTH CENTER' Admin Dashboard. The dashboard features a sidebar on the left with a green background, displaying the user's name 'Sarita' and navigation links for 'Dashboard', 'Doctor', 'Patient', 'Appointment', and 'Reports'. The main content area has a blue header with the text 'JNU HEALTH CENTER' and a 'Logout' link. Below the header are three cards: 'Total Doctor' (4, Approval Required: 0), 'Total Patient' (6, Wants to Admit: 0), and 'Total Appointment' (9, Approve Appointments: 0). The bottom section contains two tables: 'Recent Doctors' and 'Recent Patient'.

Name	Department	Mobile	Status
kk kumar	Dermatologists	9876543210	Permanent
pk_d kumar	Colon and Rectal Surgeons	7703801967	Permanent
doc1 kumar	Colon and Rectal Surgeons	7703801967	Permanent

Name	Symptoms	Mobile	Address	Status
abc abc	gdfsucy/GQHVKCB	7903256065	gaya	Admitted
shivani	bad	9876543210	delhi	Admitted
Pushkar	Bad	7703801967	Gaya	Admitted

Admin Appointment View: In this part admin can **view, book and approve appointments.**

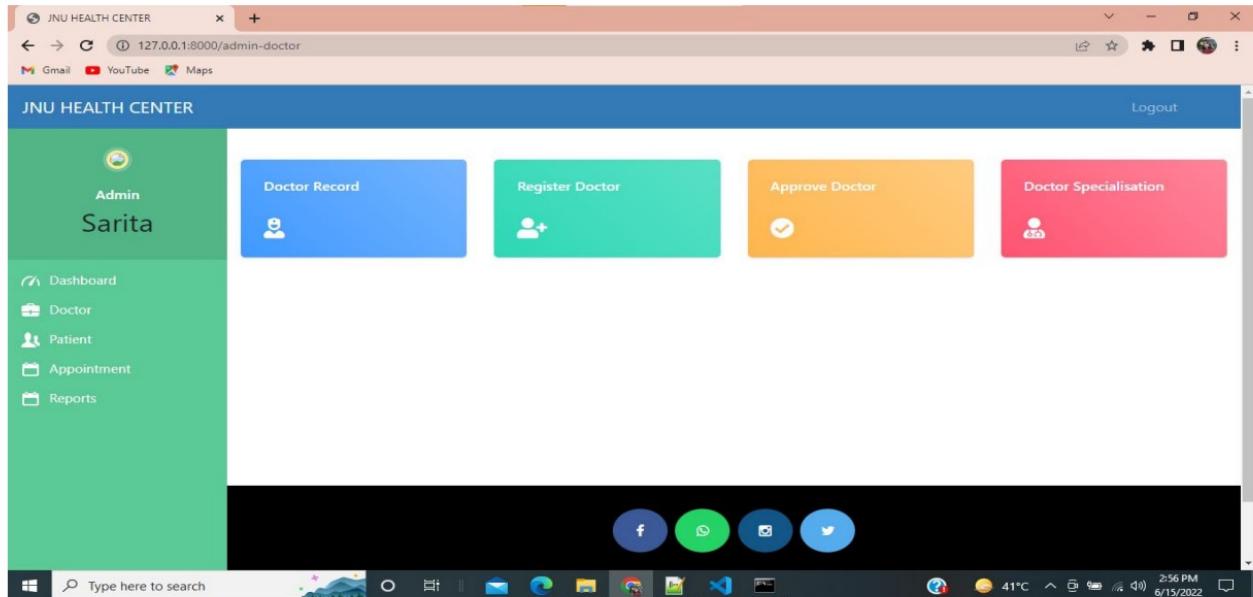


Admin View Appointment:

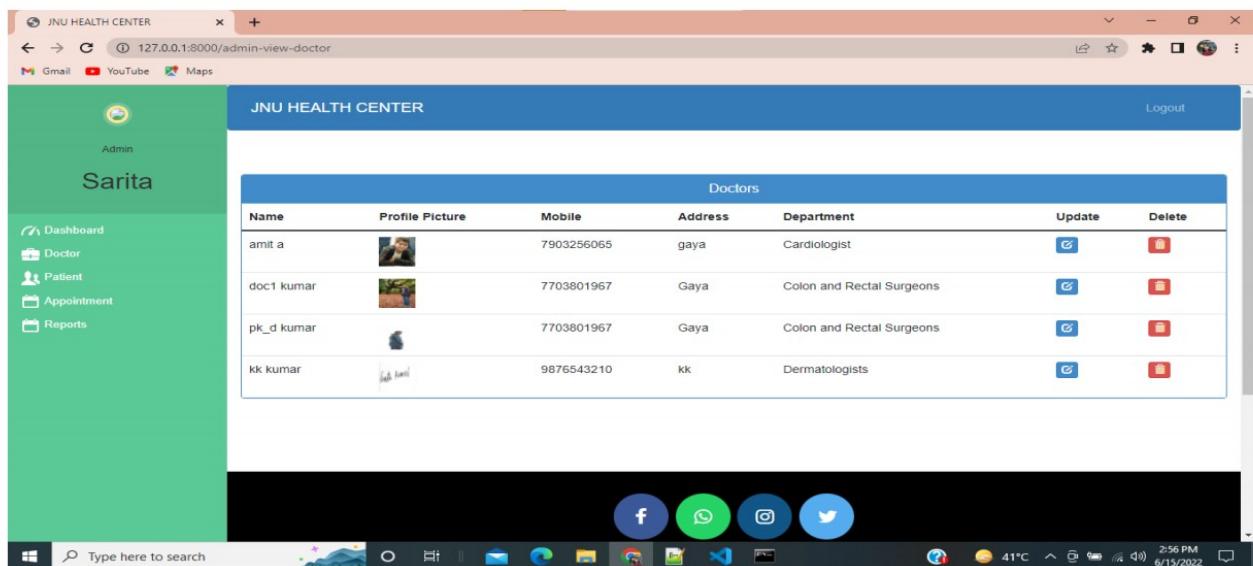
This screenshot shows the 'JNU HEALTH CENTER' web application. The top navigation bar includes a logo, the site name, a search bar with placeholder '127.0.0.1:8000/admin-view-appointment', and a 'Logout' button. Below the header is a sidebar on the left with a green background, showing the user 'Sarita' and icons for Dashboard, Doctor, Patient, Appointment, and Reports. The main content area displays a table titled 'Appointments' with columns for Doctor Name, Patient Name, Description, and Date. The table lists several entries from different doctors (pk_d, doc1) with various patient names and descriptions, along with their respective dates.

Appointments			
Doctor Name	Patient Name	Description	Date
pk_d	pk_p	aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa	April 21, 2022
pk_d	pk_p	i am waiting.	April 26, 2022
pk_d	Pushkar	nose is running	May 12, 2022
doc1	Pushkar	sardykthiukhgfrsfghjklkjgvcxz	May 17, 2022
doc1	shivani	sdfhj	June 1, 2022
pk_d	shivani	Headache	June 6, 2022
kk	shivani	i have an headache	June 6, 2022
kk	abc	pain	June 6, 2022
amit	Pushkar	hddfj	June 11, 2022

Admin Doctor View: Here admin can see **record of all the doctors, register or approve a new doctor.**



Doctor Records: Here admin will see the **list of doctors with details like name, photo, mobile no., address, department and the access to update or delete the doctor's profile.**



Register a doctor: Here admin registers a doctor itself.

While registration admin has to enter the following details:

- **Name** (First name + Last name)
- **Username**
- **Password**
- **Department name**
- **Mobile no.**
- **Address**
- **Recent Photograph**

The screenshot shows a web browser window for the JNU Health Center. The title bar reads "JNU HEALTH CENTER" and the address bar shows "127.0.0.1:8000/admin-add-doctor". The page has a blue header with the title "Add New Doctor To Hospital". On the left, there is a sidebar with a green background labeled "Admin Sarita". The sidebar includes links for Dashboard, Doctor, Patient, Appointment, and Reports. The main content area contains several input fields for registering a doctor:

- Two input fields, both containing "abc".
- A password field containing "abc" and a corresponding field showing "*****".
- A department field containing "Cardiologist" and a mobile number field containing "7903256065".
- A file upload field with "Gaya" selected and a "Choose File" button.
- A "Register" button at the bottom.

The status bar at the bottom shows system information like battery level, temperature (41°C), and date/time (2:57 PM, 6/15/2022).

Approve a doctor: Here the admin will approve a doctor who applied for registration in the JNU health center.

The screenshot shows a web browser window titled "JNU HEALTH CENTER" with the URL "127.0.0.1:8000/admin-approve-doctor". The page has a sidebar on the left labeled "Sarita" with "Admin" and a profile picture. The main content area displays a table titled "Doctors Applied For Registration" with columns: Name, Profile Picture, Mobile, Address, Department, Approve, and Reject. Below the table are social media sharing icons for Facebook, WhatsApp, Instagram, and Twitter. At the bottom, it says "Jawaharlal Nehru University, New Delhi" and "Copyright © 2022 Developed by MCA Final Year Student". The taskbar at the bottom shows various application icons and the date/time "6/15/2022 3:04 PM".

Update a doctor: Here admin updates the doctor details.

The screenshot shows a web browser window titled "JNU HEALTH CENTER" with the URL "127.0.0.1:8000/update-doctor/1". The sidebar "Sarita Admin" is visible. The main area is titled "Update Doctor Details" and contains several input fields: Name (amit), Password (a), Mobile, Address, and Department (Cardiologist). There is also a file upload field showing "Currently: profile_pic/DoctorProfilePic/id1.jpg" with options to "Clear" or "Change" the file. A "Choose File" button and a "No file chosen" message are present. A blue "Update" button is at the bottom. The taskbar at the bottom shows various application icons and the date/time "6/15/2022 2:57 PM".

Doctor Specialization: Here admin will see the list of doctors highlighted with their specializations and the contact number.

The screenshot shows a web browser window titled "JNU HEALTH CENTER" with the URL "127.0.0.1:8000/admin-view-doctor-specialisation". The page has a sidebar on the left with a green header "Sarita" and a list of navigation items: Dashboard, Doctor, Patient, Appointment, Reports. The main content area is titled "Department & Doctors" and contains a table with the following data:

Department	Doctor Name	Mobile
Cardiologist	amit a	7903256065
Colon and Rectal Surgeons	doc1 kumar	7703801967
Colon and Rectal Surgeons	pk_d kumar	7703801967
Dermatologists	kk kumar	9876543210
Cardiologist	Anokhi Singh	7903256065

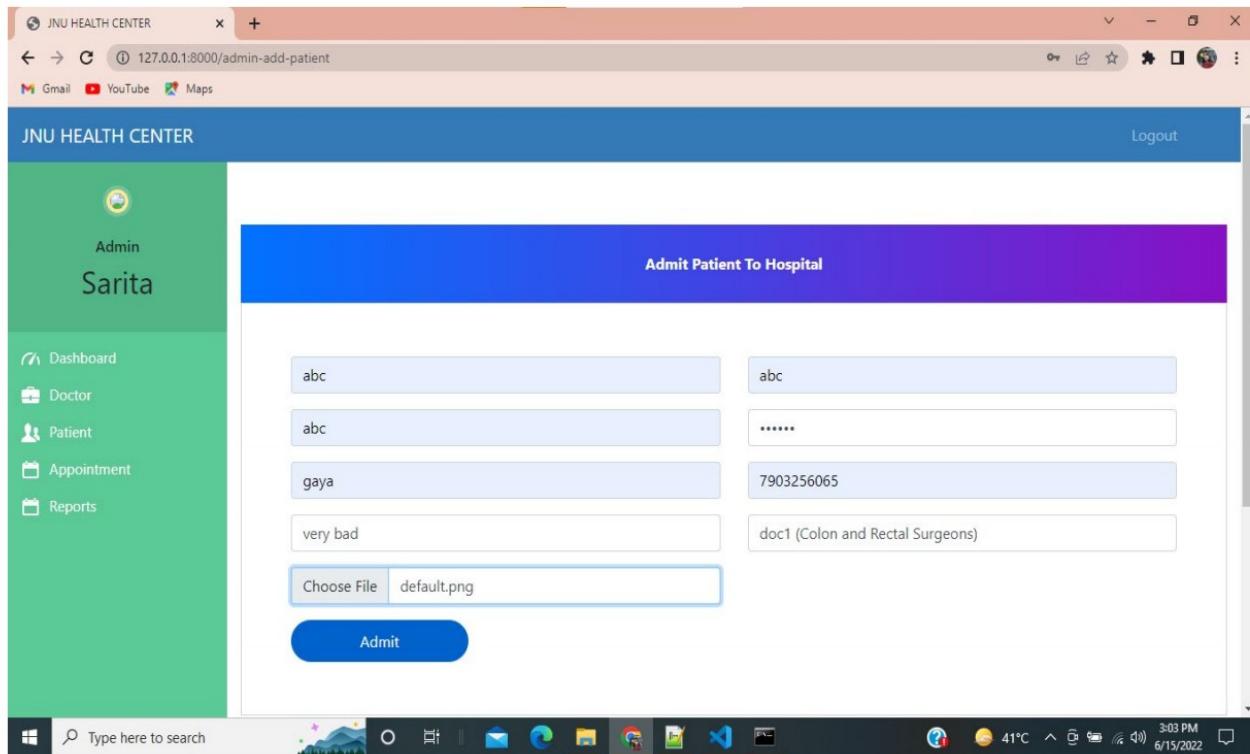
At the bottom of the page are social media sharing icons for Facebook, WhatsApp, Instagram, and Twitter.

Admin Patient View: Here admin can view all the records of patient, admit or discharge the patient and can approve a patient.

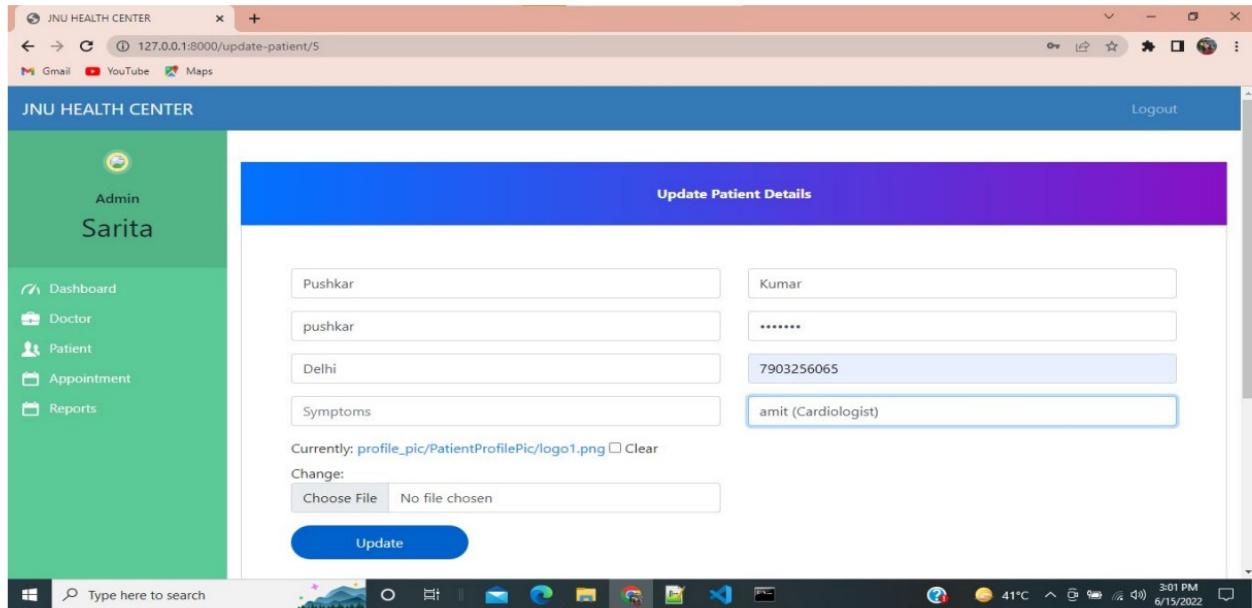
The screenshot shows a web browser window titled "JNU HEALTH CENTER" with the URL "127.0.0.1:8000/admin-patient". The page has a sidebar on the left with a green header "Sarita" and a list of navigation items: Dashboard, Doctor, Patient, Appointment, Reports. The main content area features four large, colored buttons: "Patient Record" (blue), "Admit Patient" (green), "Approve Patient" (orange), and "Discharge Patient" (red). At the bottom of the page are social media sharing icons for Facebook, WhatsApp, Instagram, and Twitter.

Admin register a Patient: Here admin registers a patient and while registration admin has to enter the following details:

- **Name (First name + Last name)**
- **Username**
- **Password**
- **Symptoms**
- **Related Department**
- **Recent Photograph**



Update a Patient: Here admin can update the patient details.



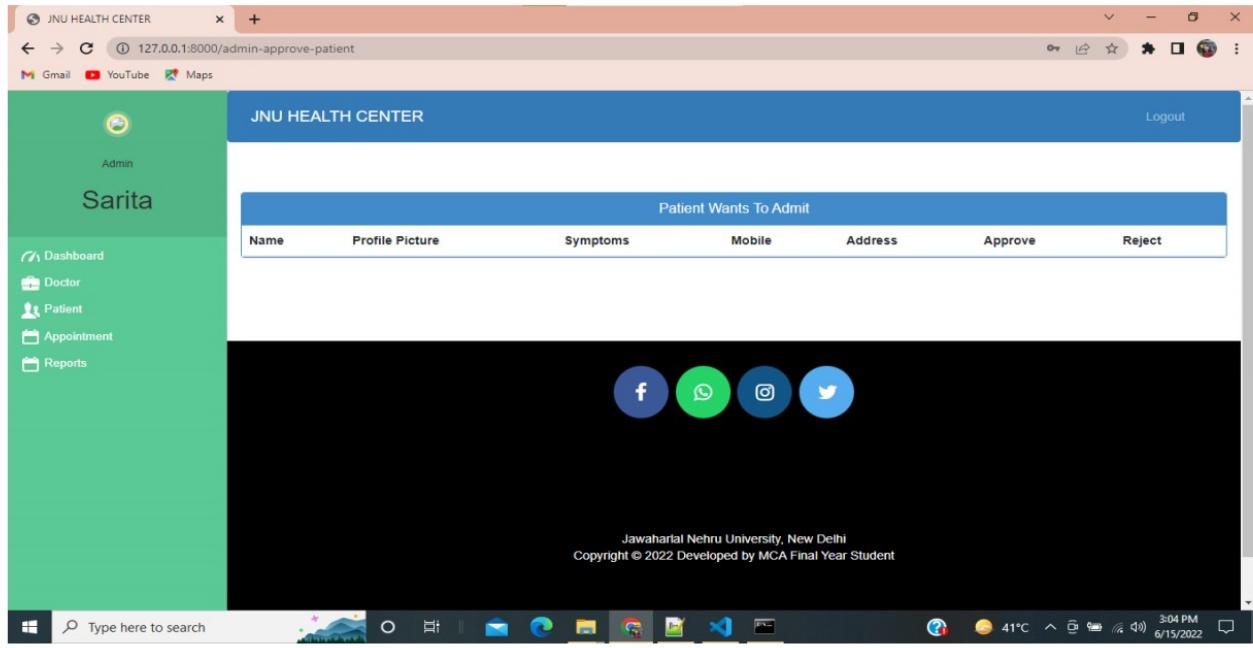
Patient List: Here admin will see the list of patients with details like name, photo, symptoms, mobile no., address, and the option to update or delete.

The screenshot shows a web browser window titled 'JNU HEALTH CENTER'. The URL is 127.0.0.1:8000/admin-view-patient. The sidebar for 'Admin Sarita' is identical to the previous screenshot. The main content area displays a table titled 'Patient' with columns: Name, Profile Picture, Symptoms, Mobile, Address, Update, and Delete. The table contains six rows of data:

Name	Profile Picture	Symptoms	Mobile	Address	Update	Delete
pk_pk		bad	7260839439	gaya		
pk_p kumar		good	7703801967	Gaya		
amit a		eye	7703801967	gaya		
Pushkar Kumar		Bad	7703801967	Gaya		
shivani kumari		bad	9876543210	delhi		
abc abc		gdfsucyiGQHVKCB	7903256065	gaya		

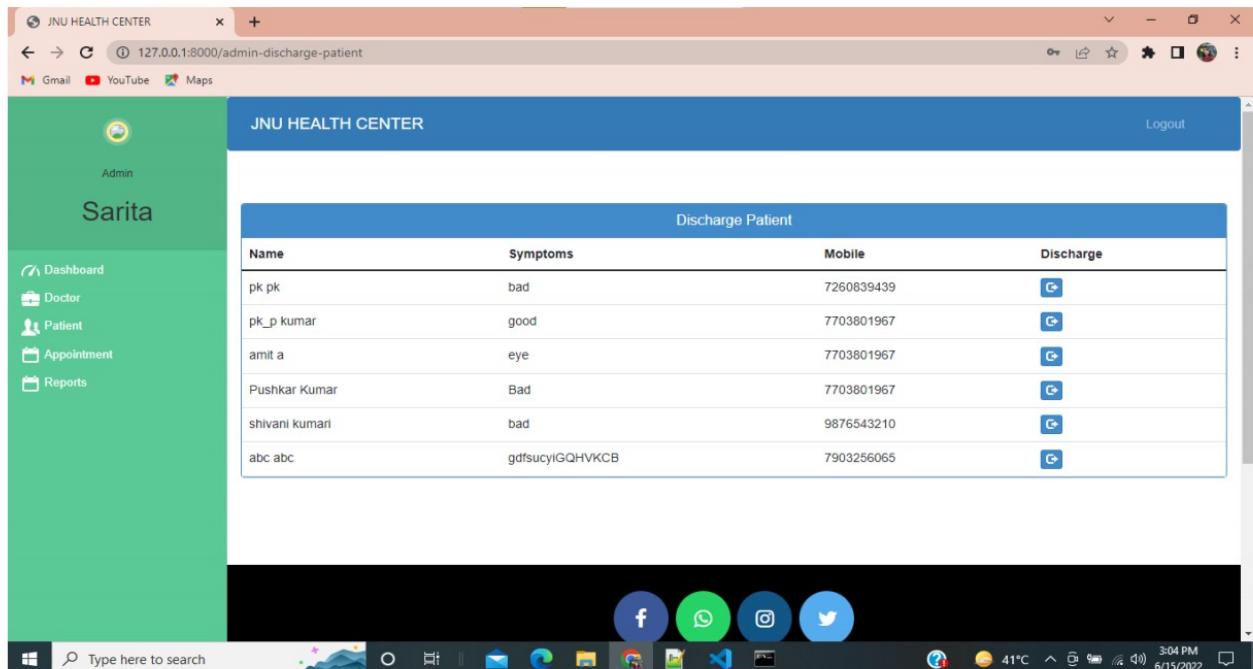
The status bar at the bottom shows the date and time: 6/15/2022, 3:01 PM, 41°C.

Admit Patient: Here admin can approve/reject the request made by patient to admit.



The screenshot shows a web browser window titled "JNU HEALTH CENTER" with the URL "127.0.0.1:8000/admin-approve-patient". The page has a green sidebar on the left labeled "Sarita" with "Admin" selected. The main content area is titled "Patient Wants To Admit" and contains a table with columns: Name, Profile Picture, Symptoms, Mobile, Address, Approve, and Reject. Below the table are social media sharing icons for Facebook, WhatsApp, Instagram, and Twitter. At the bottom of the page, it says "Jawaharlal Nehru University, New Delhi" and "Copyright © 2022 Developed by MCA Final Year Student". The Windows taskbar at the bottom shows various pinned icons and the date/time as 6/15/2022, 3:04 PM.

Discharge Patient: Here admin will discharge a patient.



The screenshot shows a web browser window titled "JNU HEALTH CENTER" with the URL "127.0.0.1:8000/admin-discharge-patient". The page has a green sidebar on the left labeled "Sarita" with "Admin" selected. The main content area is titled "Discharge Patient" and contains a table with columns: Name, Symptoms, Mobile, and Discharge. The table lists several patients with their names, symptoms, mobile numbers, and a "Discharge" button. Below the table are social media sharing icons for Facebook, WhatsApp, Instagram, and Twitter. At the bottom of the page, it says "Jawaharlal Nehru University, New Delhi" and "Copyright © 2022 Developed by MCA Final Year Student". The Windows taskbar at the bottom shows various pinned icons and the date/time as 6/15/2022, 3:04 PM.

Referred/Admitted Patient: Here admin can see the record of admitted and referred patient.

The screenshot shows a web browser window for the JNU Health Center. The URL is 127.0.0.1:8000/report_dashboard. The interface includes a sidebar on the left with icons for Dashboard, Doctor, Patient, Appointment, and Reports. The main area displays a message about referred patients and treatment counts, followed by a table of patient records.

JNU HEALTH CENTER

Logout

Admin

Sarita

Count of Referred patients = 43

Count of patients with Treatment = 17

Patient Referred Records				
PatientId	Patient Name	AssignedDoctor	AdmitDate	Mobile No
6	shivani kumari	pk_d	May 23, 2022	9876543210
3	pk_p kumar	pk_d	April 19, 2022	7703801967
3	pk_p kumar	pk_d	April 19, 2022	7703801967
3	pk_p kumar	pk_d	April 19, 2022	7703801967
3	pk_p kumar	pk_d	April 19, 2022	7703801967
3	pk_p kumar	pk_d	April 19, 2022	7703801967
3	pk_p kumar	pk_d	April 19, 2022	7703801967
3	pk_p kumar	pk_d	April 19, 2022	7703801967
3	pk_p kumar	pk_d	April 19, 2022	7703801967
3	pk_p kumar	pk_d	April 19, 2022	7703801967
3	pk_p kumar	pk_d	April 19, 2022	7703801967
3	pk_p kumar	pk_d	April 19, 2022	7703801967

AQI 148 11:04 AM 6/15/2022

The screenshot shows a web application interface for a health center. The top navigation bar includes links for Gmail, YouTube, and Maps. The main content area displays patient records and treatment details.

Sarita (User Profile)

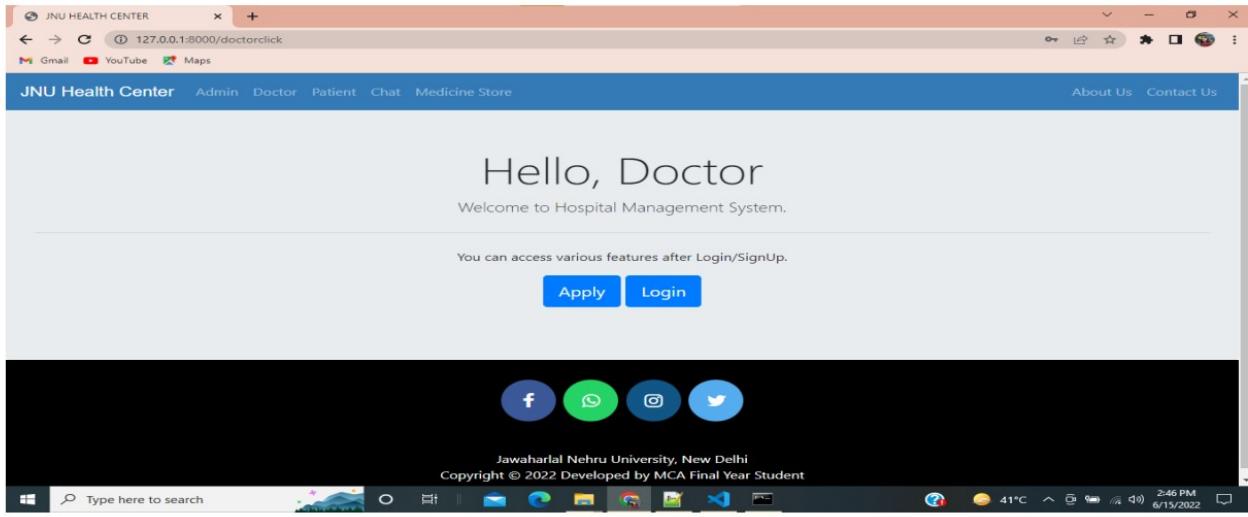
Patient Records With Treatment

PatientId	Patient Name	AssignedDoctor	AdmitDate	Mobile No
5	Pushkar Kumar	pk_d	May 12, 2022	7703801967
4	amit a	pk_d	April 19, 2022	7703801967
4	amit a	pk_d	April 19, 2022	7703801967
4	amit a	pk_d	April 19, 2022	7703801967
4	amit a	pk_d	April 19, 2022	7703801967
4	amit a	pk_d	April 19, 2022	7703801967
4	amit a	pk_d	April 19, 2022	7703801967
4	amit a	pk_d	April 19, 2022	7703801967
4	amit a	pk_d	April 19, 2022	7703801967
3	pk_p kumar	pk_d	April 19, 2022	7703801967
5	Pushkar Kumar	pk_d	May 12, 2022	7703801967

Left Sidebar: Includes links for Dashboard, Doctor, Patient, Appointment, and Reports.

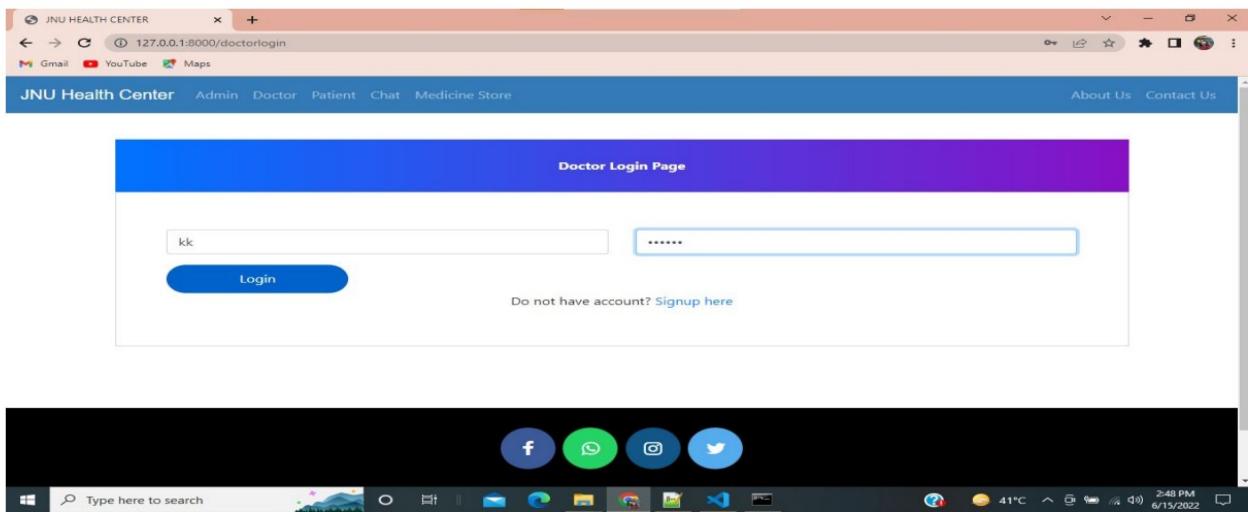
Bottom Bar: Includes a search bar, system icons (Windows, Network, Task View, Mail, File Explorer, Edge, Photos, Control Panel), and system status (CPU: AQI 148, RAM: 6/15/2022, Battery: 11:04 AM).

Doctor Click: After clicking on doctor, it is the first page you will see and it **asks for apply or login.**



Doctors Login View: Here doctor can login if he is already registered or else, he/she can sign up. While login doctor needs to enter following details:

- Username
- Password



Doctor Registration View: Here a doctor can register if he/she has not registered yet and can login if approved by admin. While registration he/she needs to enter the following details:

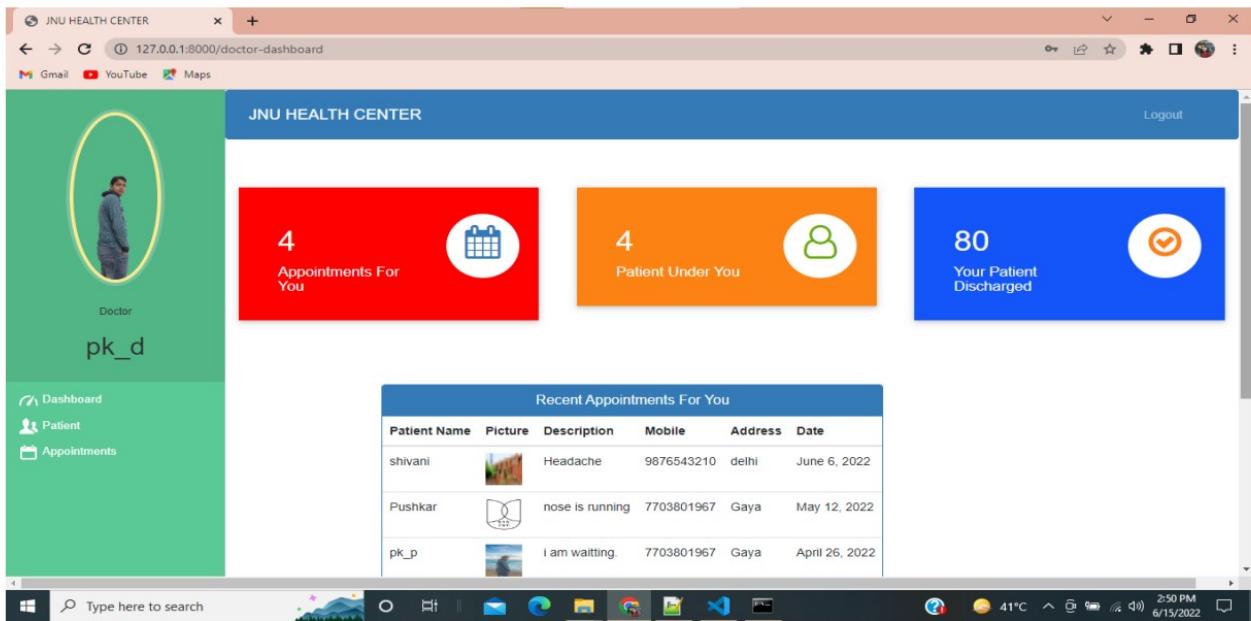
- **Name** (First name + Last name)
- **Username**
- **Password**
- **Department name**
- **Mobile no.**
- **Address**
- **Recent Photograph**

The screenshot shows a web browser window titled "JNU HEALTH CENTER" with the URL "127.0.0.1:8000/doctorssignup". The page has a blue header bar with the "JNU Health Center" logo and navigation links for Admin, Doctor, Patient, Chat, and Medicine Store. On the right side of the header are links for About Us and Contact Us. The main content area has a purple header bar with the text "Register In Hospital". Below it is a form with the following fields:

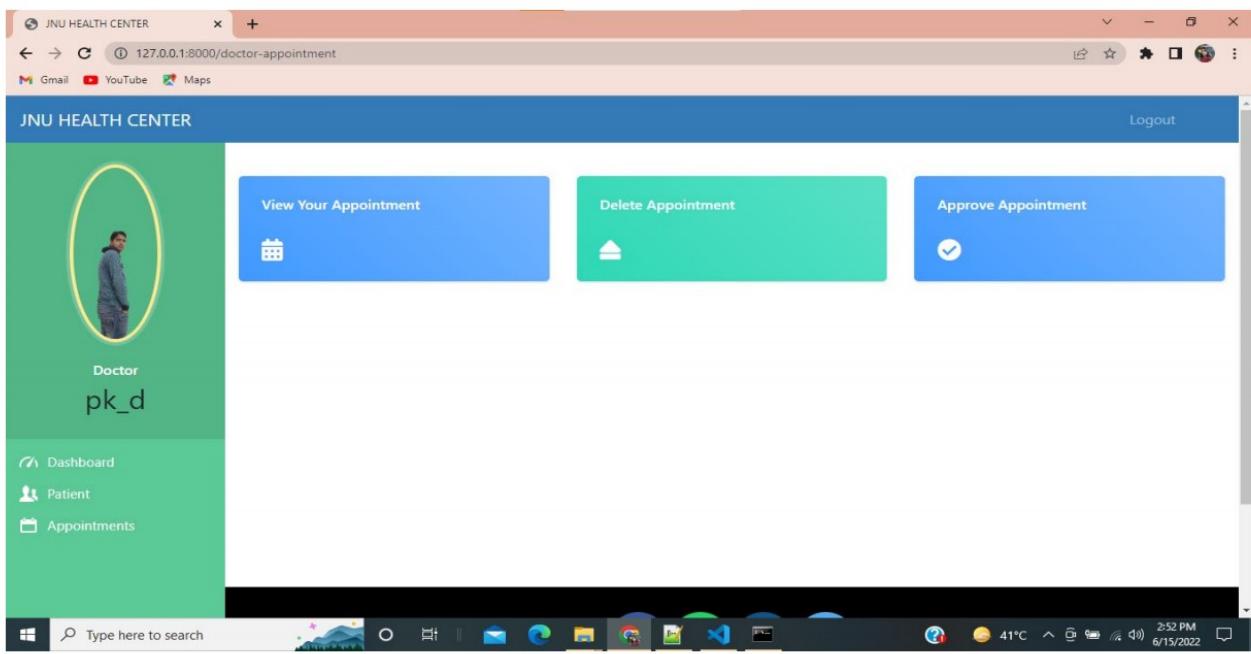
- First Name: Aman
- Last Name: singh
- Username: aman
- Password: ****
- Department: Cardiologist
- Mobile Number: 7903256065
- Address: Delhi
- Photograph: Choose File default.png

A blue "Register" button is at the bottom left, and a link "Already have an account? Login here" is at the bottom right. The browser's taskbar at the bottom shows various open applications and the system clock.

Doctor Dashboard: After login such a dashboard will open. It shows the **appointments and patient history allotted under him.**



Doctor Appointments:



Doctor View Appointments: Here doctor will see the appointments allocated under him.

The screenshot shows a web browser window titled "JNU HEALTH CENTER" at the URL "127.0.0.1:8000/doctor-view-appointment". The interface includes a sidebar on the left with a doctor's profile picture (circled in yellow), the text "pk_d", and navigation links for "Dashboard", "Patient", and "Appointments". The main content area is titled "Your Appointments" and displays a table with the following data:

Patient Name	Picture	Description	Mobile	Address	Appointment Date	Medicine	Refer
pk_p		aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa	7703801967	Gaya	April 21, 2022	View	Edit
pk_p		i am waiting.	7703801967	Gaya	April 26, 2022	View	Edit
Pushkar		nose is running	9876543210	delhi	May 12, 2022	View	Edit

The status bar at the bottom shows "2:53 PM" and the date "6/15/2022".

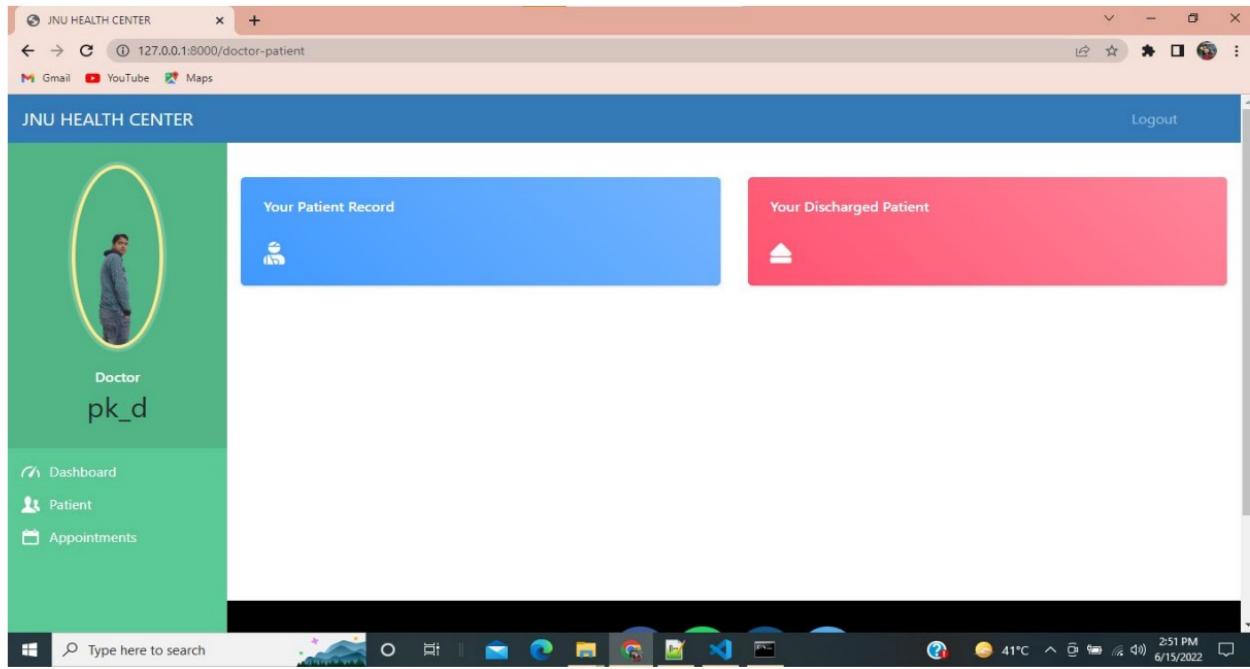
Doctor Delete Appointments: Here doctor can **delete the appointments** if he is not available.

The screenshot shows a web browser window titled "JNU HEALTH CENTER" at the URL "127.0.0.1:8000/doctor-delete-appointment". The interface is similar to the previous one, with a sidebar for the doctor "pk_d". The main content area is titled "Delete Your Appointments" and displays a table with the following data:

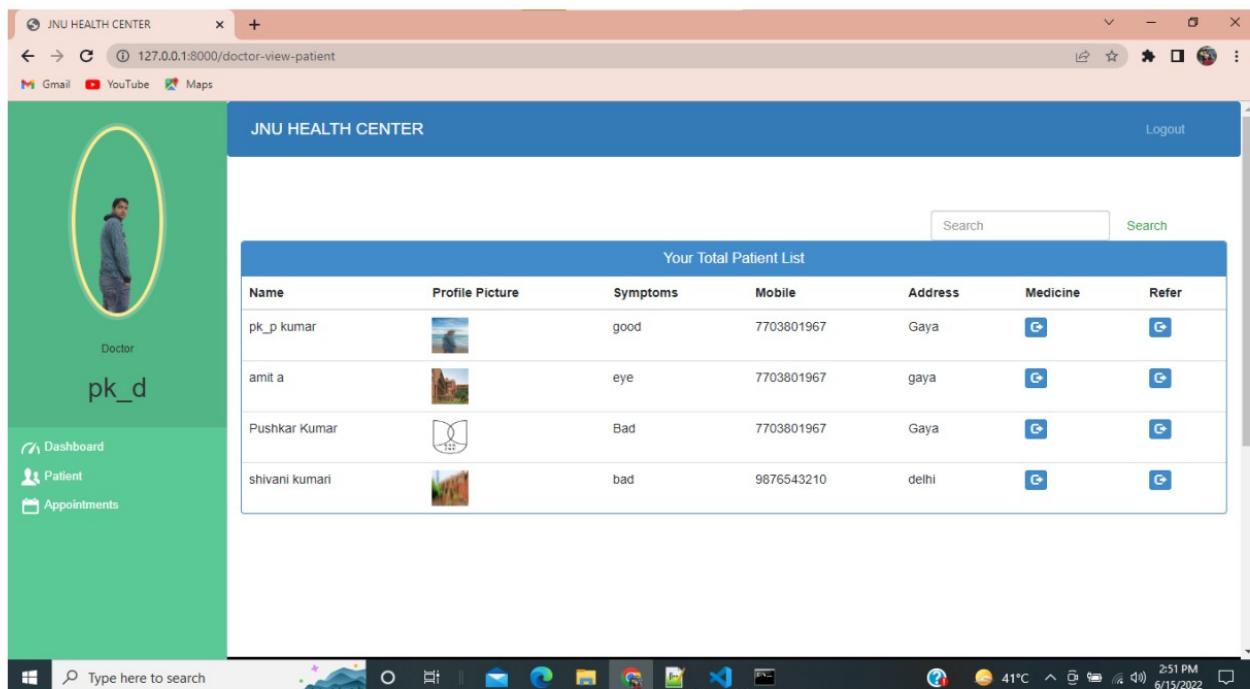
Patient Name	Picture	Description	Delete
pk_p		aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa	Delete
pk_p		i am waiting.	Delete
Pushkar		nose is running	Delete

The status bar at the bottom shows "2:53 PM" and the date "6/15/2022".

Doctor Patient view: Here doctor can see patient records.



Doctor View Patient List: Here doctor will see the list of all the patient's admitted under him.



Doctor Discharged Patient List:

The screenshot shows a web browser window titled "JNU HEALTH CENTER" at the URL "127.0.0.1:8000/doctor-view-discharge-patient". The left sidebar has a green background with a doctor's profile picture and the text "pk_d". The main content area displays a table titled "Your Discharged Patient List" with columns: Name, Admit Date, Release Date, Symptoms, Mobile, and M/F. The table contains 10 rows of patient data, all of whom are listed as having "eye" symptoms and "7703801967" as their mobile number. The bottom status bar shows system information like "41°C" and the date "6/15/2022".

Name	Admit Date	Release Date	Symptoms	Mobile	M/F
pk_p kumar	April 19, 2022	April 19, 2022	good	7703801967	None
pk_p kumar	April 19, 2022	May 4, 2022	good	7703801967	None
pk_p kumar	April 19, 2022	May 5, 2022	good	7703801967	None
amit a	April 19, 2022	May 5, 2022	eye	7703801967	None
amit a	April 19, 2022	May 5, 2022	eye	7703801967	None
amit a	April 19, 2022	May 5, 2022	eye	7703801967	None
amit a	April 19, 2022	May 5, 2022	eye	7703801967	None
amit a	April 19, 2022	May 5, 2022	eye	7703801967	None
amit a	April 19, 2022	May 5, 2022	eye	7703801967	None

Doctor Gives Medicine to Patient: Here doctor will write the medicine to a patient.

The screenshot shows a web browser window titled "JNU HEALTH CENTER" at the URL "127.0.0.1:8000/discharge-patient/6". The left sidebar has a green background with a doctor's profile picture and the text "pk_d". The main content area displays patient details: "Patient Name : shivani kumari", "Patient Mobile : 9876543210", "Patient Address : delhi", "Admit Date: June 15, 2022", "Release Date: June 15, 2022", and "Spent:0". Below this, it shows "Doctor Name : pk_d". Under "Disease and Symptoms", there is a text input field containing "bad". Under "Medicine", there is a text input field containing "Azithromycin" and a "Generate Report" button. The bottom status bar shows system information like "41°C" and the date "6/15/2022".

Doctor Generate Report:

JNU HEALTH CENTER

Logout

Profile Pic

Doctor
pk_d

Dashboard

Patient

Appointments

JNU Health Center

Patient Name : shivani kumari
Patient Mobile : 9876543210
Patient Address : delhi

Admit Date: June 15, 2022
Release Date: June 15, 2022
Spent:0

Doctor Name :
pk_d

Disease and Symptoms
bad

Medicine List

Medicine Name
Azithromycin

Type here to search

3:12 PM 6/15/2022

Doctor Refer a Patient: Here doctor can refer a patient.

JNU HEALTH CENTER

Logout

Profile Pic

Doctor
pk_d

Dashboard

Patient

Appointments

JNU Health Center

Patient Name : Pushkar Kumar
Patient Mobile : 7703801967
Patient Address : Gaya

Admit Date: May 12, 2022
Release Date: June 15, 2022
Spent:34

Symptoms: Bad

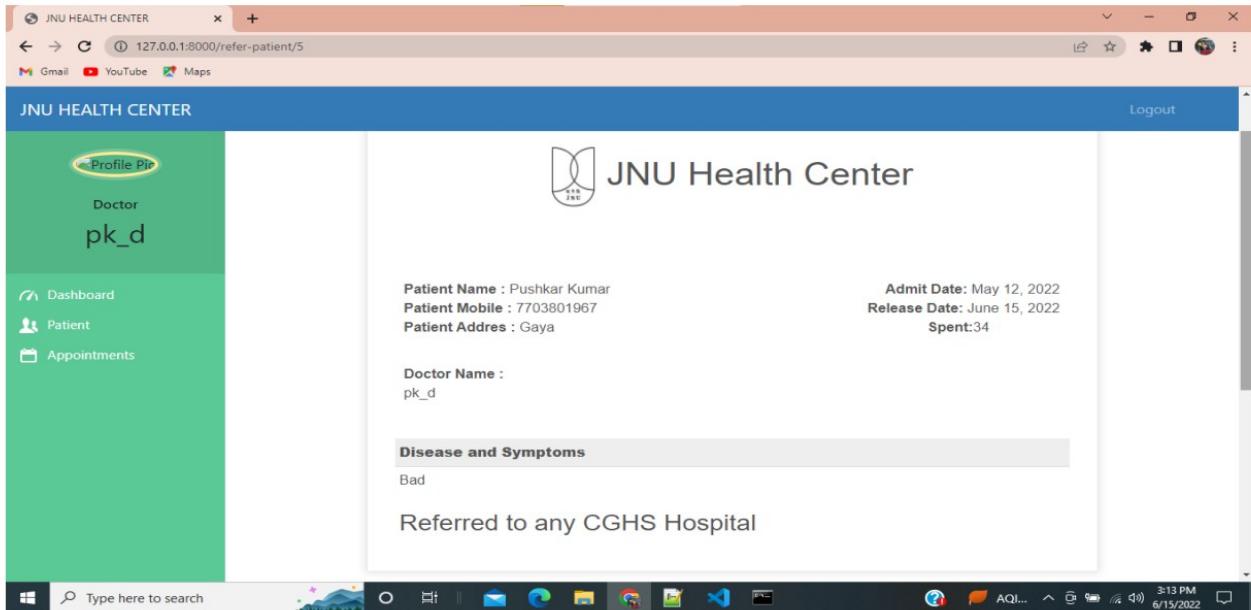
Referred to any CGHS Hospital

Generate Report

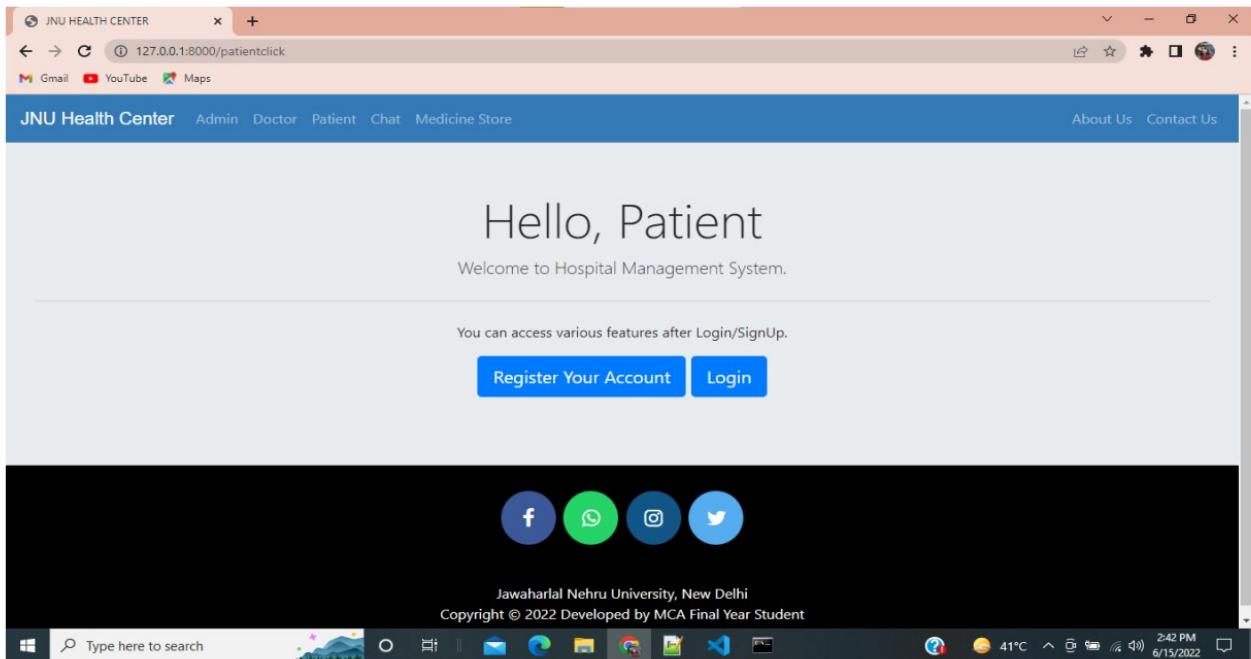
Type here to search

3:13 PM 6/15/2022

Doctor Generated Referral: Referral by a doctor for any other hospital.

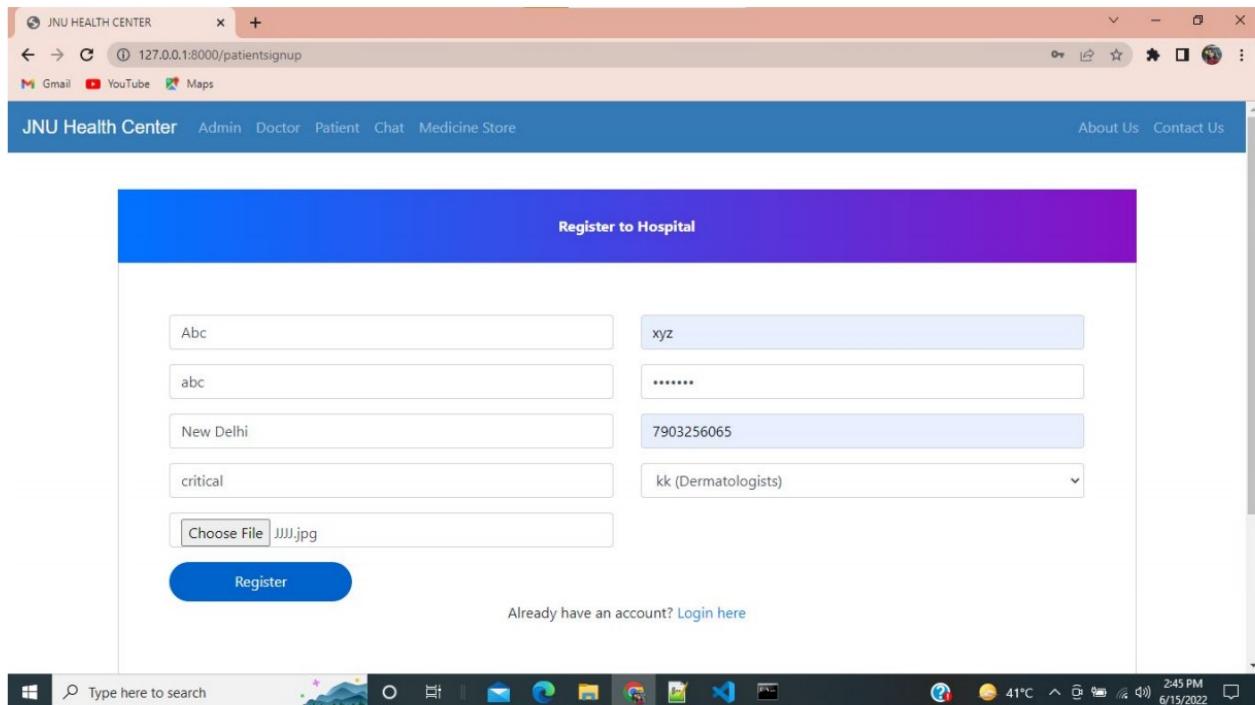


Patient click: After clicking on patient, it is the first page and ask for **register your account/login**.



Patient Registration View: Here a new patient can register itself if he/she is first-time user here or else he/she can login directly. While registration he/she needs to enter the following details:

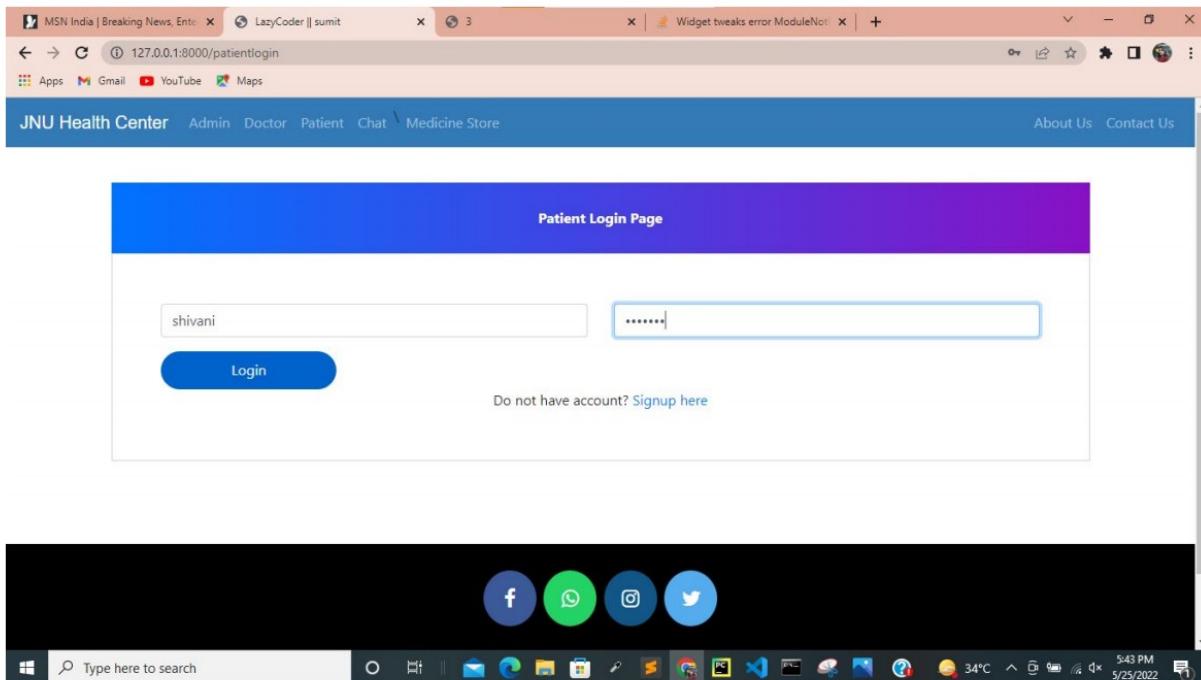
- **Name (First name + Last name)**
- **Username**
- **Password**
- **Symptoms**
- **Related Department**
- **Recent Photograph**



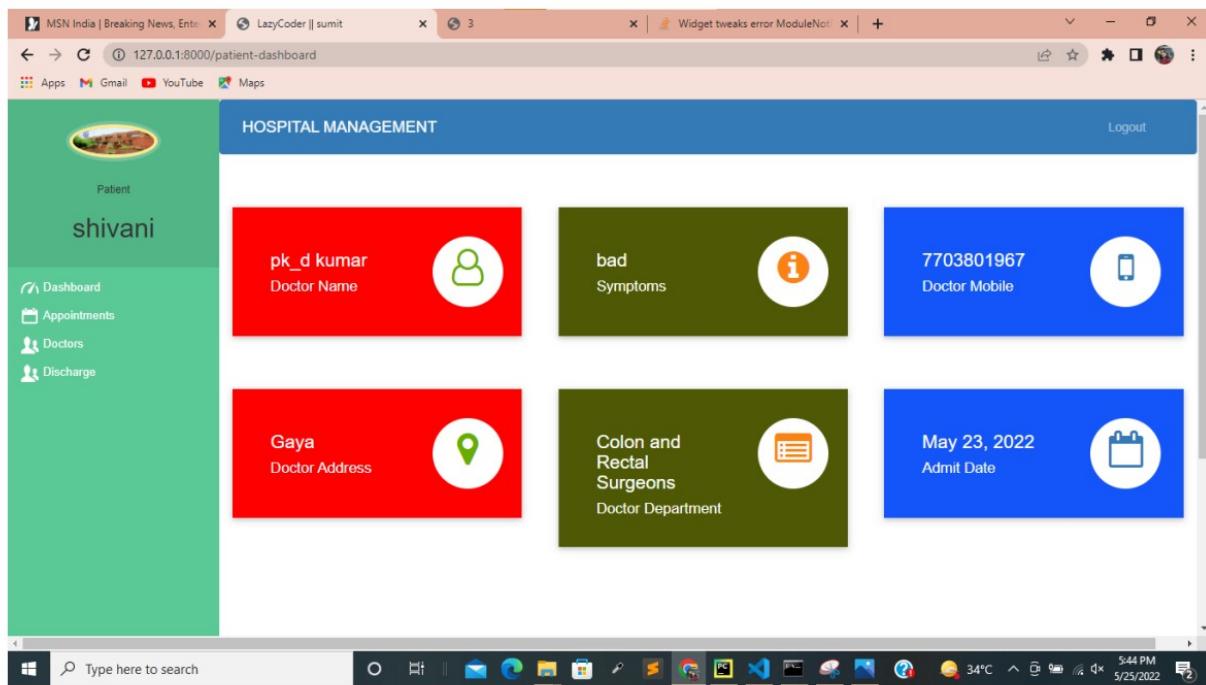
The screenshot shows a web browser window for the JNU Health Center. The title bar reads "JNU HEALTH CENTER". The address bar shows the URL "127.0.0.1:8000/patientsignup". The page header includes links for "Gmail", "YouTube", and "Maps", along with "About Us" and "Contact Us". The main content area has a blue header bar with the text "Register to Hospital". Below this are several input fields: two text fields (one containing "Abc", one containing "xyz"), two password fields (one containing "abc", one containing "*****"), two text fields (one containing "New Delhi", one containing "7903256065"), a dropdown menu set to "kk (Dermatologists)", and a file upload field labeled "Choose File" with "JJJ.jpg" selected. At the bottom left is a blue "Register" button. A note at the bottom center says "Already have an account? [Login here](#)". The taskbar at the bottom of the screen shows various open applications and system icons.

Patient Login View: Here patient can login if he/she is already registered or else he/she can go to sign up. While login the patient needs to enter following details:

- Username
- Password



Patient Dashboard: This dashboard will open after patient login successfully and here all the **details related to that patient will be shown like mobile no., address, admit date, symptoms, assigned doctor name and his department.**

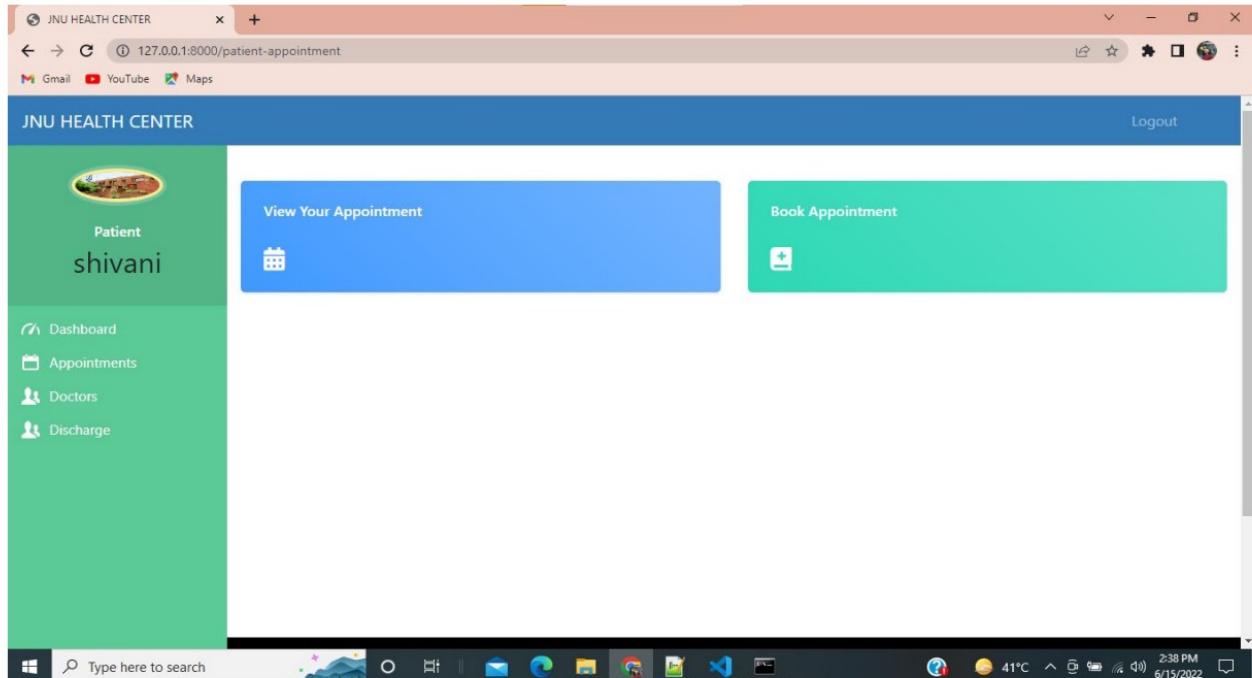


Patient view Doctor: Here patient views doctor list.

The screenshot shows a page titled "JNU HEALTH CENTER" where a patient can view a list of doctors. The left sidebar is identical to the previous dashboard, showing "Patient shivani" and links for "Dashboard", "Appointments", "Doctors", and "Discharge". The main content area is titled "Total Doctor List" and contains a table with the following data:

Name	Profile Picture	Mobile	Address	Department
amit a		7903256065	gaya	Cardiologist
doc1 kumar		7703801967	Gaya	Colon and Rectal Surgeons
pk_d kumar		7703801967	Gaya	Colon and Rectal Surgeons
kk kumar		9876543210	kk	Dermatologists

Patient Appointment Details: Here patient can view all the details related to appointments like status of appointment whether it is approved or not and also, he can book a new appointment.



Patient Own View Appointment Status: Here the status of patient appointment is shown whether it is confirmed or pending.

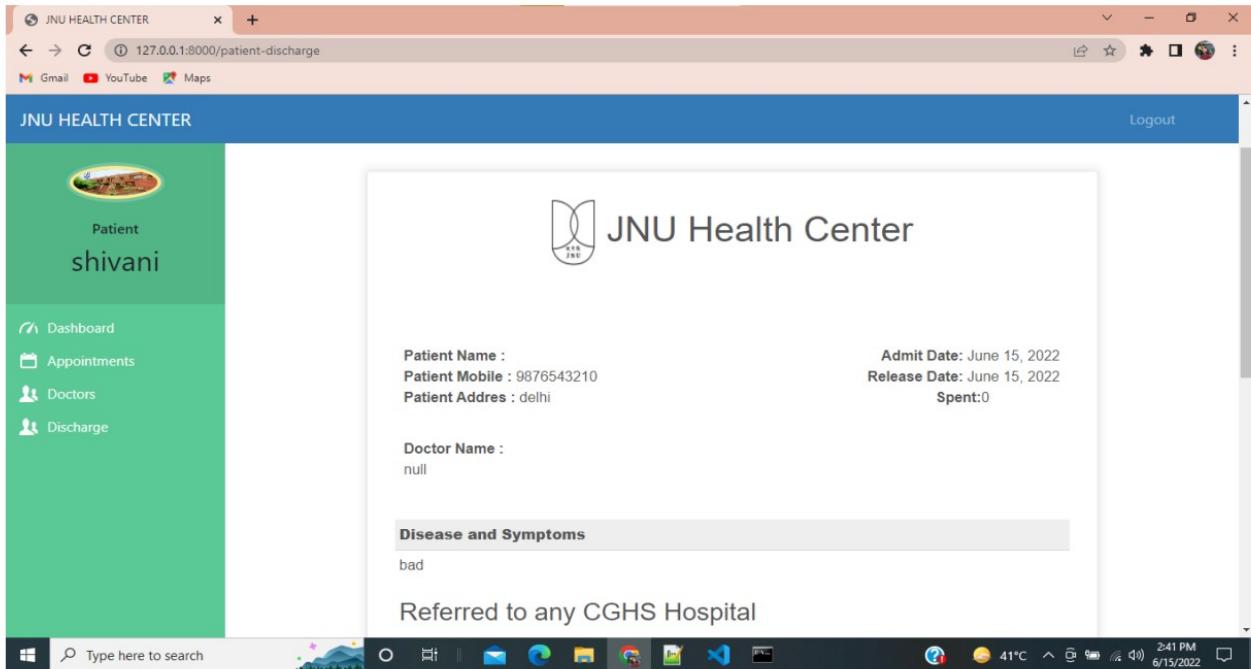
The screenshot shows a web-based hospital management system. On the left, a green sidebar for 'Patient shivani' includes links for Dashboard, Appointments, Doctors, and Discharge. The main content area is titled 'HOSPITAL MANAGEMENT' and shows a table of 'Your Appointments'. The table has columns for Doctor Name, Description, Date, and Status. It lists two entries: 'kk' with 'i have fever' and 'May 23, 2022' status 'Confirmed', and 'doc1' with 'sdfhj' and 'May 23, 2022' status 'Pending'. Below the table is a black footer bar with social media icons for Facebook, WhatsApp, Instagram, and Twitter.

Patient Book Appointment: Here patient can book an appointment by entering the following details:

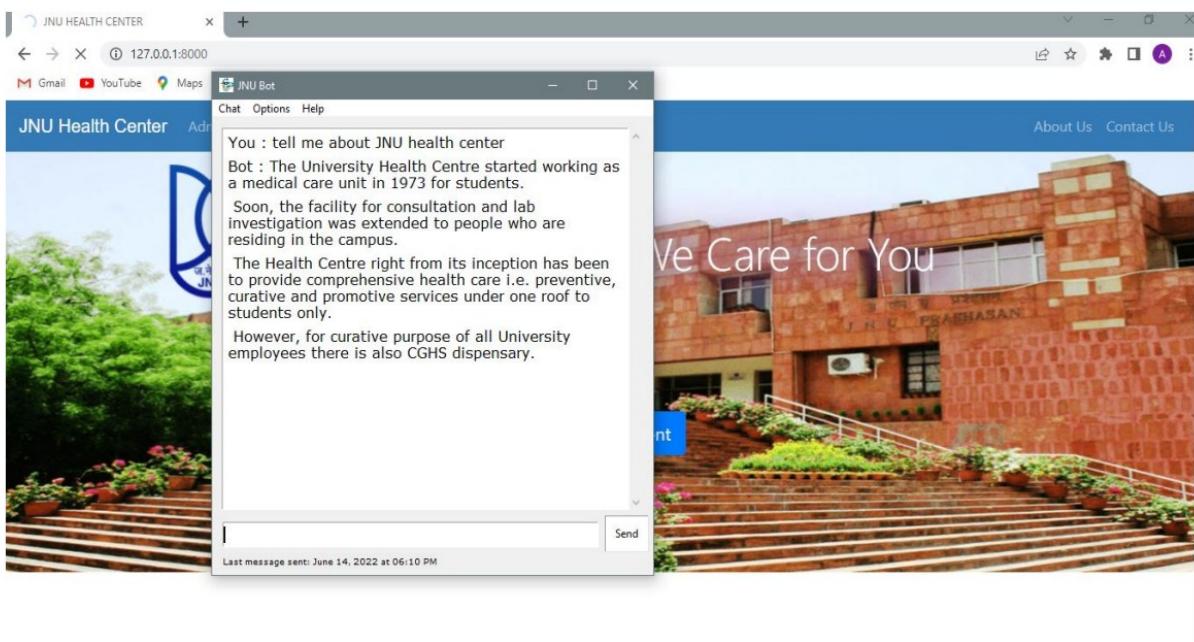
- Symptoms
- Date
- Time
- Corresponding Doctor

The screenshot shows a booking interface for 'JNU HEALTH CENTER'. The left sidebar for 'Patient shivani' is identical to the previous screenshot. The main area is titled 'Book Appointment Details' and contains a text input field with the placeholder 'I have cold fever.' Below it is a date input field set to '06/15/2022' and a time dropdown menu showing '9 AM'. A dropdown menu for 'Corresponding Doctor' is open, showing 'amit (Cardiologist)'. At the bottom is a blue 'Book' button.

Patient Own View Discharge Report: Here patient can view the discharge summary of itself.



Chat Bot: Here the user can ask for queries related to the JNU health center.



What is a chatbot?

A chatbot can be defined as an AI based computer program that simulates human conversations. They are also known as digital assistants that understand human capabilities. Bots interpret the user intent, process their requests, and give prompt relevant answers.

Why Chatbot: -

In our project of JNU medical system automation it is quite possible that the users of the system have some queries regarding health center timings, payments, contact number and many other things.

This chatbot will assist them to resolve their queries quickly and guide them in an interactive manner. This chatbot can be their virtual assistant on demand.

About this Chatbot: -

This chatbot is based on machine learning model. It first uses the natural language processing concepts like tokenization, stemming and bag of words to generate the vector and then fetch the result by using neural network.

Technologies used: -

Programming language- Python 3.9

Main libraries used:

- Torch

- NLTK
- Tkinter (front end)

Features:

Unlike regular chatbots, this software has some additional features.

- **Personalization:** From the ‘options’ menu in the menu bar we can choose multiple fonts style and themes to customize our experience of using the bot.

It currently has five font style and five themes.

- **Text-to-speech features:** In the ‘chat’ menu in menu bar there is an option ‘speak’.

This will convert all texts which are in the chat window to speech. This feature will make the chatbot easily accessible to anybody.

- **Other features:** This chatbot also have some other unique features like displaying the time of last sent message, clearing the overall chat window. There is also a feature which tells about this chatbot.

Queries:

This bot can detect various text patterns and generate the relevant information.

- **Greetings:**

This bot can detect various types of greetings from user and can generate multiple responses.

Font- Default

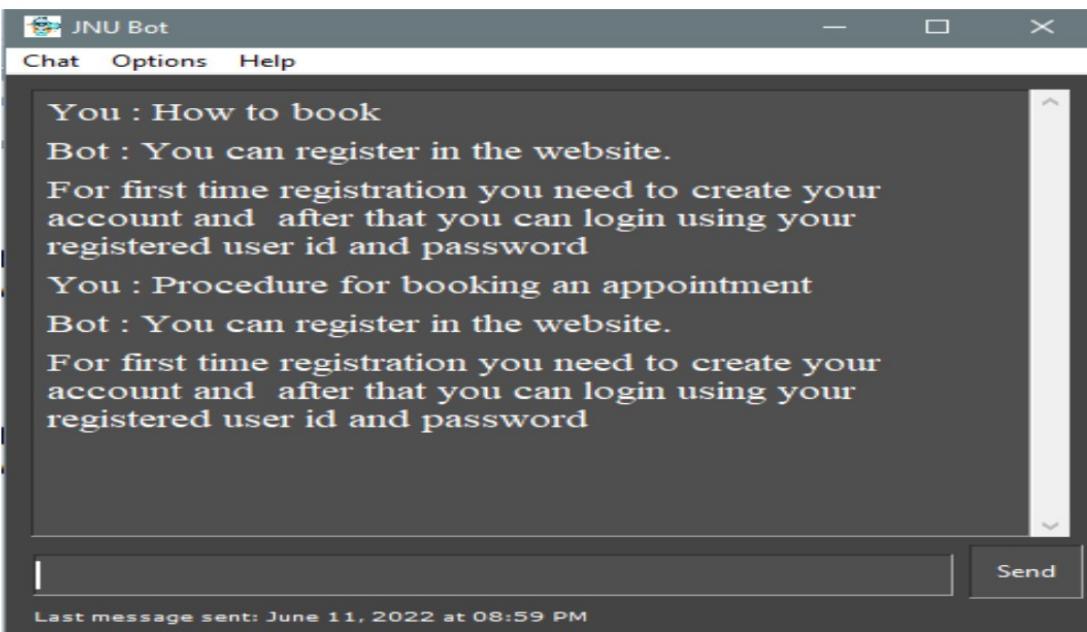
Theme- Default



- **General queries:**

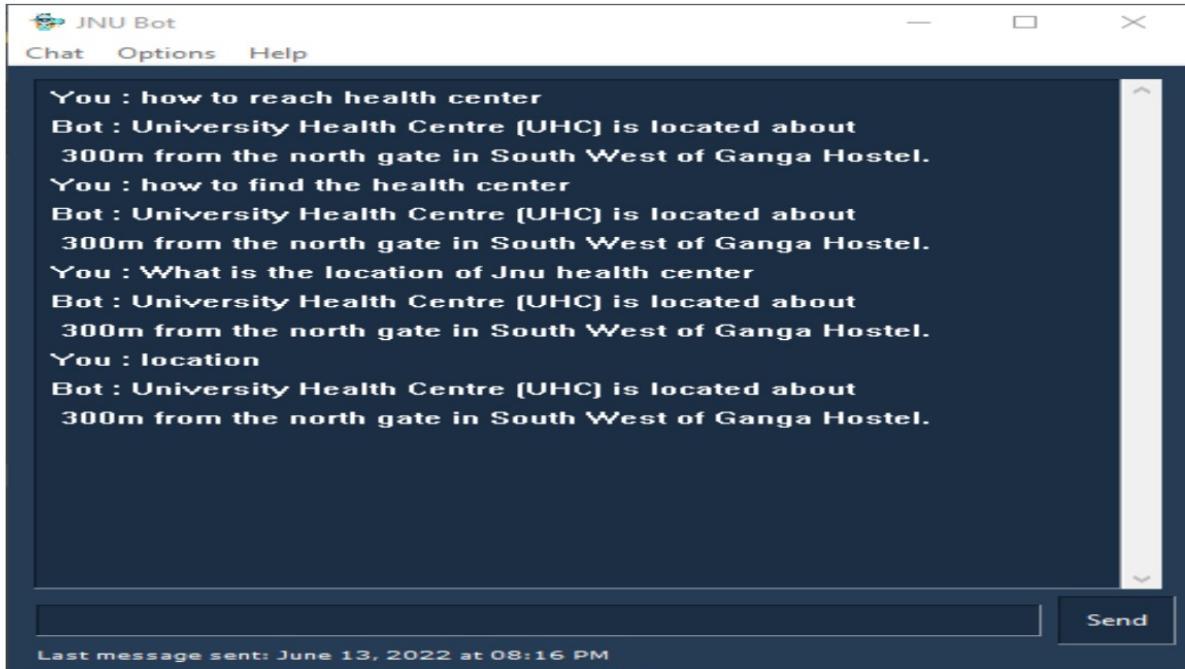
Font- Times

Theme- Grey

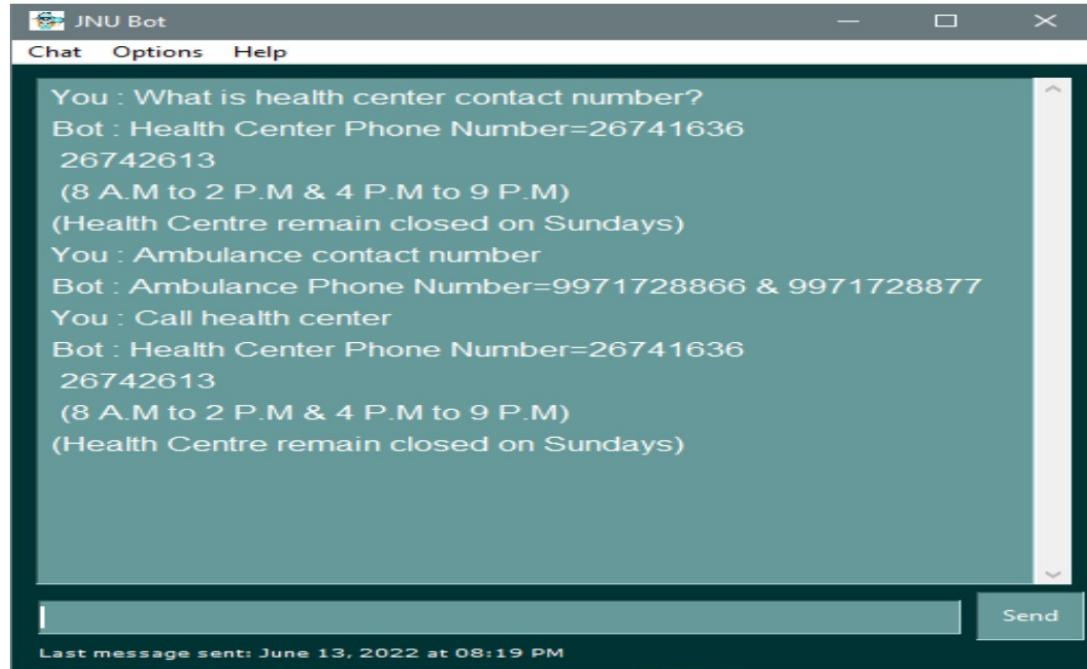


Font- System

Theme- Blue

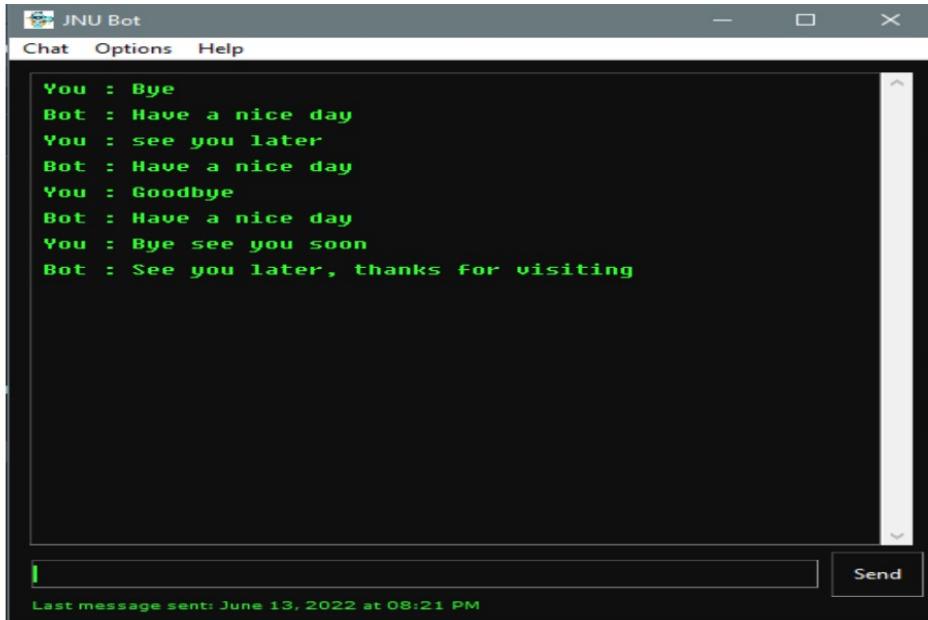


Font- Helvetica Theme- Torque



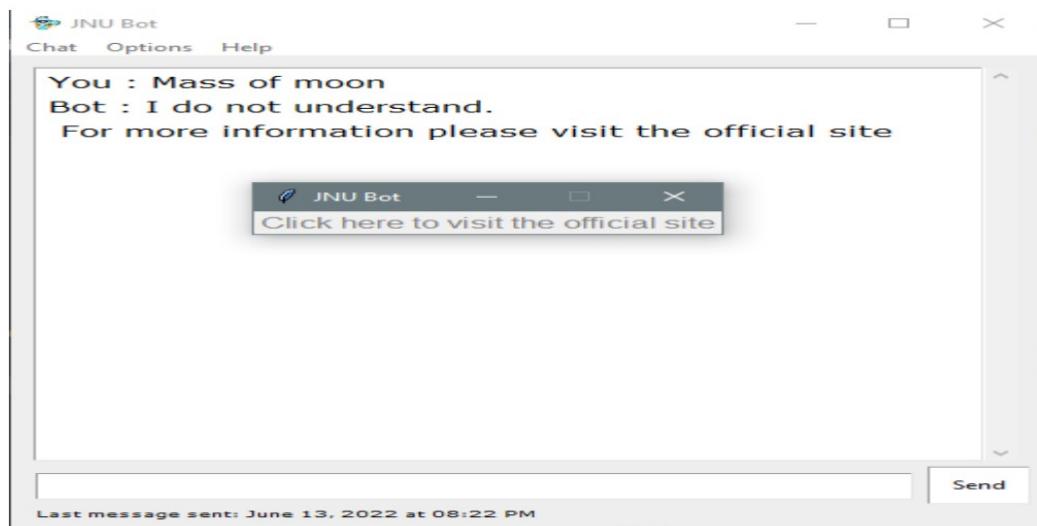
- Bye:

Font- Fixedsys Theme- Hacker



A screenshot of the JNU Bot application window. The title bar says "JNU Bot". The menu bar includes "Chat", "Options", and "Help". The main window has a black background with white text. It shows a conversation between a user ("You") and a bot ("Bot"). The user says "Bye", and the bot responds with "Have a nice day". This exchange repeats three times. Then the user says "Goodbye", and the bot responds with "Have a nice day". Finally, the user says "Bye see you soon", and the bot responds with "See you later, thanks for visiting". At the bottom of the window, there is an input field with a cursor and a "Send" button. Below the input field, the text "Last message sent: June 13, 2022 at 08:21 PM" is displayed.

- For unknown queries: If there a query occurs where the chatbot does not have any response, it will provide a link to the official site of the JNU health center through another widget in which a user can click to visit.



A screenshot of the JNU Bot application window. The title bar says "JNU Bot". The menu bar includes "Chat", "Options", and "Help". The main window has a white background with black text. It shows a conversation between a user ("You") and a bot ("Bot"). The user asks "Mass of moon", and the bot responds "I do not understand." followed by "For more information please visit the official site". Below this text, there is a small window with a blue border containing the text "Click here to visit the official site" and a small icon. At the bottom of the main window, there is an input field with a cursor and a "Send" button. Below the input field, the text "Last message sent: June 13, 2022 at 08:22 PM" is displayed.

Medicine Inventory: Here medicine is **added, deleted, updated** into the database.

The screenshot shows a Windows desktop environment with a browser window titled "Product Page" open at the URL "127.0.0.1:8000/in/product/". The browser's address bar also displays "127.0.0.1:8000/in/order/". The page has a teal header with the text "JNU Medicine Store" and "Dashboard". On the left, there is a sidebar with a "Information" section containing a "Information" button. In the center, there is a "Statistics" section with three boxes: "Staff 4", "Products 4", and "Orders 4". Below these is a table titled "Add Products" with fields for "Name", "Category", and "Quantity", and a green "Add Product" button. To the right of the table is a list of products:

Name	Category	Quantity	Activity
paracetamol	Antipyretics	0	<button>Edit</button> <button>Delete</button>
Aceclo Plus	Antibiotics	50	<button>Edit</button> <button>Delete</button>
Levomefolate calcium	Vitamins	100	<button>Edit</button> <button>Delete</button>
Pyridoxine	Vitamins	100	<button>Edit</button> <button>Delete</button>
Calcitriol	Vitamins	100	<button>Edit</button> <button>Delete</button>

The taskbar at the bottom shows various icons and the system clock indicating 11:06 AM on 6/15/2022.

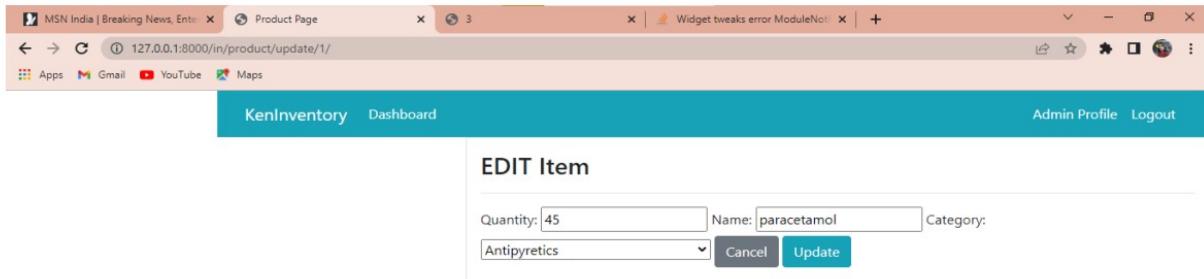
Medicine Order: Here a record is maintained **how much medicine is ordered and by whom.**

The screenshot shows a Windows desktop environment with a browser window titled "Order Page" open at the URL "127.0.0.1:8000/in/order/". The browser's address bar also displays "127.0.0.1:8000/in/order/". The page has a teal header with the text "JNU Medicine Store" and "Dashboard". On the left, there is a sidebar with a "Information" section containing a "More Information" button. In the center, there is a "Statistics" section with three boxes: "Staff 4", "Products 4", and "Orders 4". Below these is a table titled "Order Product" with fields for "Order quantity" and "Product", and a green "Order" button. To the right of the table is a list of orders:

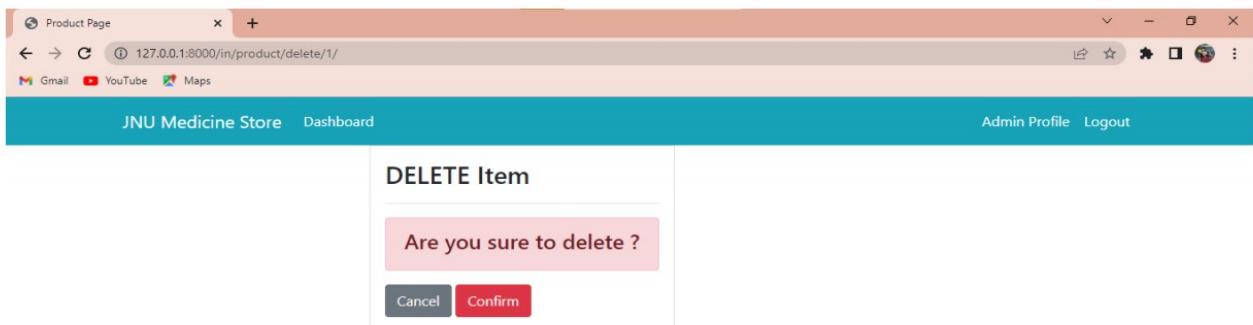
Product	Category	Quantity	Order by	Date
paracetamol	Antipyretics	10	Admin	May 25, 2022, 12:23 p.m.
Amoxicillin	Antibiotics	10	Admin	June 1, 2022, 11:49 a.m.
Aceclo Plus	Antibiotics	10	Admin	June 5, 2022, 9:46 a.m.
Calcitriol	Vitamins	5	Admin	June 5, 2022, 9:47 a.m.
Haloperidol	Antipsychotics	5	Admin	June 5, 2022, 9:59 a.m.

The taskbar at the bottom shows various icons and the system clock indicating 11:08 AM on 6/15/2022.

Medicine Update: Here the medicine provider is **updating** all the medicines manually.



Medicine Delete: Here a medicine is **deleted** manually.



About Us: Upon clicking About Us you will get the information about the JNU health center.

➤ **Medical Facilities:** Here you will get to know about the medical facilities available in the JNU and procedure how to avail it.

The screenshot shows a web browser window with the title bar 'JNU HEALTH CENTER'. The address bar displays '127.0.0.1:8000/aboutus'. Below the address bar are links for Gmail, YouTube, and Maps. The main content area has a blue header bar with 'JNU Health Center' and navigation links for Admin, Doctor, Patient, Chat, Medicine Store, About Us, and Contact Us. On the left, there's a sidebar with links for Medical Facilities, OPD Time, Clinic Laboratory Time, and Emergency Numbers. The main content area contains text about the history and services of the University Health Centre, followed by sections for Location, Staff, and OPD Services.

The University Health Centre started working as a medical care unit in 1973 for students. Soon, the facility for consultation and lab investigation was extended to people who are residing in the campus. The Health Centre right from its inception has been to provide comprehensive health care i.e. preventive, curative and promotive services under one roof to students only. However, for curative purpose of all University employees there is also CGHS dispensary.

Location
University Health Centre (UHC) is located about 300m from the north gate in South West of Ganga Hostel.

Staff
Dean of student is the head of the Department .The staff of the University Health Centre (UHC) comprises of CMO (SAG), I/C Health Centre and Medical Officer, part time Doctors for General OPD, Specialists, a Homeopathic Physician, a Staff Nurse, Pharmacists, a Senior Technical Assistant, a Technical Assistant and other supportive staff, functions under the overall supervision and administrative control of the Chief Medical Officer (SAG), I/C Health Centre. It also has staff for control for mosquito-borne-disease.

OPD Services(OPD registration is compulsory)

- Doctors of the University Health Centre provide primary health care. The student can just walk in for consultations and treatment.
- Homeopathic physician provides services in homeopathic system of medicine.

➤ **OPD:** Here you will get to know about the corresponding room numbers department wise.

JNU Health Center Admin Doctor Patient Chat Medicine Store About Us Contact Us

	Room No.	Times	Wings
GENERAL OPD	208, 221, 222, 223 & 224	8 AM to 2 PM (Morning) 3 PM to 9 PM (Evening)	NEW WING
OPD CARD	209,207	8 AM to 2 PM (Morning) 3 PM to 9 PM (Evening)	NEW WING
LAB TEST	212,218 & 219	8 AM to 11 AM 3 PM to 7 PM	OLD WING
PART TIME PSYCHOLOGIST	210	(Monday to Saturday)	OLD WING



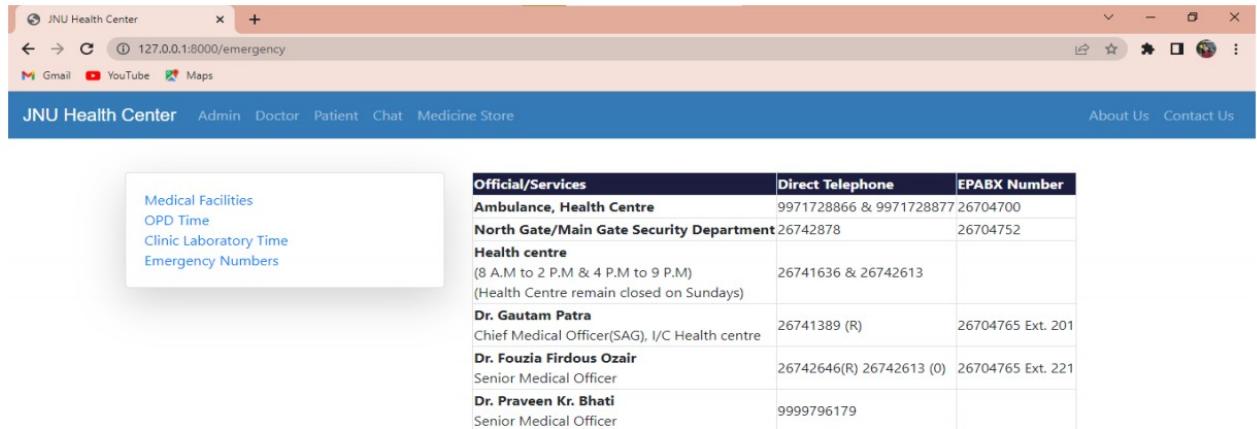
➤ **Clinic Laboratory Time:** Here you will get to know the timing of blood sample and report collection time.

JNU Health Center Admin Doctor Patient Chat Medicine Store About Us Contact Us

Times
Blood Collection Time 8:30 AM to 11:30 AM
Report Collection Time Next Routine working day between 8:30 AM to 01:30 PM (from lab)



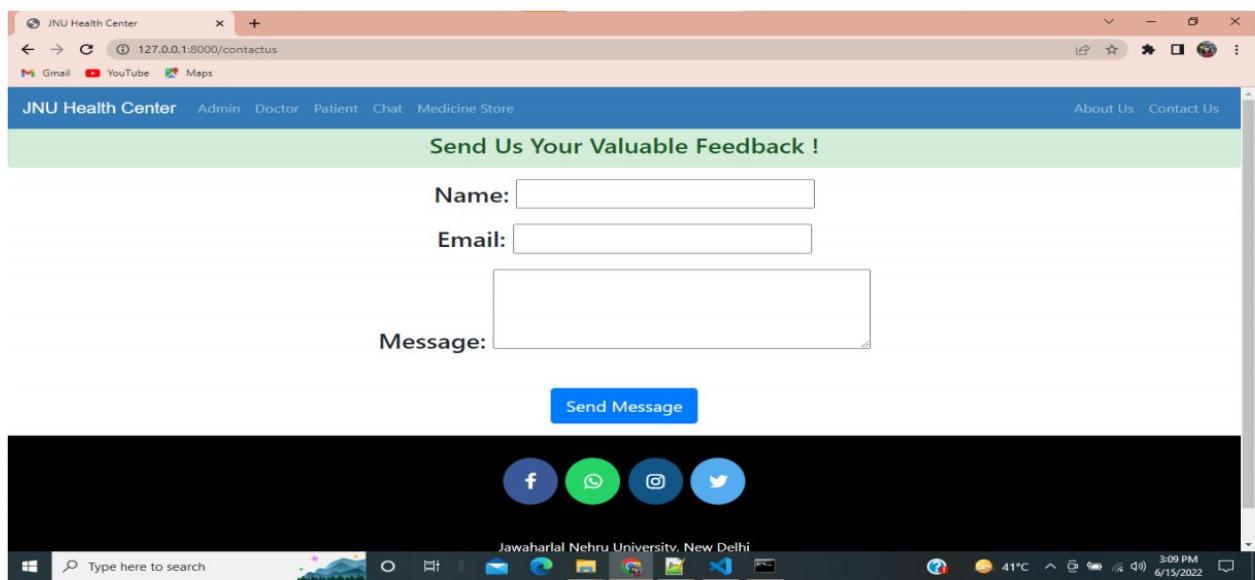
➤ **Emergency:** Here this page shows all the emergency numbers like ambulance, security, CMO number etc.



A screenshot of a web browser displaying the JNU Health Center website. The URL in the address bar is 127.0.0.1:8000/emergency. The page has a blue header with the JNU Health Center logo and navigation links for Admin, Doctor, Patient, Chat, Medicine Store, About Us, and Contact Us. On the left, there's a sidebar with links for Medical Facilities, OPD Time, Clinic Laboratory Time, and Emergency Numbers. The main content area contains a table with columns for Official/Services, Direct Telephone, and EPABX Number. The table lists various contacts including Ambulance, Health Centre, North Gate/Main Gate Security Department, Health centre, Dr. Gautam Patra, Dr. Fouzia Firdous Ozair, and Dr. Praveen Kr. Bhati.

Official/Services	Direct Telephone	EPABX Number
Ambulance, Health Centre	9971728866 & 9971728877	26704700
North Gate/Main Gate Security Department	26742878	26704752
Health centre (8 A.M to 2 P.M & 4 P.M to 9 P.M) (Health Centre remain closed on Sundays)	26741636 & 26742613	
Dr. Gautam Patra Chief Medical Officer(SAG), I/C Health centre	26741389 (R)	26704765 Ext. 201
Dr. Fouzia Firdous Ozair Senior Medical Officer	26742646(R) 26742613 (O)	26704765 Ext. 221
Dr. Praveen Kr. Bhati Senior Medical Officer	9999796179	

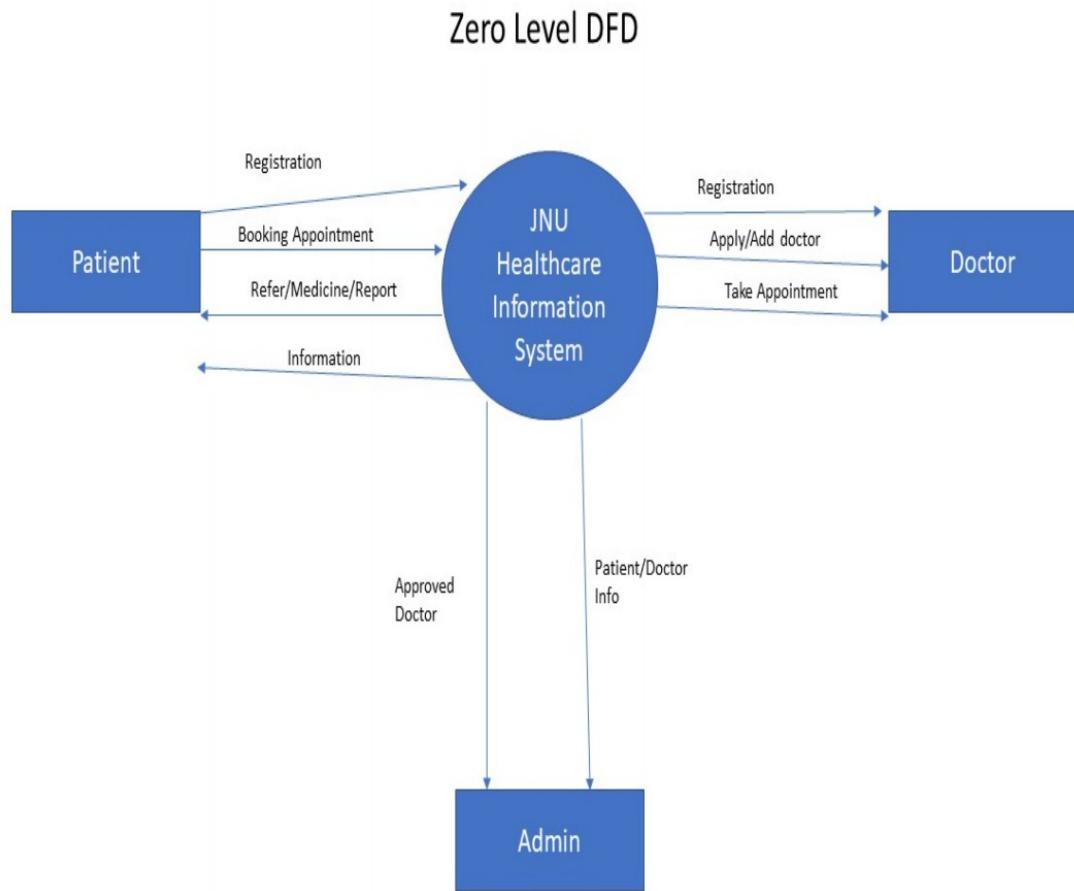
Contact Us: Here you can give feedback to the JNU center on his medical facilities just by entering your name and email id.



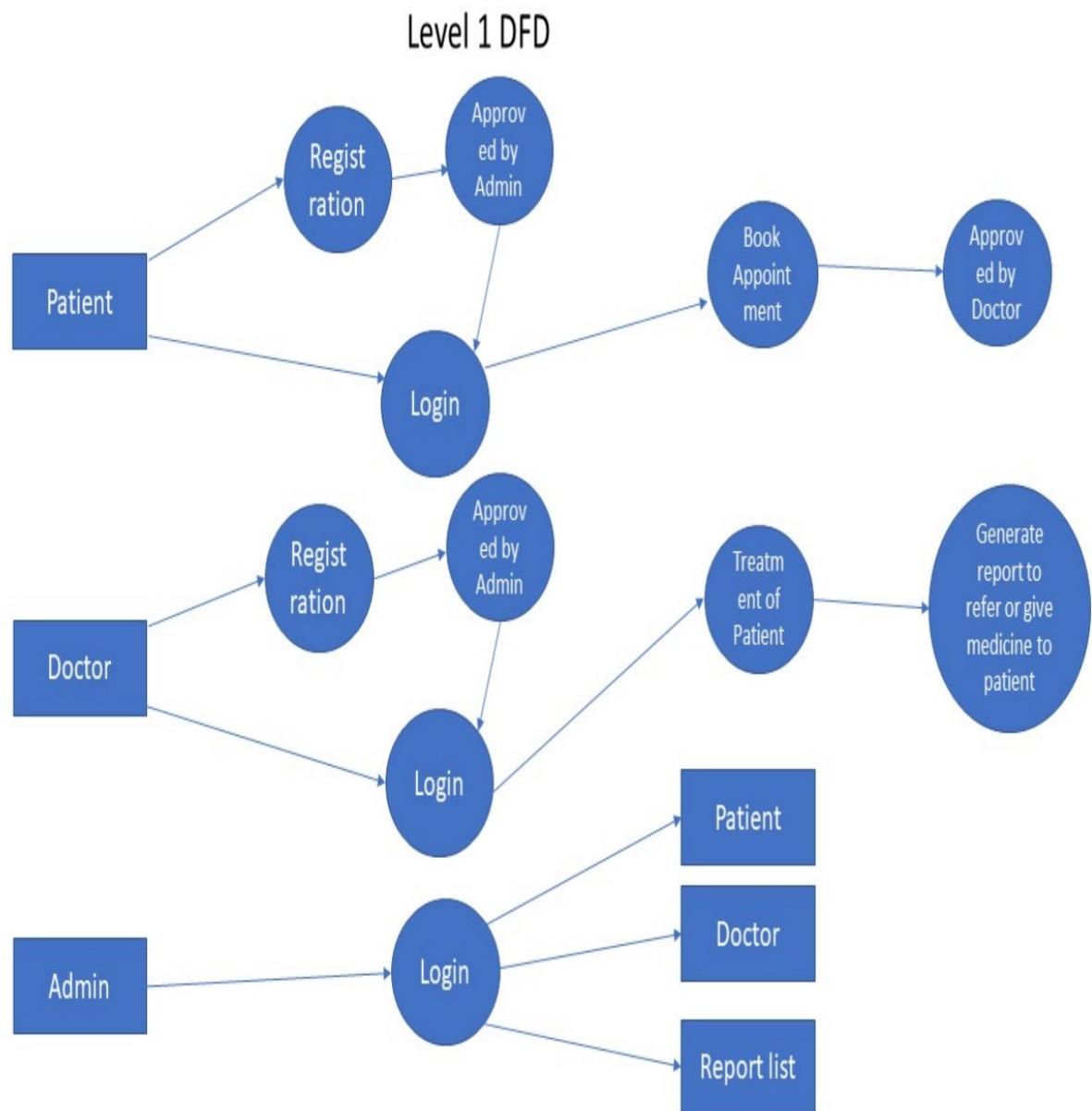
A screenshot of a web browser displaying the JNU Health Center website. The URL in the address bar is 127.0.0.1:8000/contactus. The page has a blue header with the JNU Health Center logo and navigation links for Admin, Doctor, Patient, Chat, Medicine Store, About Us, and Contact Us. A green banner at the top says "Send Us Your Valuable Feedback !". Below it is a form with fields for Name (input box), Email (input box), and Message (text area). At the bottom of the form is a blue "Send Message" button. Below the form is a black footer bar with social media icons for Facebook, WhatsApp, Instagram, and Twitter. The footer also includes the text "Jawaharlal Nehru University, New Delhi". The system tray at the bottom shows the date as 6/15/2022, the time as 3:09 PM, and the temperature as 41°C.

DATA FLOW DIAGRAM

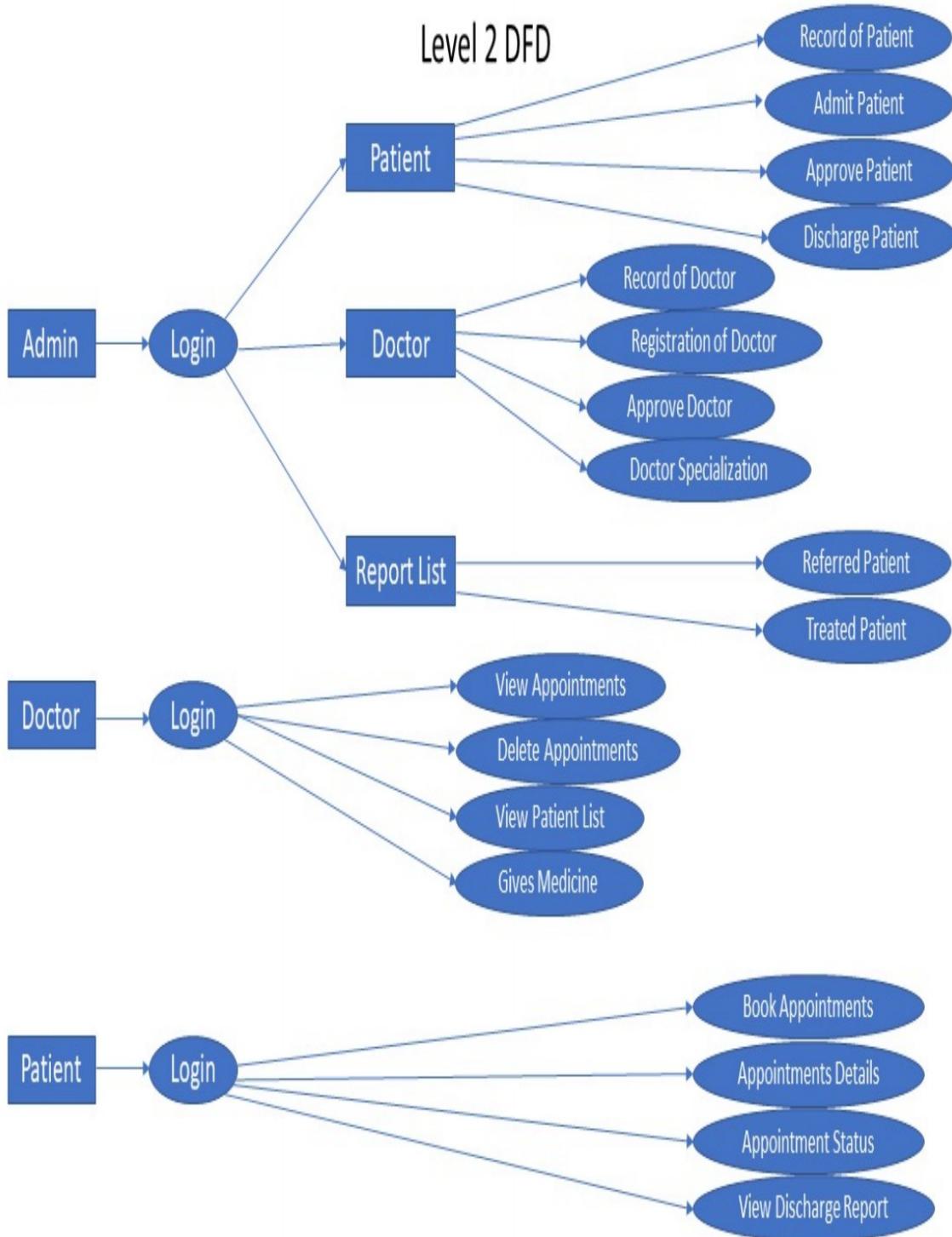
ZERO LEVEL DFD:



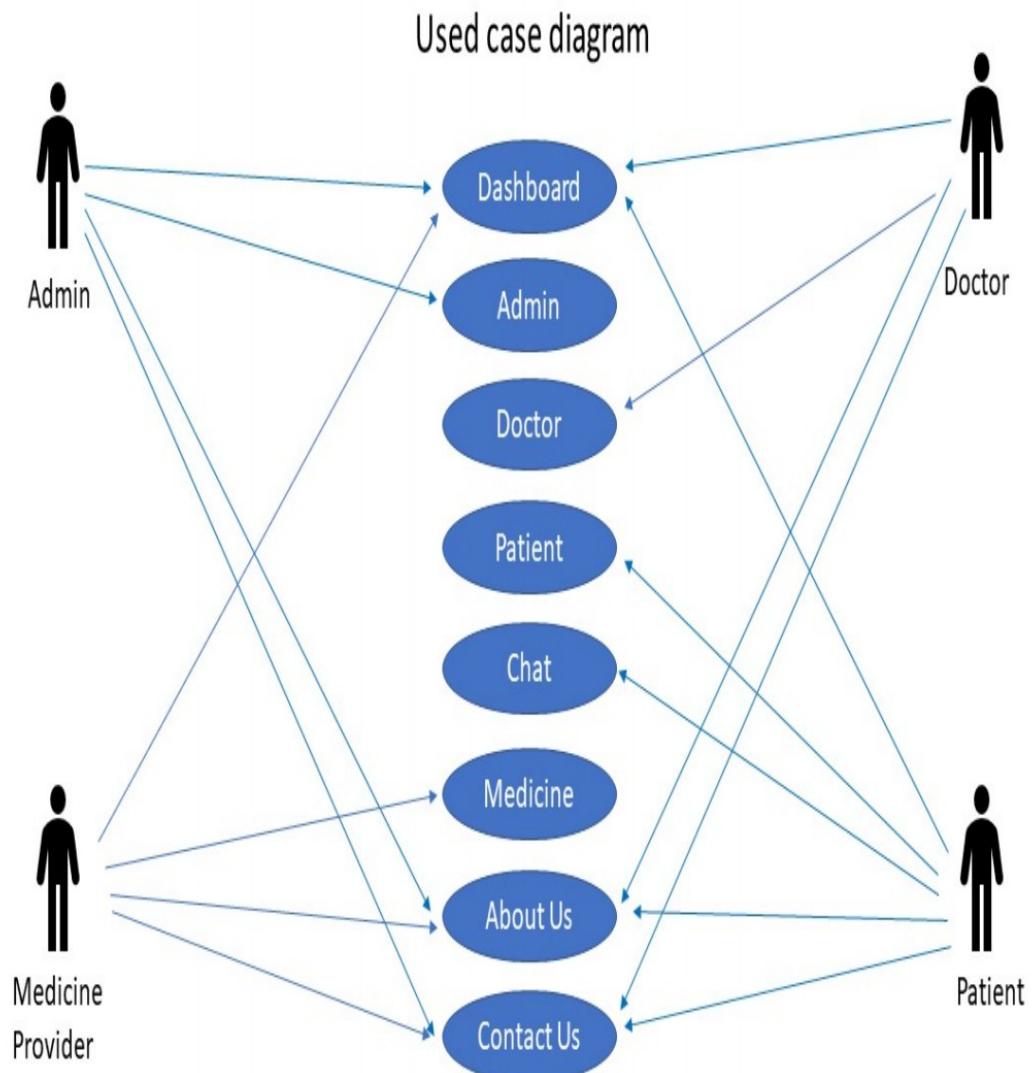
LEVEL ONE DFD:



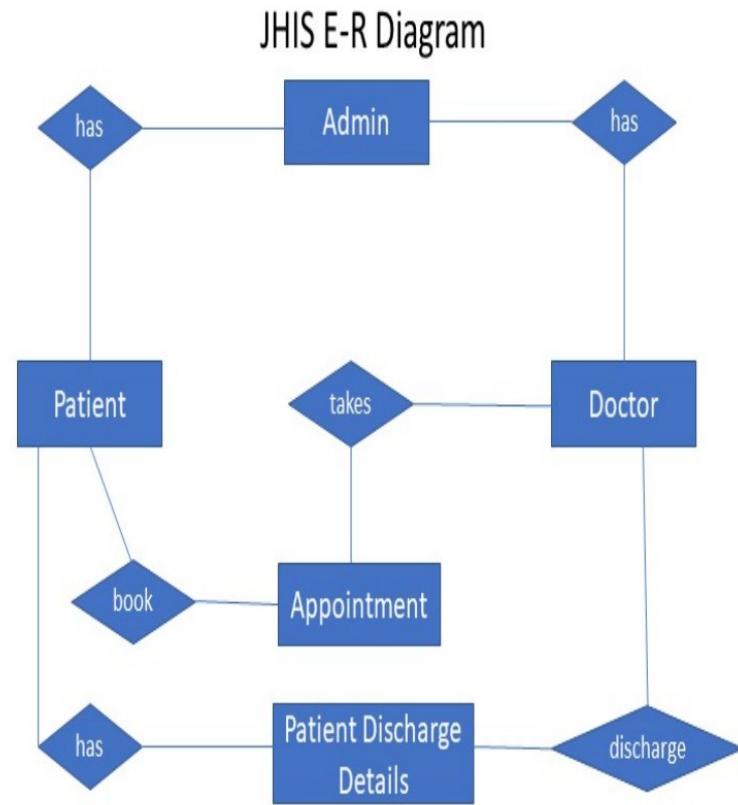
LEVEL TWO DFD:



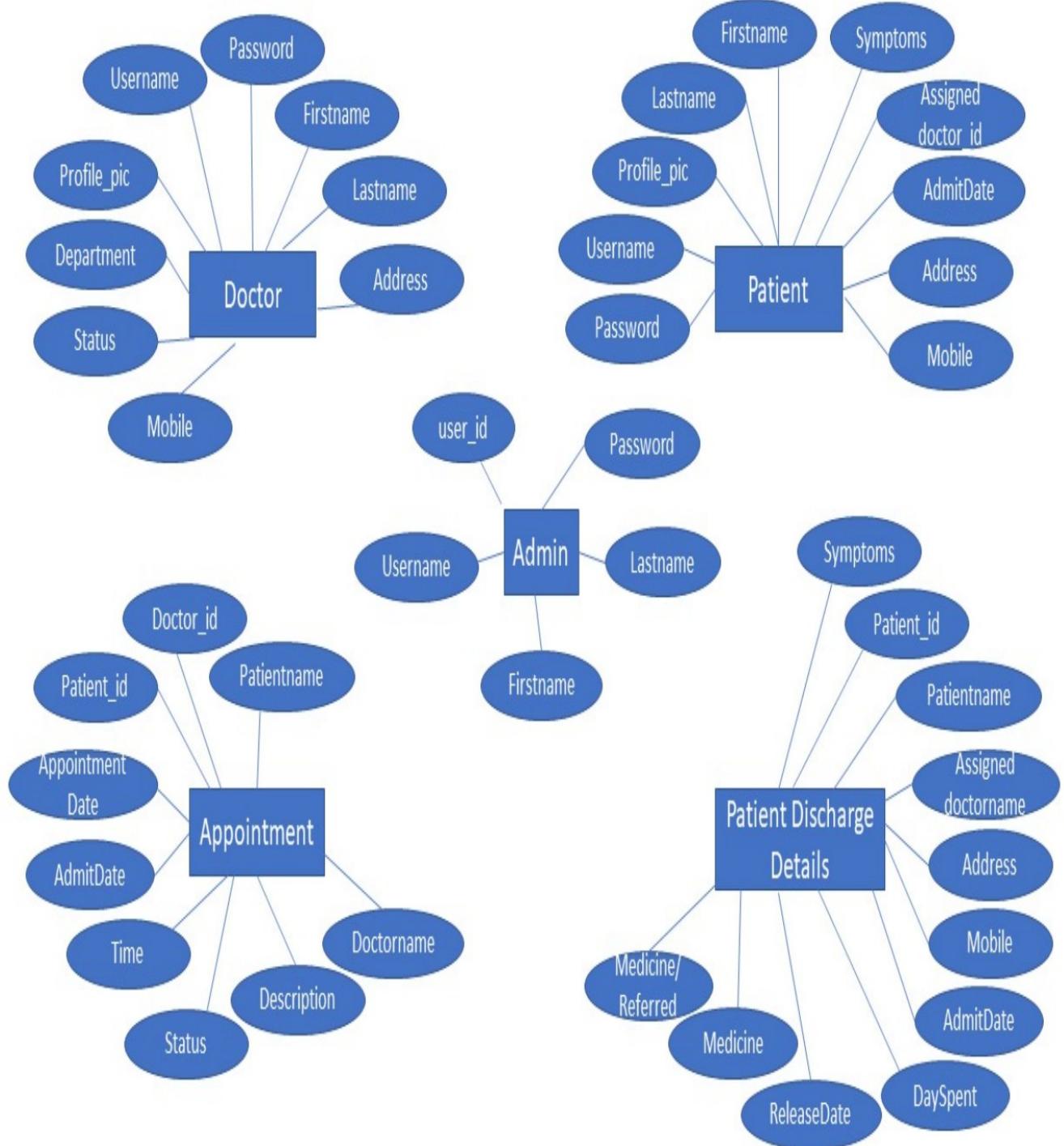
USED CASE DIAGRAM:



E-R DIAGRAM



Entities with their corresponding attributes:



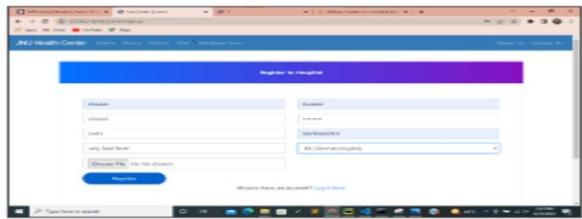
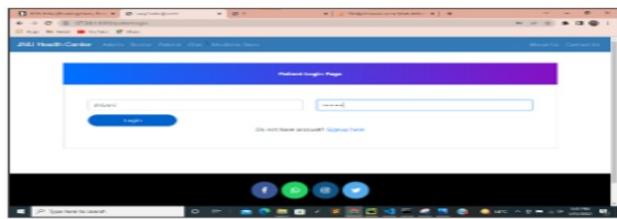
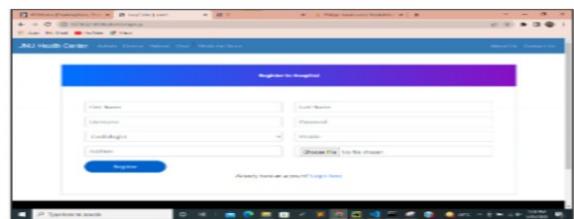
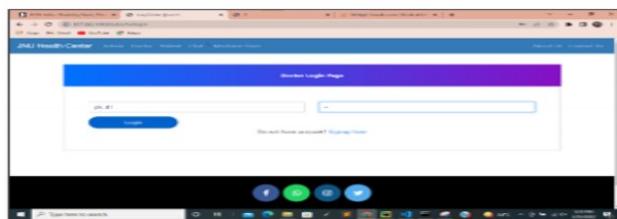
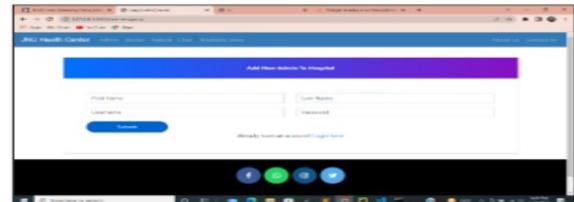
TESTING

Test Cases for JNU Healthcare Information System [JHIS]

- Check by entering the correct URL in the browser, and the application should be loading properly
- Check is there any user verification functionality present on the application.
- Check by entering valid credential like username and password user should be able to log in
- Check by entering invalid credentials the user should not be login into the application, and an error message should be displayed
- Check if the JNU healthcare information system has an option to add a new patient
- Check whether all the mandatory fields are present while registration
- Check after adding a new patient the patient must to be allowed to login.
- Check whether the patient card has the details like assign doctor name, department, present application number, date of admission and discharge etc.
- Check after completion of patient checkup process the details should be updated in the patient database
- Check if the patient exists in the database, and he performs some checkup then the user should be able to search the details of the present in the database
- Check if the doctors are also able to update the passenger details after check
- Check the number of roles in the hospital management system like the patient, doctor, admin, accountant, etc.

- Check that the authorized users can see the doctor details in the portal.
- Check if there is any functionality to add a new doctor in the JNU healthcare information system, for instance, we have added patient details in the database.
- Check whether the admin users can delete doctor and patient information by the JNU healthcare information system portal
- Check after the formation of a bill that should be an option to print the bill or to generate a hard copy of the bill.
- Check the authorized users have the privilege to check the details report of the patients.
- Check the admin has all the access

Test cases for the Admin module:



Login:

Prerequisite: All fields are mandatory.

Test Case id	Testcase Objective	Steps	Input data	Expected Output	Actual Output	Status
T01	Login using correct data	1.Username 2.Password 3.Login	1.sarita 2.Sa@123	Open admin window	Open admin window	Pass
T02	Login using incorrect username	1.Username 2.Password 3.Login	1.amitk 2.Sa@123	Doesn't open admin window	Doesn't open admin window	Pass
T03	Login using incorrect password	1.Username 2.Password 3.Login	1.sarita 2.djielk	Doesn't open admin window	Doesn't open admin window	Pass

Signup:

Prerequisite: All fields are mandatory.

Test Case id	Testcase Objective	Steps	Input data	Expected Output	Actual Output	Status
T01	Signup using valid password	1.FirstName 2.LastName 3.Username 4.Password	1.aman 2.singh 3.aman 4.Am@123	Open login window	Open login window	Pass

		5.Submit				
T02	Signup using invalid password	1.FirstName 2.LastName 3.Username 4.Password 5.Submit	1.shaan 2.kumar 3.shaan 4.Sh1234	Error Password should contain at least one of them @, #, \$	Error Password should contain at least one of them @, #, \$	Pass

Test cases for the Doctor module:

Login:

Prerequisite: All fields are mandatory.

Test Case id	Testcase Objective	Steps	Input data	Expected Output	Actual Output	Status
T01	Login using correct data	1.Username 2.Password 3.Login	1.pk_d1 2.Ak@123	Open doctor window	Open doctor window	Pass
T02	Login using incorrect username	1.Username 2.Password 3.Login	1.amiw 2.Ak@123	Doesn't open doctor window	Doesn't open doctor window	Pass
T03	Login using incorrect password	1.Username 2.Password 3.Login	1.pk_d1 2.as	Doesn't open doctor window	Doesn't open doctor window	Pass

Apply:

Prerequisite: All fields are mandatory.

Test case id	Testcase Objective	Steps	Input data	Expected Output	Actual Output	Status
T01	Register using correct data	1.FirstName 2.LastName 3.Username 4.Password 5.Department 6.Mobile 7.Address 8.Profile 9.Register	1.anish 2.yadav 3.anish 4.An@123 5.Cardiologist 6.7348747012 7.UP 8.photo	Opens login window after successful registration	Opens login window after successful registration	Pass
T02	Signup using incorrect password	1.FirstName 2.LastName 3.Username 4.Password 5.Department 6.Mobile 7.Address 8.Profile 9.Register	1.aman 2.sharma 3.amsh 4.am@145 5.Cardiologist 6.9452865341 7.bihar 8.photo	Error the password must contain one uppercase letter	Error the password must contain one uppercase letter	Pass
T03	Signup using	1.FirstName	1.aman	Error Invalid	Error Invalid	Pass

	incorrect password	2.LastName 3.Username 4.Password 5.Department 6.Mobile 7.Address 8.Profile 9.Register	2.sharma 3.amsh 4.Am@145 5.Cardiologist 6.945286 7.bihar 8.photo	phone number	phone number	
--	--------------------	--	--	--------------	--------------	--

Test cases for the Patient module:

Login:

Prerequisite: All fields are mandatory.

Test Case id	Testcase Objective	Steps	Input data	Expected Output	Actual Output	Status
T01	Login using correct data	1.Username 2.Password 3.Login	1.shivani 2.Sh@123	Open patient window	Open patient window	Pass
T02	Login using incorrect username	1.Username 2.Password 3.Login	1.shivani 2.Sh@123	Doesn't open doctor window	Doesn't open doctor window	Pass
T03	Login using incorrect password	1.Username 2.Password 3.Login	1.shivani 2.shivani	Doesn't open doctor window	Doesn't open doctor window	Pass

Register Your Account:

Prerequisite: All fields are mandatory.

Test Case id	Testcase Objective	Steps	Input data	Expected Output	Actual Output	Status
T01	Signup using correct data	1.FirstName 2.LastName 3.Username 4.Password 5.Address 6.Mobile 7.Symptoms 8.Name and Department 9.Profile_pic 10.Register	1.shradha 2.chaudhari 3.cr 4.Sh@123 5.UP 6.7854625847 7.fever 8.anish (cardiologist) 9.photo	Opens login window after successful registration	Opens login window after successful registration	Pass
T02	Signup using incorrect password	1.FirstName 2.LastName 3.Username 4.Password 5.Address 6.Mobile 7.Symptoms	1.pakhi 2.sinha 3.keeda 4.Pa@23 5.Bihar 6.7548963254 7.cold	Error password length must be at least of length 6.	Error password length must be at least of length 6.	Pass

		8.Name and Department 9.Profile_pic 10.Register	8.anish (cardiologist) 9.photo			
T03	Signup using incorrect mobile number	1.FirstName 2.LastName 3.Username 4.Password 5.Address 6.Mobile 7.Symptoms 8.Name and Department 9.Profile_pic 10.Register	1.pakhi 2.sinha 3.keeda 4.Pa@123 5.Bihar 6.75489632 7.cold 8.anish (cardiologist) 9.photo	Error invalid mobile number.	Error invalid mobile number.	Pass

Test cases for Book Appointment by patient:

Prerequisite: All fields are mandatory.

Test Case id	Testcase Objective	Steps	Input data	Expected Output	Actual Output	Status
T01	Book appointment by entering all the details	1.Description 2.Date 3.Time	1.fever 2.Select 3.Select	Open patient appointment status window	Open patient appointment status window	Pass

		4.Doctor Name and Department 5.Book	4.Select			
T02	Book appointment by not entering description	1.Description 2.Date 3.Time 4.Doctor Name and Department 5.Book	1. 2.Select 3.Select 4.Select	Error, please fill out this field.	Error please fill out this field.	Pass
T02	Book appointment by not entering date	1.Description 2.Date 3.Time 4.Doctor Name and Department 5.Book	1.fever 2. 3.Select 4.Select	Error, please fill out this field.	Error please fill out this field.	Pass

Test cases for Medicine Module:

Add Product

Test Case id	Testcase Objective	Steps	Input data	Expected Output	Actual Output	Status
T01	Add medicine in the list	1.Category 2.Name	1.Select 2.Paracetamol	Adds medicine to the product list	Adds medicine to the product list	Pass

		3.Quantity 4.AddProduct	3. 10			
T02	Add medicine in the list without entering details	1.Category 2.Name 3.Quantity 4.AddProduct	1.Select 2. 3. 10	Please fill out this field.	Please fill out this field.	Pass

Order Product

Test Case id	Testcase Objective	Steps	Input data	Expected Output	Actual Output	Status
T01	Order medicine from the list	1.Product 2.Order Quantity 3.Order	1.Select 2.10	Order is placed for the given medicine	Order is placed for the given medicine	Pass
T02	Order medicine from the list	1.Product 2.Order Quantity 3.Order	1.Select 2.	Please fill out this field.	Please fill out this field.	Pass

CONCLUSION

The project has been a rewarding experience in more than one way. The entire project work has enlightened us in the following areas:

- We have gained an insight into the working of the Hospital. This represents a typical real-world situation.
- Scheduling a project and adhering to that schedule creates a strong sense of time management.
- Sense of teamwork has developed and confidence of handling real life project has increased to a great extent.
- Initially, there were problem with the validation but with discussions, we were to implement validations.

FUTURE WORK:

- We can add a log record system which keeps the record of every user who visited this website and the activity done by him.
- Instead of creating a new login id for a patient we can connect it to the existing database of student and employees in JNU.
- We can add a mobile verification system while registering a new patient.
- Instead of checking appointment status online we can provide it via mobile SMS to patient.