Hospital Doctor Appointment Booking
{Health on Hands}

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Introduction:-

Health on Hands is a platform that works for a multispecialty hospital where patients can easily book appointments online based on the vaccination and doctor they need, which simplifies the scheduling procedure. User-friendly interfaces make it simple for patients to select their preferred time based on the doctor's schedule. All things considered; our platform improves overall patient satisfaction in all the fields related to hospitals.

In our application, we have three modules: hospital, doctor and patient. Here, the hospital will add and view the doctors and also nurses. The hospital will add the vaccinations and assign a doctor and nurse to that vaccination in our application. Then the doctor will login to the application and can add the timings according to his availability. For example if a doctor adds the timings from 10 am to 12 pm then slots divide automatically with 15 mins. Now the patient will register by giving the basic details of the patient; after that, with a registered email and password, the patient will login to the application.

After logging in, the patient can get an overview of the doctor, time slots, and vaccinations. After selecting the doctor, the patient will select the slot and book the appointment for that doctor by paying consultancy fees. If one patient books the slot from 11 am to 11:15 am then another patient can't book the appointment for the same slot. It appears red in colour as the slot is booked by some patient. Patients can cancel the appointment and reschedule the appointment based on the desired slot. The doctor can write and view the prescription for the patient and test the requirements for the patient. After that the patient will pay the total amount of vaccination and for reports and also can view the payment in the application. Patients can revisit the hospital after booking an

appointment and view all the past appointments and past reports at the hospital.

The system should solve problems such as "overlapping of slots," which means it should take care of no two patients booking the same slot." Accurate Reports" In this problem, Health On Hands ensures the reports are uploaded accurately for each patient. "Lack of User Convenience," where the system aims to improve user convenience by offering a user-friendly interface for doctor search, booking placement, and report tracking.

The database should store information like "patient data," such as patient names, email addresses, phone numbers, and patient IDs, after the initial consultation "Doctor data" includes categories, schedule timings, consultation fees, and prescriptions. "Hospital Data" includes vaccination details (Polio,Pneumococcal, flu vaccination ,HPV vaccine, etc., which includes all age vaccinations), lab reports (blood, urine, ecg etc.), and doctor names with their background work. By effectively managing this information, the database ensures the efficient operation of the hospital.
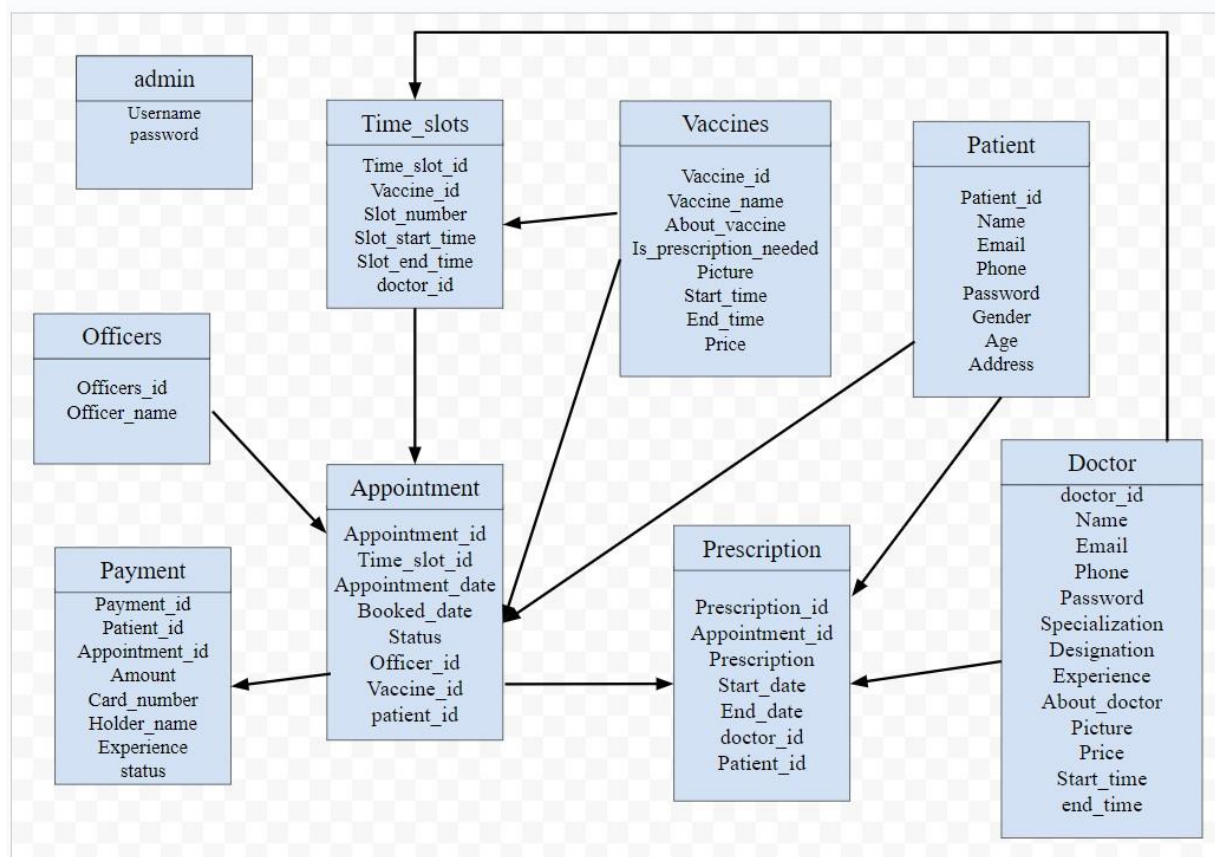
Database description:

The database Description contains nine collections: Admin, vaccines, doctor, patient, officer, Time-slots, appointment, payment,Prescription.The Admin collection contains the user_name,password. And the admin can add the vaccines, officer and doctor. The vaccines collection contains the vaccine_name, about-vaccine, is prescription needed, picture, start-time, end_time and price. The admin will add the officers and doctors. The officer collection contains the officer_name . The doctor collection contains the name, email ,phone ,password, specialisation, designations, experience, about_doctor, picture, start_time, end_time and price.

The patient will register into the website with their valid details then login into the website, the patient collection contains the name, email, password, phone, gender, age and address. Then the patient will view the vaccines if the vaccine doesn't contain doctor prescription then the patient will book the appointment with their details and choose the time slot and the admin will assign the officer for the vaccination or if the vaccine contains doctor prescription then the patient will view the doctors time slot and book the appointment.The appointment collection contains the time_slot_id, appointment_date, booked_date, status, officer_id, vaccine_id and patient_id,doctor_id.

After the appointment booked the doctor will check the patient based on that prescription will given to the patient the prescription collection contain appointment_id, prescription, start_date, end_date, doctor-id and patient_id based on the appointment patient will pay the amount, the payment collection contains patient_id, appointment_id, total-amount, card-number, Holder_name, expiry_date and status if they payment is completed the status is updated to transaction successful,otherwise transaction failed.

Database Diagram:-

Database Collection:

admin

Storage size: 20.48 kB
Documents: 1
Avg. document size: 62.00 B
Indexes: 1
Total index size: 20.48 kB

appointment

Storage size: 20.48 kB
Documents: 3
Avg. document size: 229.00 B
Indexes: 1
Total index size: 36.86 kB

doctor

Storage size: 20.48 kB
Documents: 5
Avg. document size: 420.00 B
Indexes: 1
Total index size: 36.86 kB

doctor_timings

Storage size: 20.48 kB
Documents: 4
Avg. document size: 100.00 B
Indexes: 1
Total index size: 36.86 kB

officers

Storage size: 20.48 kB
Documents: 1
Avg. document size: 252.00 B
Indexes: 1
Total index size: 20.48 kB

patient

Storage size: 20.48 kB
Documents: 1
Avg. document size: 103.00 B
Indexes: 1
Total index size: 20.48 kB

payments

Storage size: 20.48 kB
Documents: 3
Avg. document size: 202.00 B
Indexes: 1
Total index size: 36.86 kB

prescription

Storage size: 20.48 kB
Documents: 1
Avg. document size: 94.00 B
Indexes: 1
Total index size: 20.48 kB

slots

Storage size: 20.48 kB
Documents: 68
Avg. document size: 124.00 B
Indexes: 1
Total index size: 36.86 kB

vaccines

Storage size: 20.48 kB
Documents: 2
Avg. document size: 223.00 B
Indexes: 1
Total index size: 36.86 kB

Sample Snippets:-

Admin:-

```
_id: ObjectId('66276a222d0643e0764cf5af')
username : "admin"
password : "admin"
```

Appointment:-

```
_id: ObjectId('662795ca699d1f9e06870782')
slot_id : ObjectId('66278d9174899829a1aeb28b')
status : "Prescribed"
vaccine_id : ObjectId('66276c4c24b0cda51ca69ddc')
doctor_id : ObjectId('66278d9174899829a1aeb28a')
appointment_type : "doctor"
appointment_date : 2024-04-23T00:00:00.000+00:00
booked_date : 2024-04-23T16:34:42.328+00:00
price : 30
patient_id : ObjectId('66278c7874899829a1aeb288')
```

Doctor:-

```
_id: ObjectId('66278d9174899829a1aeb28a')
name : "chaitu"
email : "chaithu444@gmail.com"
phone : "36584152522"
password : "123"
specialization : "cardiologist"
designation : "mbbs"
experience : "6"
about_doctor : " we scoured the web for examples of doctors' bios that break the mold …"
picture : "c2.jpg"
consulting_fee : "30"
start_time : 1900-01-01T02:00:00.000+00:00
end_time : 1900-01-01T12:00:00.000+00:00
```

Officer:-

```
_id: ObjectId('66276adc24b0cda51ca69ddb')
name : "raj"
```

Patient:-

_id: ObjectId('66278c7874899829a1aeb288')
name : "guru"
email : "g@gmail.com"
phone_number : "65124213532"
password : "098"

Payments:-

_id: ObjectId('66278ef874899829a1aeb2dc')
appointment_id : ObjectId('66278eeb74899829a1aeb2db')
price : "30"
card_type : "Debit Card"
card_number : "32"
name_on_card : "34"
cvv : "4"
expiry_date : "23"
patient_id : ObjectId('66278c7874899829a1aeb288')

Prescription:-

_id: ObjectId('6627961b699d1f9e06870784')
appointment_id : ObjectId('662795ca699d1f9e06870782')
prescription : "dasjkjsadlkjdslkdjsaldsa"
date : 2024-04-23T16:36:03.953+00:00

Slots:-

_id: ObjectId('66276c4c24b0cda51ca69dde')
slot_number : 2
slot_start_time : "02:15 AM"
slot_end_time : "02:30 AM"
vaccine_id : ObjectId('66276c4c24b0cda51ca69ddc')

Vaccines:-
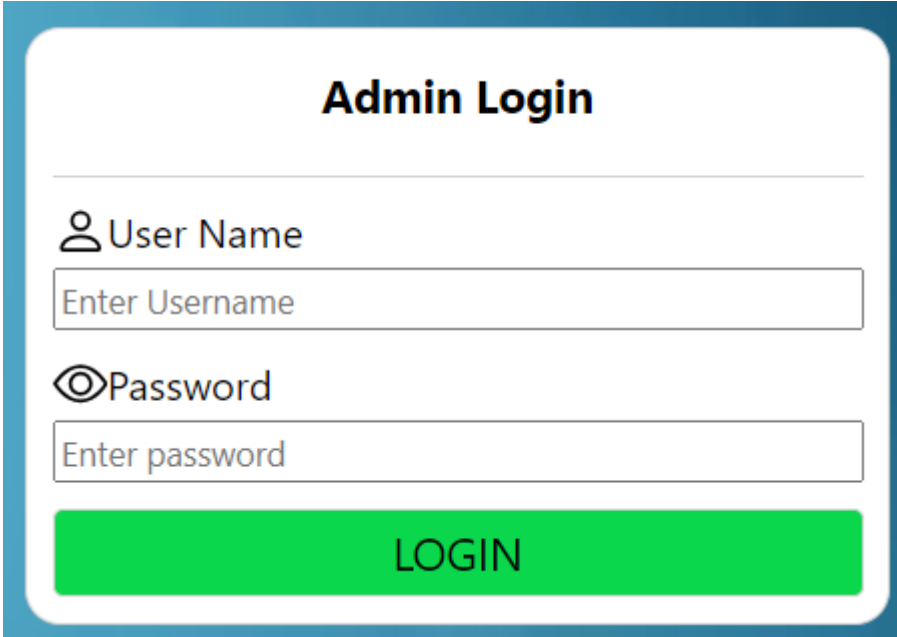
_id: ObjectId('66276c4c24b0cda51ca69ddc')
name : "Hepatitis B"
about : "the liver, and therefore, the Hepatitis B vaccine and the Hepatitis B …"
is_prescription_needed : "yes"
vaccine_image : "Hepatitis B.jpg"
start_time : 1900-01-01T02:00:00.000+00:00
end_time : 1900-01-01T16:00:00.000+00:00
price : "50"

Website Home Page :
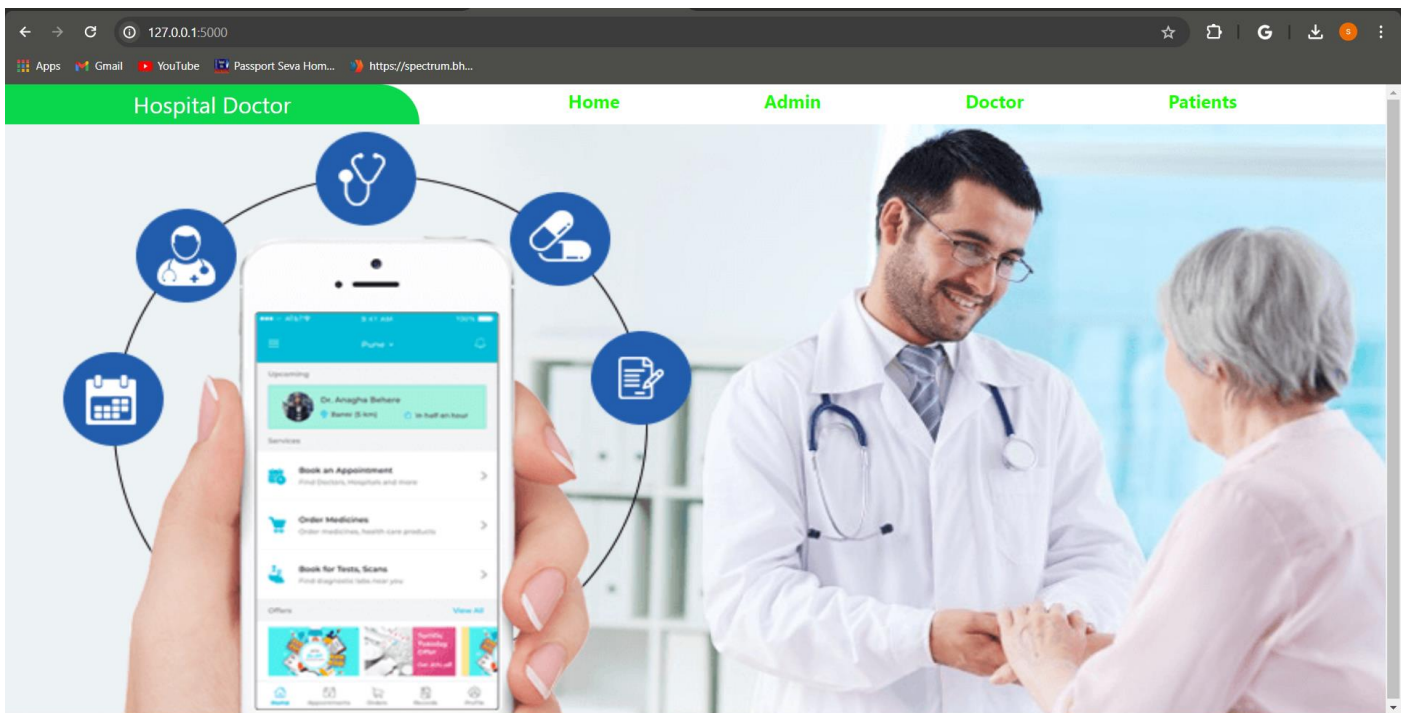
It is the homepage of the Hospital doctor Appointment,here we have Three modules.

Admin,Doctor ,Patient.

Admin Login Page :

It is the admin login page, the admin can login into the website with predefined login credentials like username and password.

Admin Home :
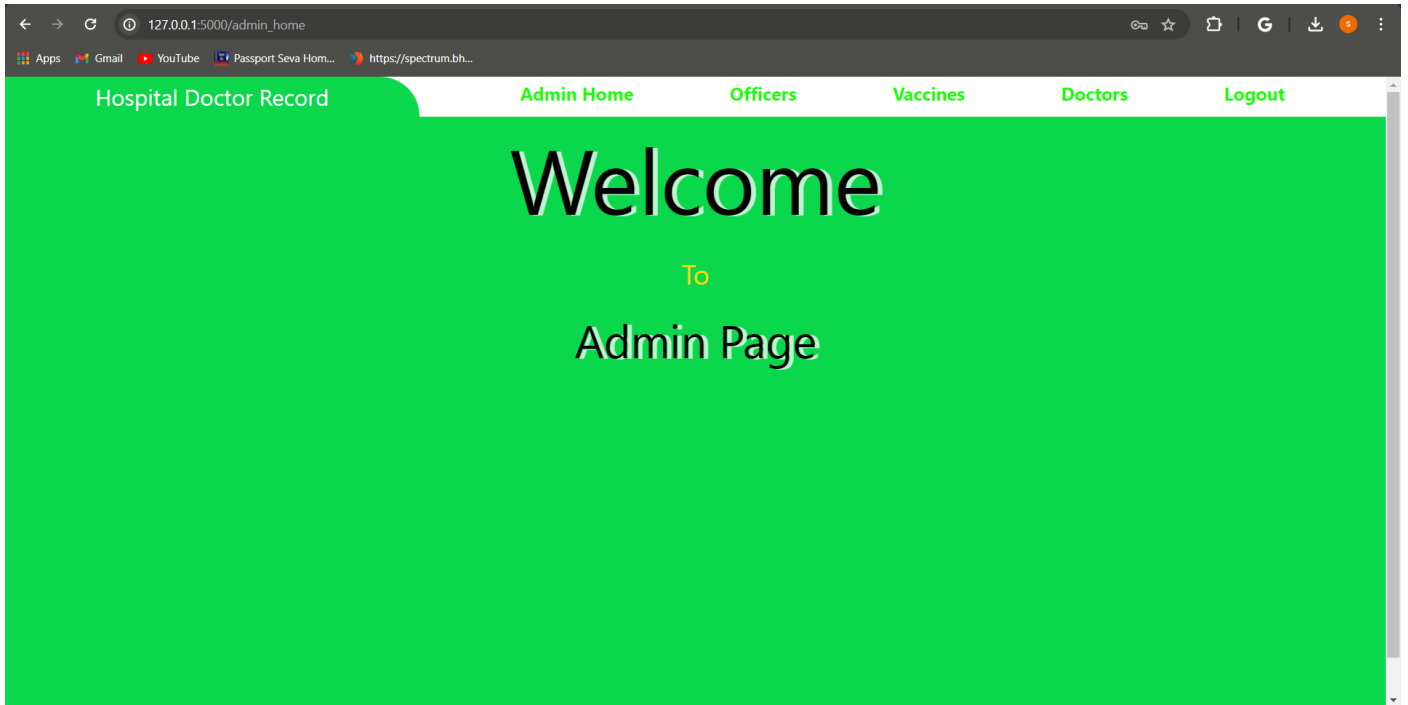
It is the Admin Home Page of the Hospital doctor Appointment,here we have Three modules. Officers,Vaccines ,Doctors.

Add Officers details:

In the admin home page admin can add the officers names.

View Officers details:

Where Admin can view the Enrolled officers details.

Add Vaccine Details :

Admin can add the Vaccine Details like Vaccine Name, About the Vaccine , Select "Is Prescription Required for this vaccine Yes/ No", Vaccine Image, Start Time, End Time, Price

View Vaccine Details :

Admin can View the Vaccine details What Should they Entered.

View Vaccine Slots:

Admin Can View their Available Slots.

Add Doctor Details :

Weekday	From Time	TO Time	
Sunday	--:-- --	--:-- --	Add Timings

Doctor Timings

Day	From Time	To Time
Monday	09:00 AM	12:00 PM
Wednesday	09:00 AM	12:00 PM
Thursday	02:00 PM	06:00 PM
Thursday	08:00 PM	09:00 PM

Admin can Add the Doctor Details like Name, Email, Phone, Password, Specialization, Designation, Experience, About Doctor, Doctor Image, Consulting Fee, Start time, End time.

View Doctor Details :

Name
surya prakash

Email
surya@gmail.com

Phone
9132546598

SSN
1245787548

Date of Birth
1996-03-02

Gender
male

About
good well trained in general health department

Address
olathe park
kansas, missouri - 64109

Consulting Free
70

Experience
5yrs

Designation
MBBS,MD

Specialization
general physiscian

Slots

Admin can View The Doctor Details What they should enter.

View Doctor Slots :

Guru   24-04-2024

09:00 AM - 09:15 AM Slot Number:- 1 Available	09:15 AM - 09:30 AM Slot Number:- 2 Available	09:30 AM - 09:45 AM Slot Number:- 3 Available	09:45 AM - 10:00 AM Slot Number:- 4 Available	10:00 AM - 10:15 AM Slot Number:- 5 Available	10:15 AM - 10:30 AM Slot Number:- 6 Available
10:30 AM - 10:45 AM Slot Number:- 7 Available	10:45 AM - 11:00 AM Slot Number:- 8 Available				

Where Admin Can View the Doctor Available Slots.

Doctor Login Page :

Doctors can login with their Admin Assigned Detail Like Email,Password.

Doctor Home Page :

| Hospital Doctor Appointment | Doctor Home | Timings | Slots | Logout |

Welcome
To
Doctor Page

It is the Doctor Home Page of the Hospital doctor Appointment,here we have one module.
Slots.

Doctor Appointments:

Hepatitis B   24-04-2024

| 02:00 AM - 02:15 AM Slot Number:- 1 Available | 02:15 AM - 02:30 AM Slot Number:- 2 Available | 02:30 AM - 02:45 AM Slot Number:- 3 Available | 02:45 AM - 03:00 AM Slot Number:- 4 Available | 03:00 AM - 03:15 AM Slot Number:- 5 Available | 03:15 AM - 03:30 AM Slot Number:- 6 Available |
| 03:30 AM - 03:45 AM Slot Number:- 7 Available | 03:45 AM - 04:00 AM Slot Number:- 8 Available | 04:00 AM - 04:15 AM Slot Number:- 9 Available | 04:15 AM - 04:30 AM Slot Number:- 10 Available | 04:30 AM - 04:45 AM Slot Number:- 11 Available | 04:45 AM - 05:00 AM Slot Number:- 12 Available |

Where doctors can view/Check The appointments in Date Wise.

Patient Login Page :

Here Patients Can Login With Their Details Like Email And Password. If Patient Has No Account He Should Register And Login

Patient Registration Page :

Patient Registration

First Name

Enter First Name

Last Name

Enter Last Name

DOB

mm/dd/yyyy

✉Email

Enter Email

📞Phone

Enter Phone Number

👁Password

Enter Password

👁Confirm Password

Enter Confirm Password

City

Enter City

State

Enter state

Zipcode

Enter Zipcode

Address

Enter Address

SSN

Enter SSN

Gender ○ Male ○ Female

Register

Patient Register With Theie Details Like Name ,Email,Password,Phone number.

Patient Home Page :

| Hospital Doctor Record | Patient Home | Vaccines | Appointment | Logout |

Welcome

To

Patient Page

It is the Patient Home Page of the Hospital doctor Appointment,here we have Two modules.

Vaccines ,Appointment .

Book Vaccine Appointmment:-

Here Patient can Book Vaccin Appointment Directly Without Doctor Prescripton

Book Doctor Appointment :

Here Patients can Book Doctor Appointments.

Select Doctor :

After Booking The Doctor Appointment Patient Select The Doctor.

Book Doctor Appointment :

After They Books Doctor Appointment

View Appointment Booked Details :

View Booked Details

Slot number: 2	06:15 AM - 06:30 AM	Appointment Date :26-04-2024	Appointment type : doctor	Vaccine : Rubella
Doctor : raj				

View Appointment Booking Details.

Enter Card Deatils :

Total Price:-$ 30

Enter Card Details

Card Type

Debit Card ∨

Card Number

Enter Card Number

Name On Card

Enter Name On Card

CVV

Enter CVV Number

Expiry Date

MM/YY

PAY NOW

Before Booking the Appointment They Should Pay The Consulting fee WIth there card Details.

VIew Appointment Details :

Appointment Bookes for:doctor

Vaccine: Rubella

26-04-2024

Slot Number: 2

Slot timings: 06:15 AM - 06:30 AM

guru36463246

Appointment Booked

Cancel Appointment

View Payment

Thye Can View The Apointment details.

View Payment Details :

View Payment Details

Card Type	CVV
Debit Card	234
Expiry Date	Paid Amount
24/28	$ 30
Card number	
353224234211	
Name On Card	
guru	

Click On View Payment Button to View there payments

Doctor check's Appointment :

06:15 AM - 06:30 AM
Slot Number:- 2

View Appointment

After Patint-Booking Doctor Can View The Appointment

Doctor views Patient Appointment :

Appointment Bookes for:doctor

Vaccine: Rubella

26-04-2024

Slot Number: 2

Slot timings: 06:15 AM - 06:30 AM

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Appointment Booked

Write Prescription   Reject

View Payment

Doctor Can Prescribe to the patient / rejects Patient Appointment.

Doctor's Prescription :

Doctor Prescribe Here to patient

Book Appointment :

After Doctor Appointment Agin APtien Can Book The Appointment For Same Vaccination .

Book Appointment :

In the Same Book Doctor Appointment With There CArd Details.

Assigning Officer :

Appointment Bookes for:vaccine

Vaccine: Rubella

26-04-2024

Slot Number: 1

Slot timings: 03:00 AM - 03:15 AM

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Appointment Booked

Assign Officer chaitu ∨ Assign

Reject

View Prescription

View Payment

Admin Assigns the Officer to Booked slots.