

# INTERNET AND WEB PROGRAMMING

## J COMPONENT REVIEW-2

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TITLE

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REDUCING THE EXPOSURE OF NON-COVID PATIENTS

## ABSTRACT :

The growth of Covid patients in India in second wave was exponential and the no. of deaths was also increasing and there is no way to stop the widespread of the virus other than by staying at home. In the second wave Since, the hospitals were filled with Covid patients thus, a non-COVID patient has a huge exposure to COVID in any hospital, on the other hand as we saw in the second wave, the hospital was full with patients and lack of availability of hospital beds.

## ABSTRACT :

- The aim of this project is to solve the issue for both sides of the problem by limiting the time, for a patient to stay inside the hospital, to as low as possible

# PROBLEM STATEMENT:

- The second wave of COVID was a dangerous one, there was a lack of hospital beds and the resources were not enough to treat everyone. The second wave is a huge lesson for us to prepare for the third wave.

# HOSPITAL PROBLEM :

- The major problem in the second wave was lack of hospital bed because of which they faced huge problem in giving proper treatment to all the patients.



## PATIENT PROBLEM :

- Most of the hospitals were filled with Covid patients thus, a non-COVID patient has a huge exposure to COVID in any hospital, so the longer they stay at the hospital the higher are the chances for them to catch COVID.

## LACK OF DOCTOR'S :

- Since the COVID is highly communicable, many of the doctors catch COVID while treating them as a result of which we have seen that many doctors were avoiding to treat patients for their safety. Due to which there was lack of doctors as well.



## SOLUTION :

- The Solution is to reduce the time for the non-Covid patients to stay inside the hospital, to as low as possible. Since, they will be staying inside the hospital for lesser time so the crowd inside the hospital will also reduce and their exposure to COVID inside the hospital will drastically reduce. And since the interaction time between the patient and doctor will be very minimal therefore doctor will also not hesitate meeting the patient.

## REASON FOR CHOOSING THIS TOPIC

- The major reason for choosing this topic is upcoming third wave of COVID, many researchers have predicted that a third wave is yet to come and as we have seen in second wave, the situation of our country was not good, there were huge number of deaths and the pressure on hospitals was also very high. Not only the COVID patients, but the non-COVID patients also suffered a lot.

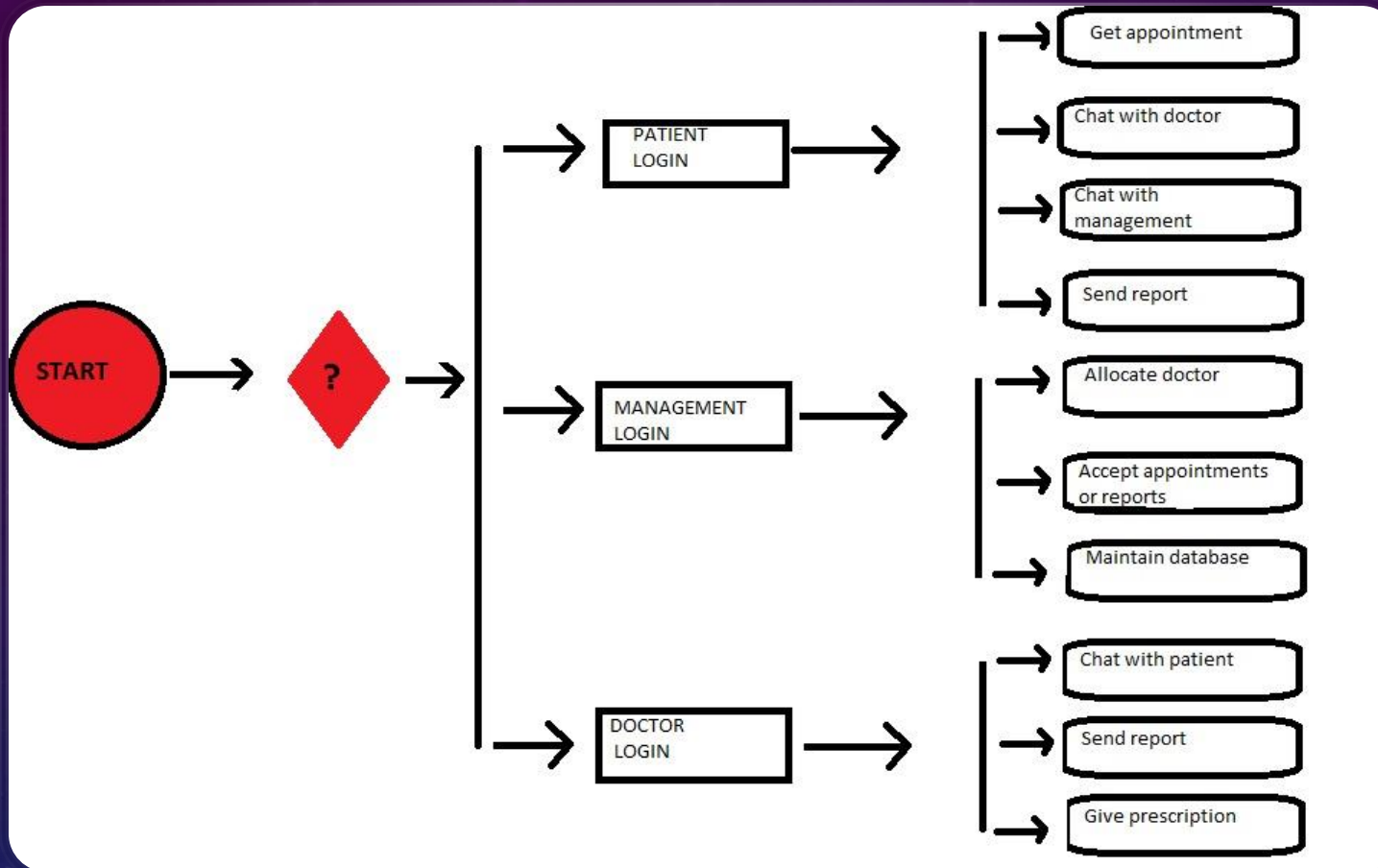
The second wave is a huge learning for us and we don't want situation to be this bad in third wave.

## IDEA:

- In this website, patients can login to their account and can directly consult about their problems to management staff. The management staff will then allocate a doctor to the patient based on his/her symptoms.
- The patient will then message to the doctor and send him all of his/her problems. The doctor may give some medical test for patient.

- Patient has to go to hospital once and there, staff will take all the requested tests of the patient. As soon as the tests are done the patients are supposed to leave the hospital and the reports of the test will be send to them online by the management, so there is no need for the patient to go to hospital to collect their reports.
- Once the reports are received by patient, he needs to send it to the doctor. The doctor will go through the report and give him a prescription.
- In the case of emergency Doctor will report it to the management team and the management team will arrange a room and ask the patient to report to the hospital as soon as possible.

- If the doctor is not responding to the patient or patient is having any kind of problem with the doctor, he can send his complain to the management team. The management team will have the access to see all the doctor's and patient's page, he can see how the doctor is dealing with a patient and how patient is communicating with the doctor. . The management team can create, remove or edit any doctor.
- In this way patient have to go to the hospital for as minimum time as possible and hence it will significantly reduce the exposure of non-COVID patient and there will be a better crowd management in the hospital



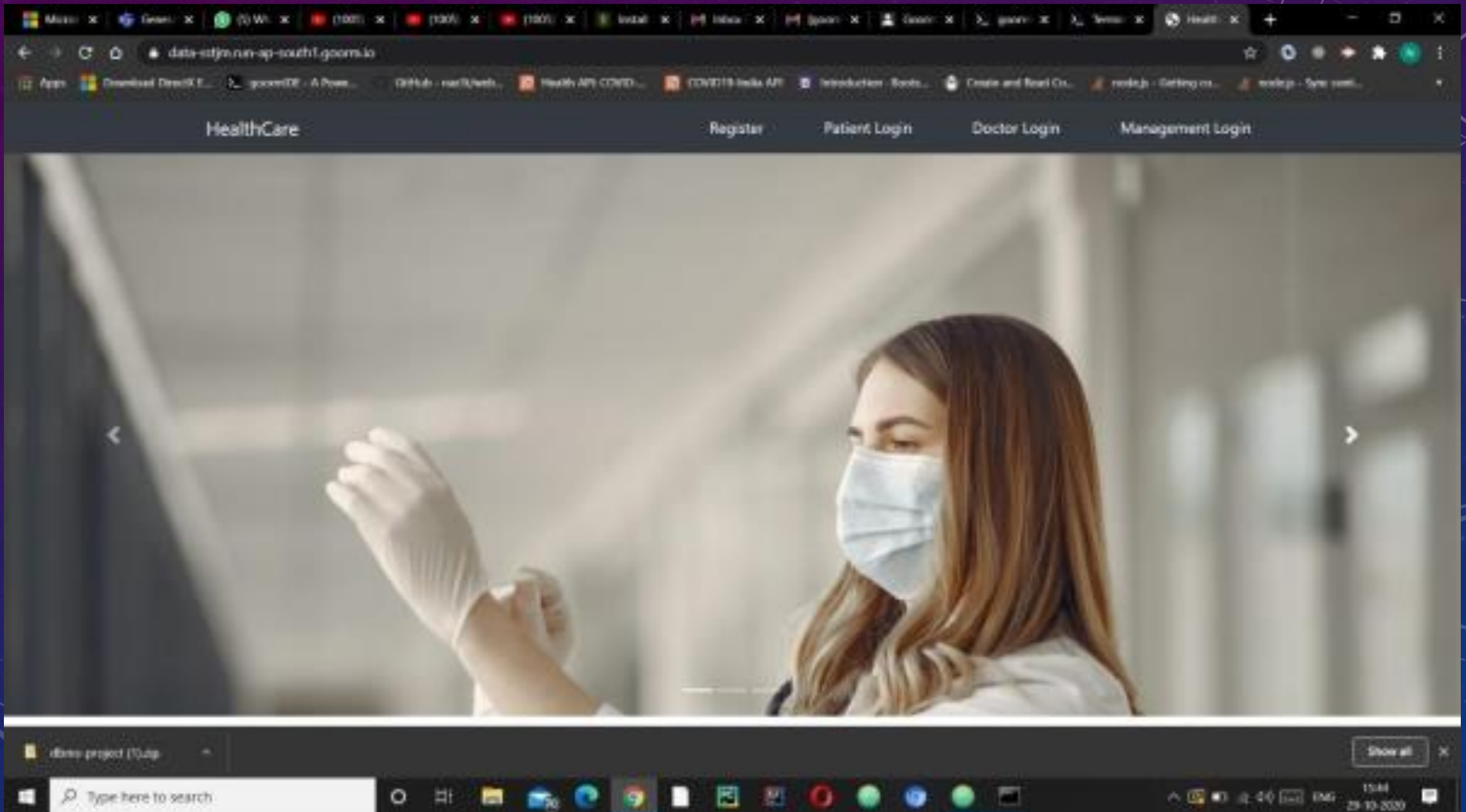
# PROCESS FLOW DIAGRAM



# MODULES

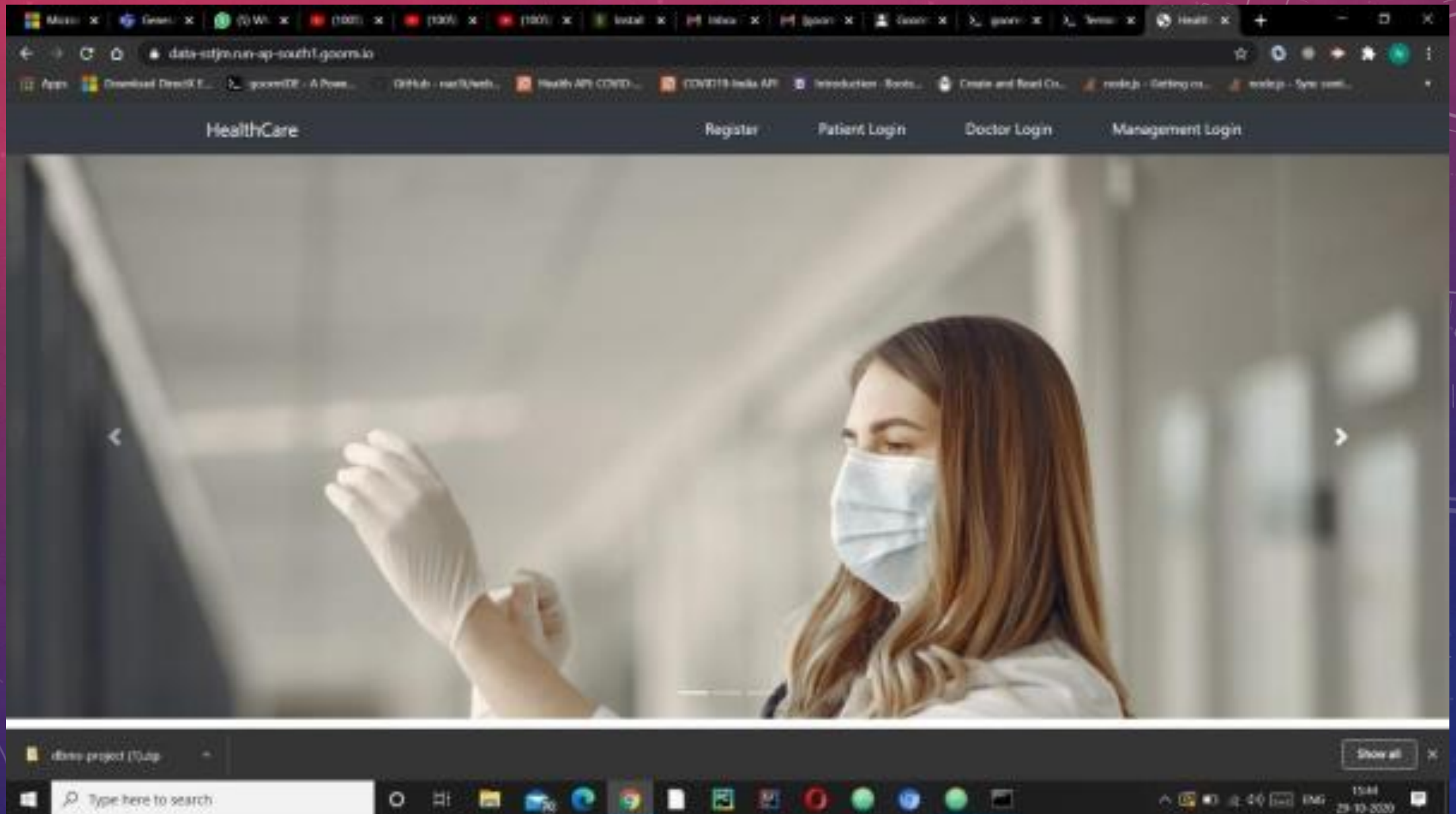
- Login System for patients, Doctor and Management.
- Patient can chat with Management Team and tell him his problems.
- Management Team allocates patient a doctor.
- Patient can chat with doctor and tell him all his problems in chat.
- Doctor can respond to all the queries of the patients and can ask them for all the tests that he needs to analyze the problem.

# PROTOTYPE



# FRONT END DESIGNS

# HOME SCREEN



# REGISTRATION

The screenshot shows a web browser window with the following elements:

- Browser Tabs:** WhatsApp, HealthCare, HealthCare, Untitled document - Google Doc.
- Address Bar:** Not secure | web-pywpur-in-ap-south-1-gomkio/patient/register
- Navigation Bar:** HealthCare, Register, Patient Login, Doctor Login, Management Login.
- Form Title:** PATIENT REGISTRATION FORM
- Form Fields:**
  - First Name (Text input)
  - Last Name (Text input)
  - Email (Text input)
  - Password (Text input)
  - Age (Text input)
  - Gender (Dropdown menu, currently showing "Select Gender")
  - Address (Text input)
- Taskbar:** Windows Start button, search bar (Type here to search), taskbar icons (File Explorer, Edge, etc.), system tray (17:32, 09-10-2020).

WhatsApp

HealthCare

HealthCare

Untitled document - Google Do...

Not secure | web-psypw-run-ap-south1.goorm.io/patient/register

AppsGmailYouTubeMapsVellore Institute of...June 2020 - FaCal...APLXVTI University - VTDPLeo 31: Pumping to...STEAMUNLOCKED...Solution to DBMS...Assassin's Creed O...

First Name

Last Name

Email

Password

Age

Gender

Address

Pincode

Submit

First Name

First Name

Last Name

Last Name

Email

Email

Password

Password

Age

Age

Gender

Select Gender

Address

Apartment, floor or landmark

Pincode

6-digit Pincode

Submit



# PATIENT LOGIN

The screenshot shows a web browser window with the following elements:

- Browser Tabs:** WhatsApp, HealthCare, Untitled document - Google Docs.
- Address Bar:** Not secure | web-pywpun-ap-south-1-goorm.io/patient/register
- Navigation Bar:** HealthCare, Register, Patient Login, Doctor Login, Management Login.
- Form Title:** PATIENT LOGIN
- Email address:** modirocks@gmail.com
- Password:** [REDACTED]
- Submit Button:** Submit

The form is titled "PATIENT LOGIN" and contains two input fields: "Email address" and "Password". The email address field contains the text "modirocks@gmail.com". The password field contains a series of dots, indicating that the password is masked. Below the password field is a blue "Submit" button. A small note below the email field states: "We'll never share your email with anyone else."

# EDIT DETAILS OF PATIENT

EDIT PATIENT

First Name: Sathwik

Last Name: Goyal

Email: sathwik2000@gmail.com

Password:

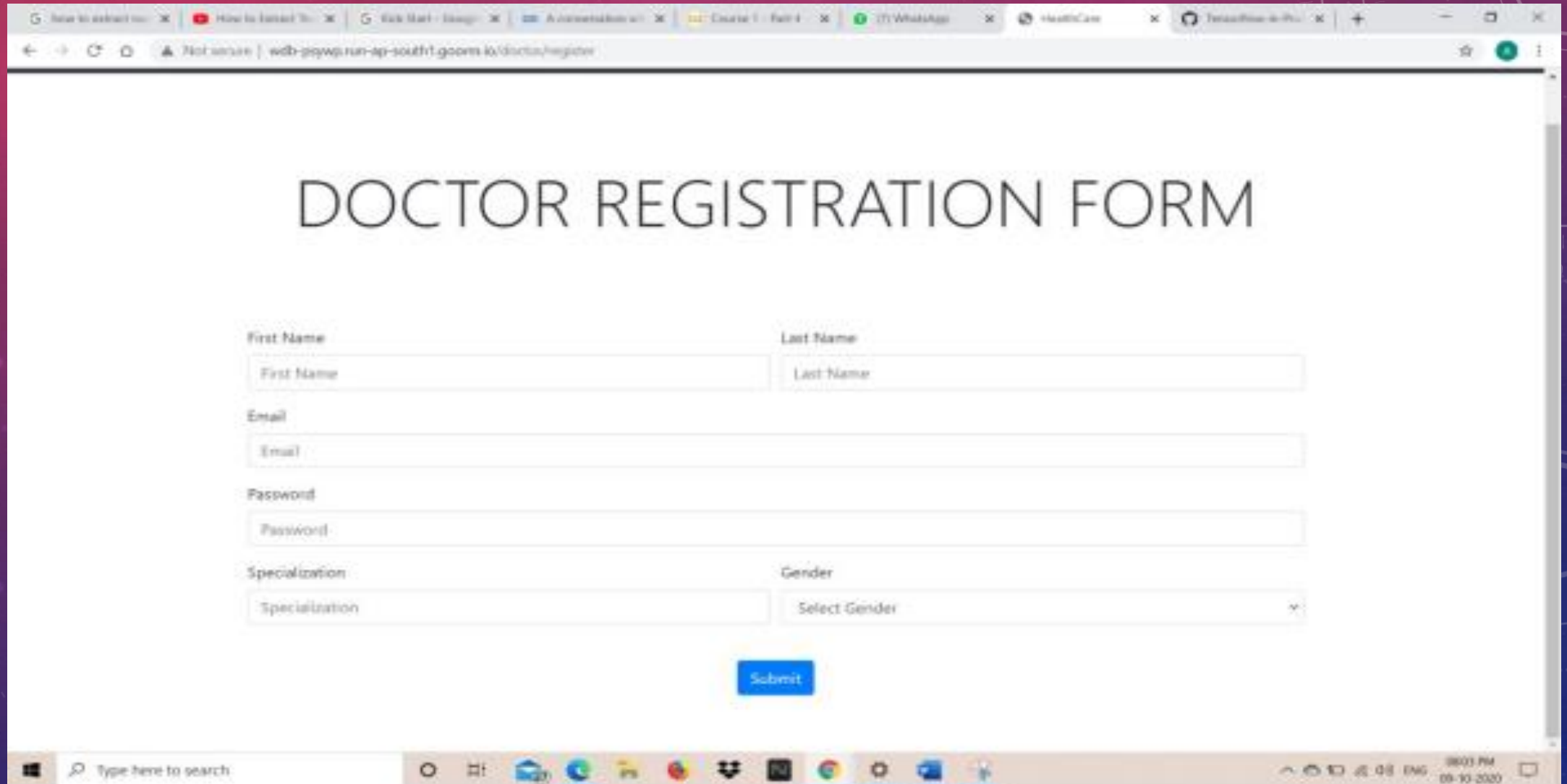
Age: 20

Gender: Male

Address: VIT VELLORE

Pincode:

# CREATION OF DOCTOR ACCOUNT BY THE MANAGEMENT



The screenshot shows a web browser window with multiple tabs open. The active tab displays a "DOCTOR REGISTRATION FORM". The form includes input fields for First Name, Last Name, Email, Password, Specialization, and Gender. A blue "Submit" button is located at the bottom of the form. The browser's address bar shows the URL "wdb-power-run-ap-south1-gcpm.io/doctor/register". The Windows taskbar at the bottom indicates the system time as 08:03 PM on 08-10-2020.

DOCTOR REGISTRATION FORM

First Name  
Last Name

Email

Password

Specialization  
Gender

Submit



[View and edit profile](#)

[Delete doctor](#)



**Dr. Ashutosh Agarwal**

**Specialization :** Heart

**Email :** ashutosh@gmail.com

[View and edit profile](#)

[Delete doctor](#)



**Dr. Rupa Agarwal**

**Specialization :** Eyes

**Email :** rupa@gmail.com


[View and edit profile](#)


[Delete doctor](#)

# EDIT PROFILE OF DOCTORS BY MANAGEMENT

HealthCare

Add a Doctor Online Reception See all Doctors Logout

 **Dr. Ramesh Gupta**  
Specialization : neurologist  
Email : guptaramesh@gmail.com  
[View and edit profile](#) [Delete doctor](#)

 **Dr. Rahul Jain**  
Specialization : Brain  
Email : rahul@gmail.com  
[View and edit profile](#) [Delete doctor](#)

Type here to search

10:30 PM 09-10-2020

how to extract no... x How to Extract Th... x File Manager - Design x A conversation with x Course 1 - Part 1 x 01 WhatsApp x HealthCare x TensorFlow in Py... x

Not secure | wdb-gowg.run-ap-south-1.amazonaws.com/doctor/5f317e5d277028100128e1902/register/doctor

# EDIT DOCTOR

First Name Last Name

Ramesh Gupta

Email

guptaramesh@gmail.com

Password

Specialization Gender

neurologist Male

Edit

[Back](#)

Type here to search

08:01 PM 09-10-2020



# MANAGEMENT LOGIN

The screenshot shows a web browser window with multiple tabs open. The active tab is titled 'HealthCare' and displays a page for 'ONLINE RECEPTION'. The page has a dark navigation bar at the top with the following links: 'HealthCare', 'Add a Doctor', 'Online Reception', 'See all Doctors', and 'Logout'. The main content area is white and features a large heading 'ONLINE RECEPTION'. Below this, there are two sections: 'PATIENT' and 'MANAGEMENT'. The 'PATIENT' section shows details for a doctor request from Sathwik Goyal, including his name, email, age, gender, and problem. A blue button labeled 'Allocate doctor' is present. The 'MANAGEMENT' section shows a message from Dr. Ramesh Gupta. The bottom of the browser window shows the Windows taskbar with various icons and the system clock.

HealthCare

Add a Doctor Online Reception See all Doctors Logout

## ONLINE RECEPTION

**PATIENT**  
Doctor Request  
Name : Sathwik Goyal  
E-mail : sathwik2000@gmail.com  
Age : 20  
Gender : Male  
Problem : headache and cold  
[Allocate doctor](#)

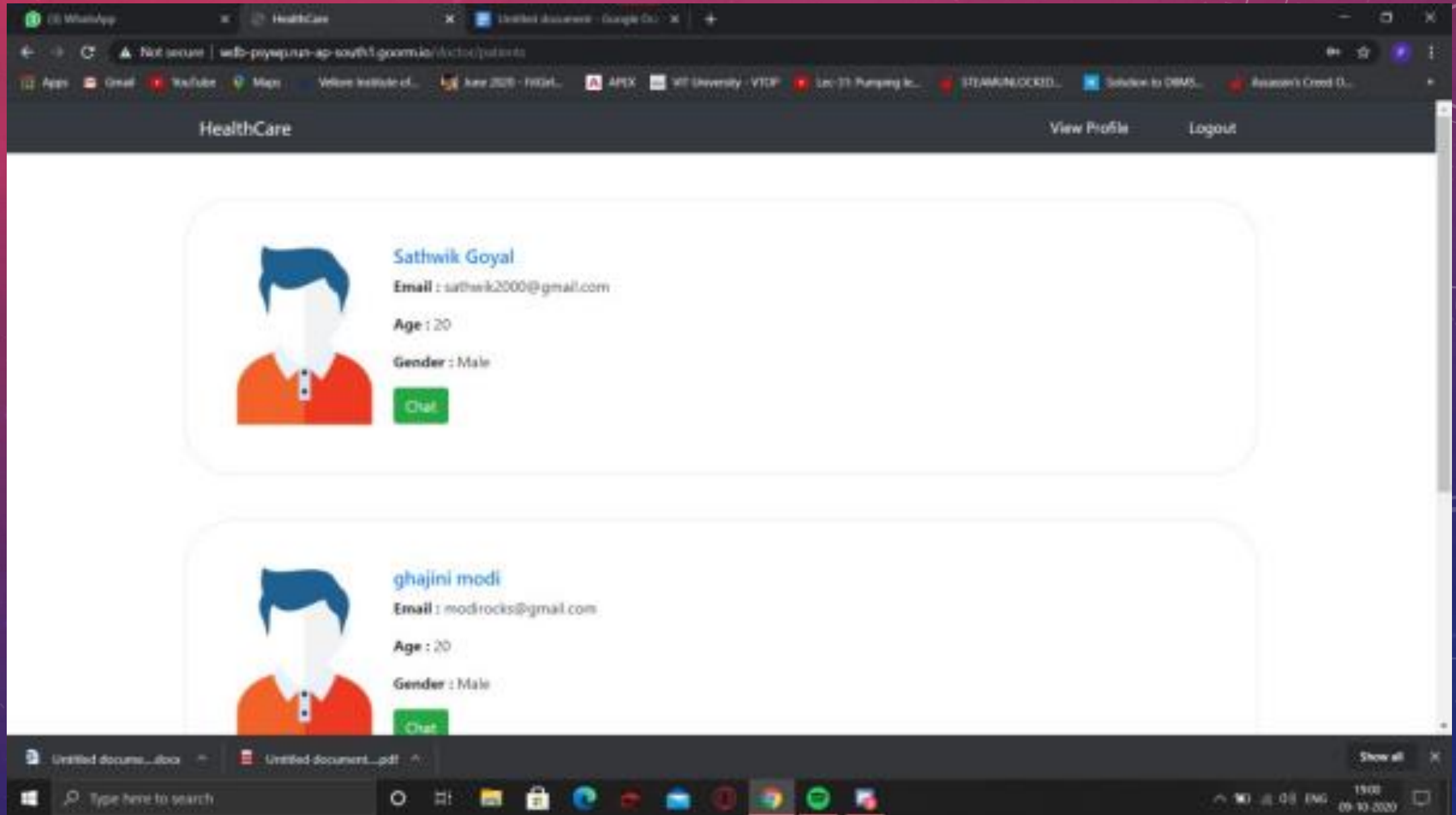
**MANAGEMENT**  
Dr Ramesh Gupta has been allotted to you. Discuss your problem with the allocated doctor

**PATIENT**  
Doctor Request

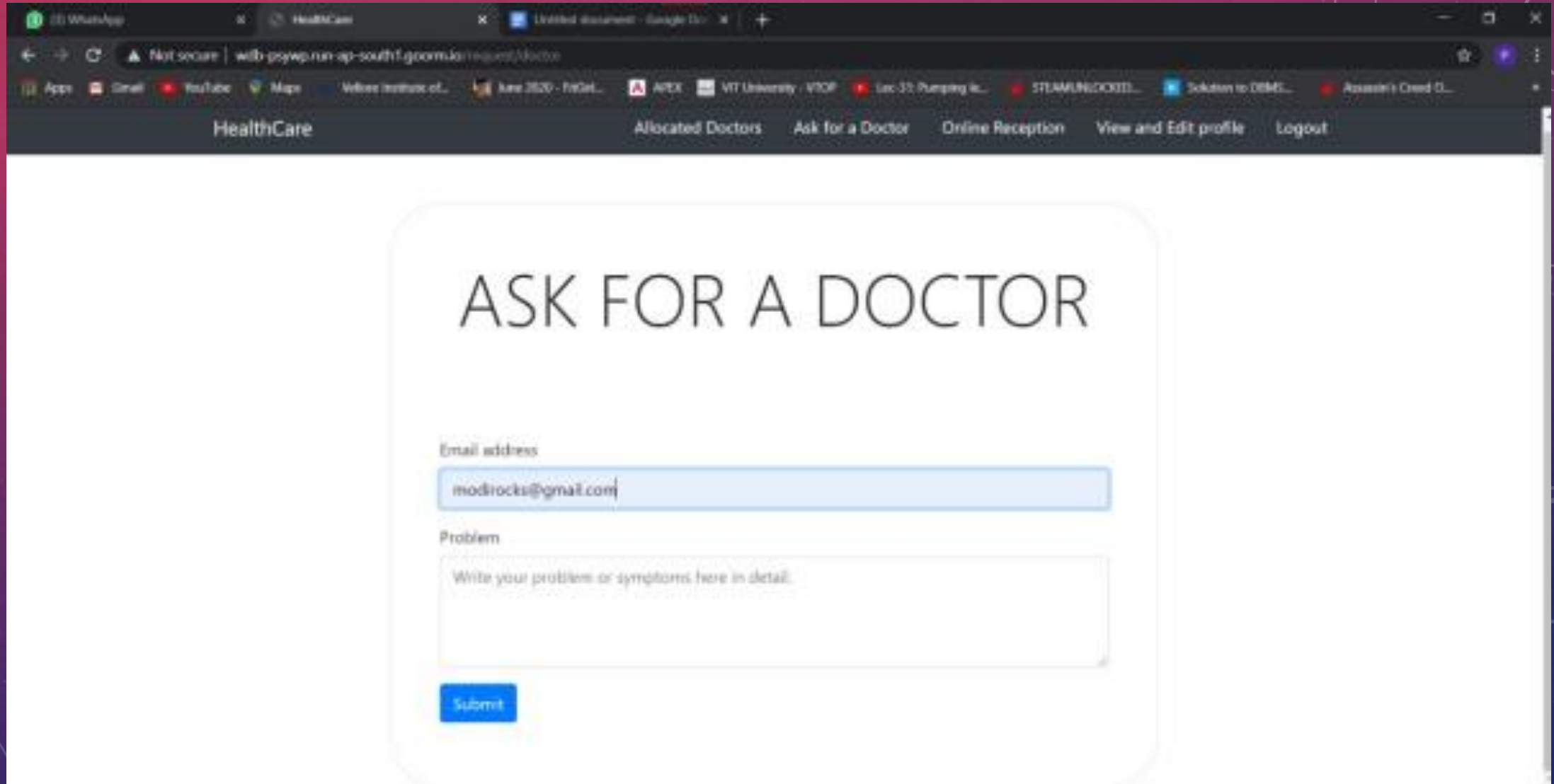
Type here to search

8:09 PM 08-10-2020

# DOCTOR LOGIN



# PATIENT-DOCTOR ALLOCATION



The screenshot shows a web browser window with the following elements:

- Browser Tabs:** WhatsApp, HealthCare, and an untitled document in Google Docs.
- Address Bar:** Not secure | will-polywp-run-ap-south1-gcpmln-request/doctor
- Navigation Bar:** HealthCare (logo), Allocated Doctors, Ask for a Doctor, Online Reception, View and Edit profile, Logout.
- Main Content Area:**
  - ASK FOR A DOCTOR** (Large heading)
  - Email address:** Input field containing `modirocks@gmail.com`
  - Problem:** Text area with placeholder text: "Write your problem or symptoms here in detail."
  - Submit:** A blue button at the bottom of the form.

# PATIENT ASKS FOR DOCTOR

The screenshot shows a web browser window with the following details:

- Browser Tabs:** WhatsApp, HealthCare, Untitled document - Google Doc.
- Address Bar:** Not secure | web-pywpn-unip-south1.gcpn.io/healthcare/doctor
- Page Header:** HealthCare | Allocated Doctors | Ask for a Doctor | Online Reception | View and Edit profile | Logout
- Main Content:**
  - ASK FOR A DOCTOR**
  - Email address:** modirocks@gmail.com
  - Problem:** I have serious Head ache from past 4 days
  - Submit** button
- Taskbar:** Shows a search bar and various application icons. The system clock indicates 18:33 on 09-10-2020.

# SEND MESSAGE

The screenshot shows a web browser window with the following details:

- Browser Tab:** HealthCare
- Address Bar:** Not secure | web-pocpoc-run-ap-south1.gcpml.io/doctor/5f7afab4813ae5d482430014/patient/74004548ae2887223b/760ee/message
- Page Header:** HealthCare | Allocated Doctors | Ask for a Doctor | Online Reception | View and Edit profile | Logout
- Main Content:**
  - SEND MESSAGE** (Large heading)
  - Message** (Label for the input field)
  - Input Field:** I AM HAVING HEADACHE FROM PAST 1 WEEK AND ACUTE FEVER
  - Submit** (Blue button)
- Taskbar:** Windows search bar (Type here to search), task icons (File Explorer, Edge, etc.), system tray (07:16 PM, 09-10-2020).



# DOCTOR REPLIES

The screenshot shows a web browser window with multiple tabs open. The active tab is titled 'HealthCare' and displays a 'SEND MESSAGE' form. The form is contained within a light gray rounded rectangle. At the top of the form, the text 'SEND MESSAGE' is displayed in a large, black, sans-serif font. Below this, there is a label 'Message:' followed by a text input field. The input field contains the text 'GO FOR A BLOOD TEST AND URINE TEST'. Below the input field is a blue button labeled 'Submit'. The browser's address bar shows the URL 'wdb-gqwpj-run-ap-south1.google.com/diaries/5175ab4d90d6e50802e30014/patient/5804848e21817223b765ee/message'. The browser's taskbar at the bottom shows the Windows logo, a search bar, and several application icons. The system tray on the right indicates the time is 8:15 PM on 09-10-2020.

HealthCare View Profile Logout

## SEND MESSAGE

Message:

GO FOR A BLOOD TEST AND URINE TEST

Submit

Type here to search

8:15 PM 09-10-2020



# PATIENT CAN ALSO CHAT WITH ADMINISTRATION

## MANAGEMENT

Dr Ashutosh Agarwal has been allotted to you. Discuss your problem with the allocated doctor

---

## PATIENT

when will i get my blood report

---

## MANAGEMENT

it will 1 week

# MANAGEMENT SENDS THE PATIENT HIS MEDICAL REPORT

HealthCare

Not secure | wdh-pywp-run-up-south1.gforms.io/patient/chat/5804947ed38072236c790ed

**MANAGEMENT**  
Report  
Problem : heart problem  
Title : blood test

## Medical Report

Name : \_\_\_\_\_ Date : \_\_\_\_\_  
When did your problem start? : \_\_\_\_\_ Describe Problem : \_\_\_\_\_  
Cause of Current Problem :  
☐ Car Accident ☐ Work Injury ☐ Gradual onset ☐ Other  
Did this Problem require Surgery : ☐ No ☐ Yes ☐ Yes Date of Surgery \_\_\_\_\_  
Past Medical History Do you have a history of the following problems?  

<input type="checkbox"/> Breathing Problems	<input type="checkbox"/> Stroke	<input type="checkbox"/> Depression
<input type="checkbox"/> Pregnant	<input type="checkbox"/> Bone/joint Problems	<input type="checkbox"/> Bowel/Bladder
<input type="checkbox"/> Heart Problems	<input type="checkbox"/> Kidney Problems	<input type="checkbox"/> History of heavy alcohol use
<input type="checkbox"/> Current Wound/Skin Problems	<input type="checkbox"/> Gallbladder/Liver	<input type="checkbox"/> Drug use
<input type="checkbox"/> Pacemaker	<input type="checkbox"/> Electrical Implants	<input type="checkbox"/> Smoking
<input type="checkbox"/> Tumor/Cancer	<input type="checkbox"/> Anxiety attacks	<input type="checkbox"/> Headaches
<input type="checkbox"/> Diabetes	<input type="checkbox"/> Sleep Apnea	

  
☐ No Surgeries  

Surgeries/Hospitalizations	Year	Complications
_____	_____	_____
_____	_____	_____
_____	_____	_____

  
☐ No Medication

Type here to search

07:24 PM 09-10-2020

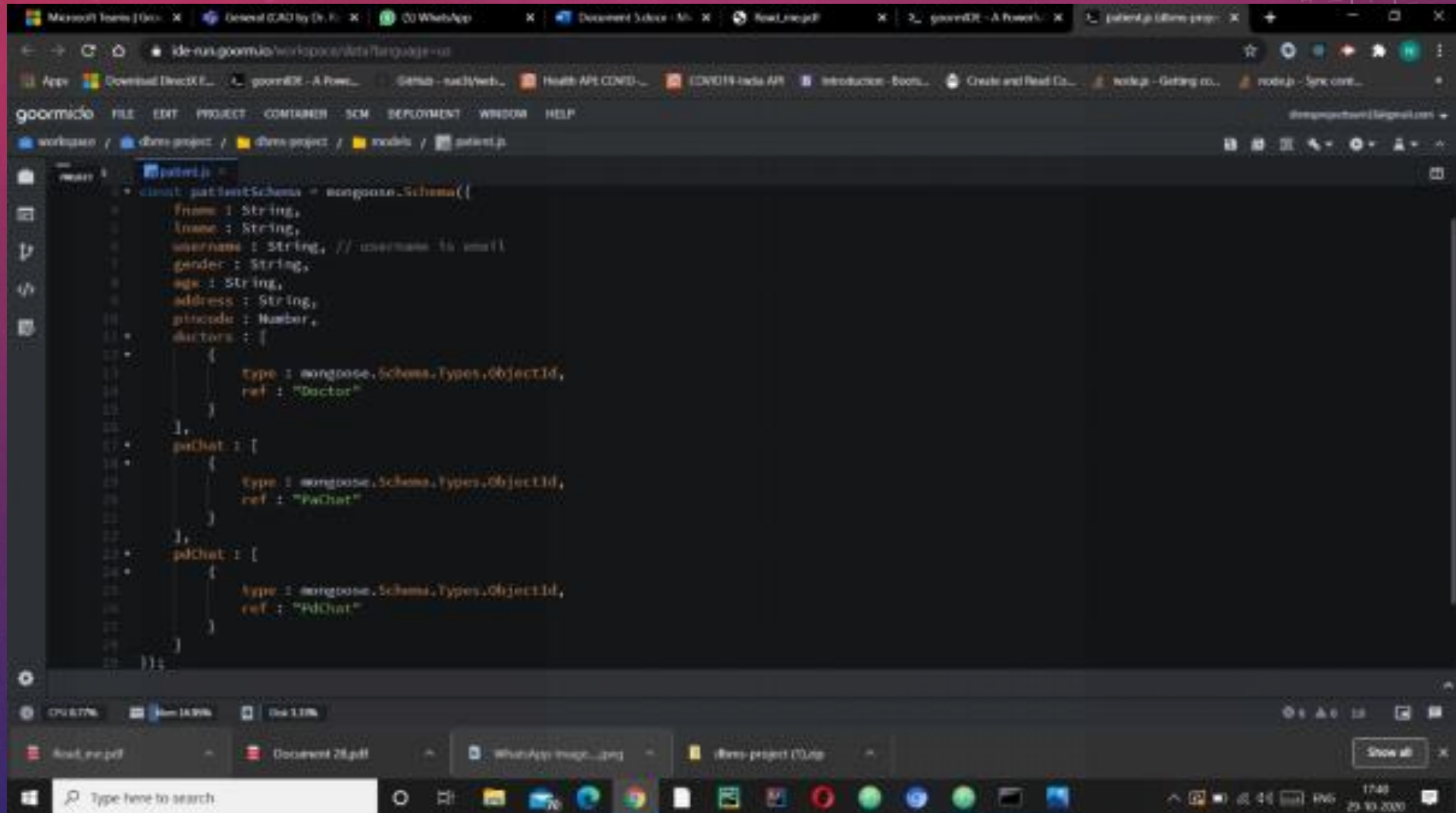


# DATABASE DETAILS

# USER DATABASE

```
4 * const userSchema = mongoose.Schema({  
5   username : String,  
6   password : String,  
7 * |   isPatient : {  
8     type : Boolean,  
9     default : false  
10  },  
11 *   isDoctor : {  
12     type : Boolean,  
13     default : false  
14   },  
15 *   isAdmin : {  
16     type : Boolean,  
17     default : false  
18   }  
19 });
```

# PATIENT DATABASE



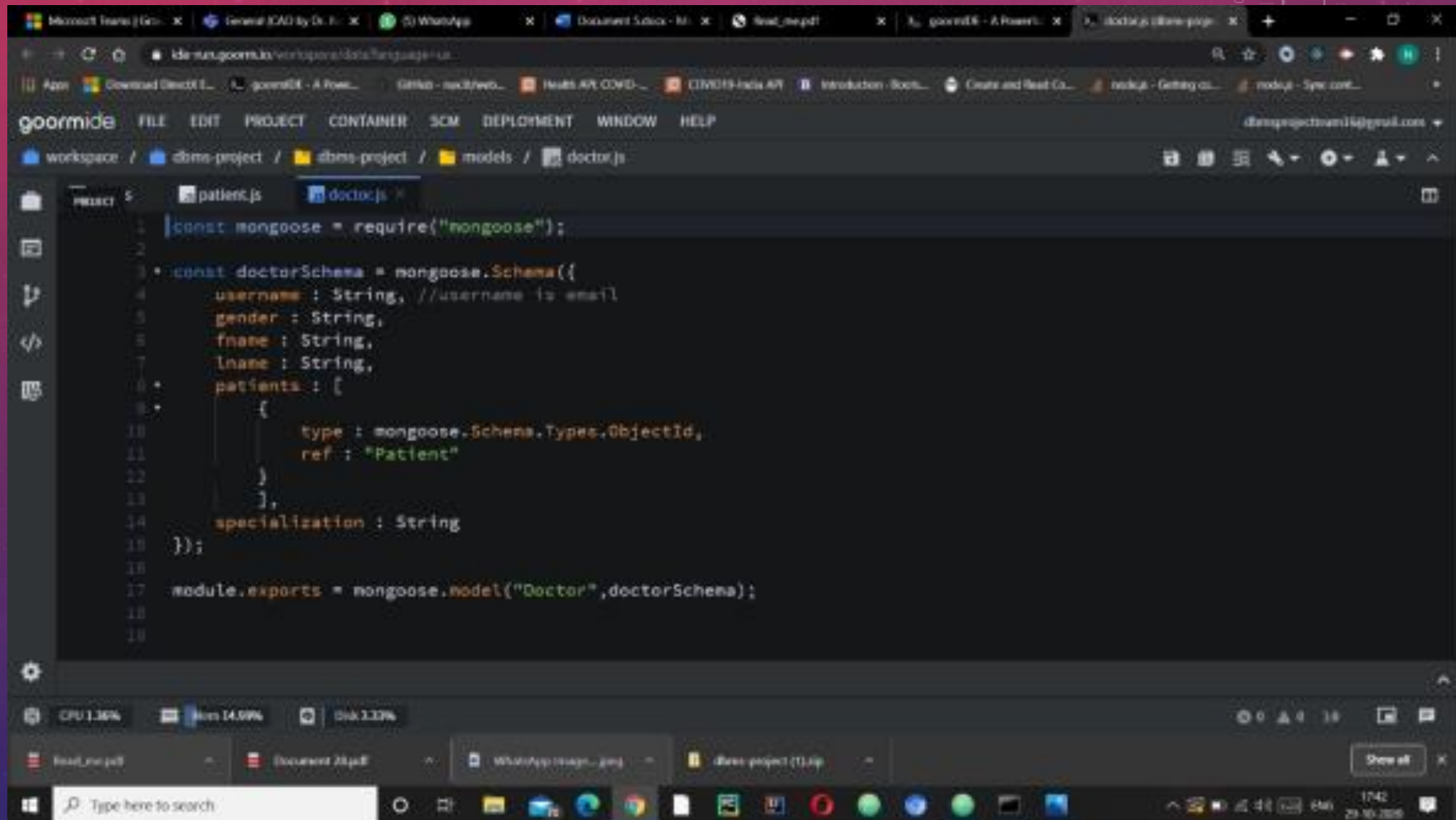
The screenshot shows a web browser window with a code editor displaying a Mongoose schema for a patient database. The schema is defined in a file named `patient.js` within a project structure. The schema includes fields for `fname`, `lname`, `username`, `gender`, `age`, `address`, `pincode`, and an array of `doctors`. The `doctors` array is a reference to a `Doctor` model. The `paChat` field is a reference to a `PaChat` model. The `pdChat` field is a reference to a `PdChat` model. The schema is defined as follows:

```
const patientSchema = mongoose.Schema({
  fname: String,
  lname: String,
  username: String, // username is small
  gender: String,
  age: String,
  address: String,
  pincode: Number,
  doctors: [
    {
      type: mongoose.Schema.Types.ObjectId,
      ref: "Doctor"
    }
  ],
  paChat: [
    {
      type: mongoose.Schema.Types.ObjectId,
      ref: "PaChat"
    }
  ],
  pdChat: [
    {
      type: mongoose.Schema.Types.ObjectId,
      ref: "PdChat"
    }
  ]
});
```

The browser window shows the code editor with the schema definition. The project structure is visible in the sidebar, showing the `models` directory containing `patient.js`. The browser's address bar shows the URL `ide-nugoomide/workspaces/data/language-ide`. The browser's tabs include `Microsoft Teams`, `General GAD by Dr. P...`, `GO WhatsApp`, `Document 20.pdf`, `Read, me.pdf`, `goormide - A Power...`, and `patient.js - Line 100`. The browser's status bar shows the date and time `17:48 29-10-2020`.



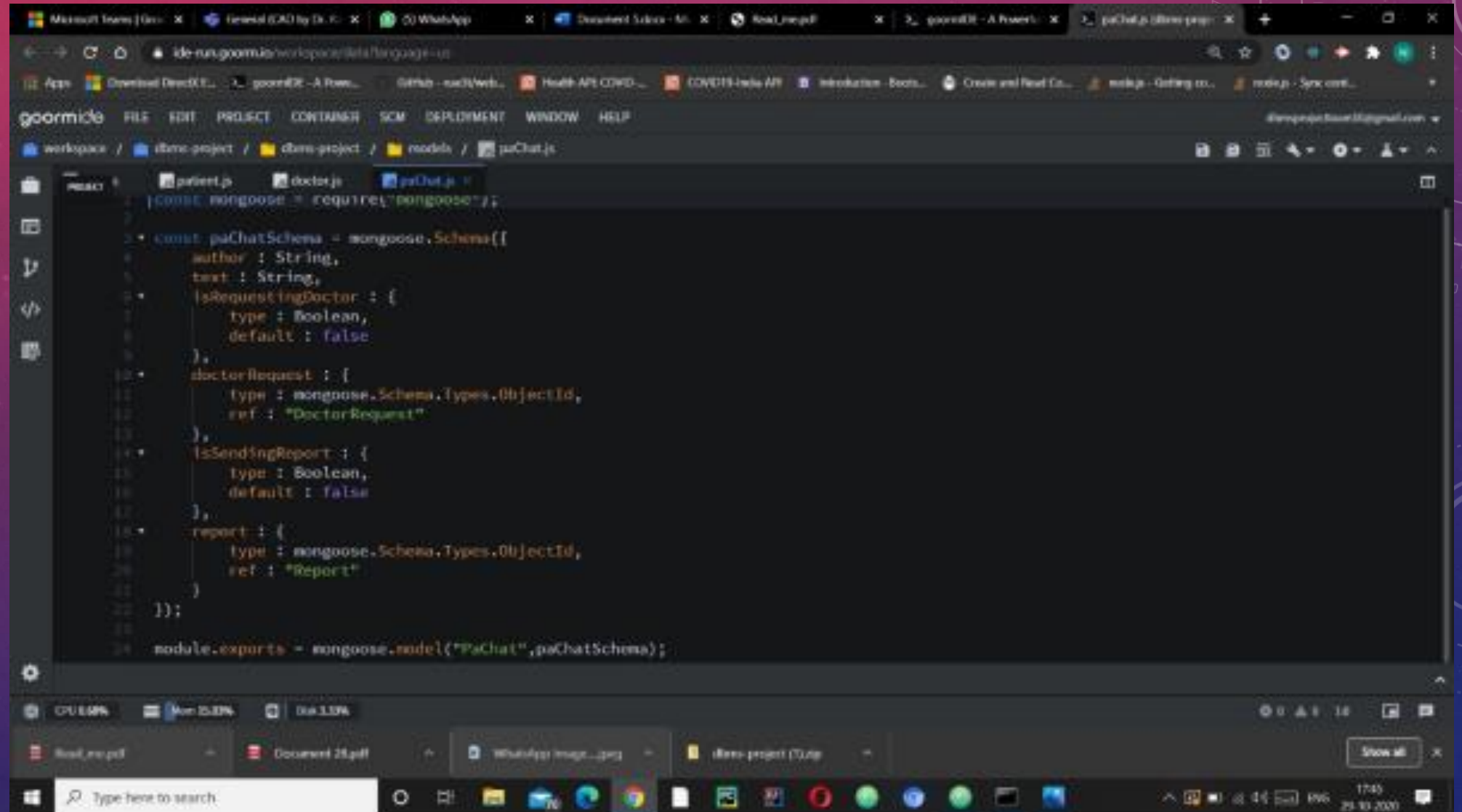
# DOCTOR DATABASE



```
1 const mongoose = require("mongoose");
2
3 const doctorSchema = mongoose.Schema({
4   username : String, //username is email
5   gender : String,
6   fname : String,
7   lname : String,
8   patients : [
9     {
10      type : mongoose.Schema.Types.ObjectId,
11      ref : "Patient"
12    }
13  ],
14   specialization : String
15 });
16
17 module.exports = mongoose.model("Doctor",doctorSchema);
18
19
```

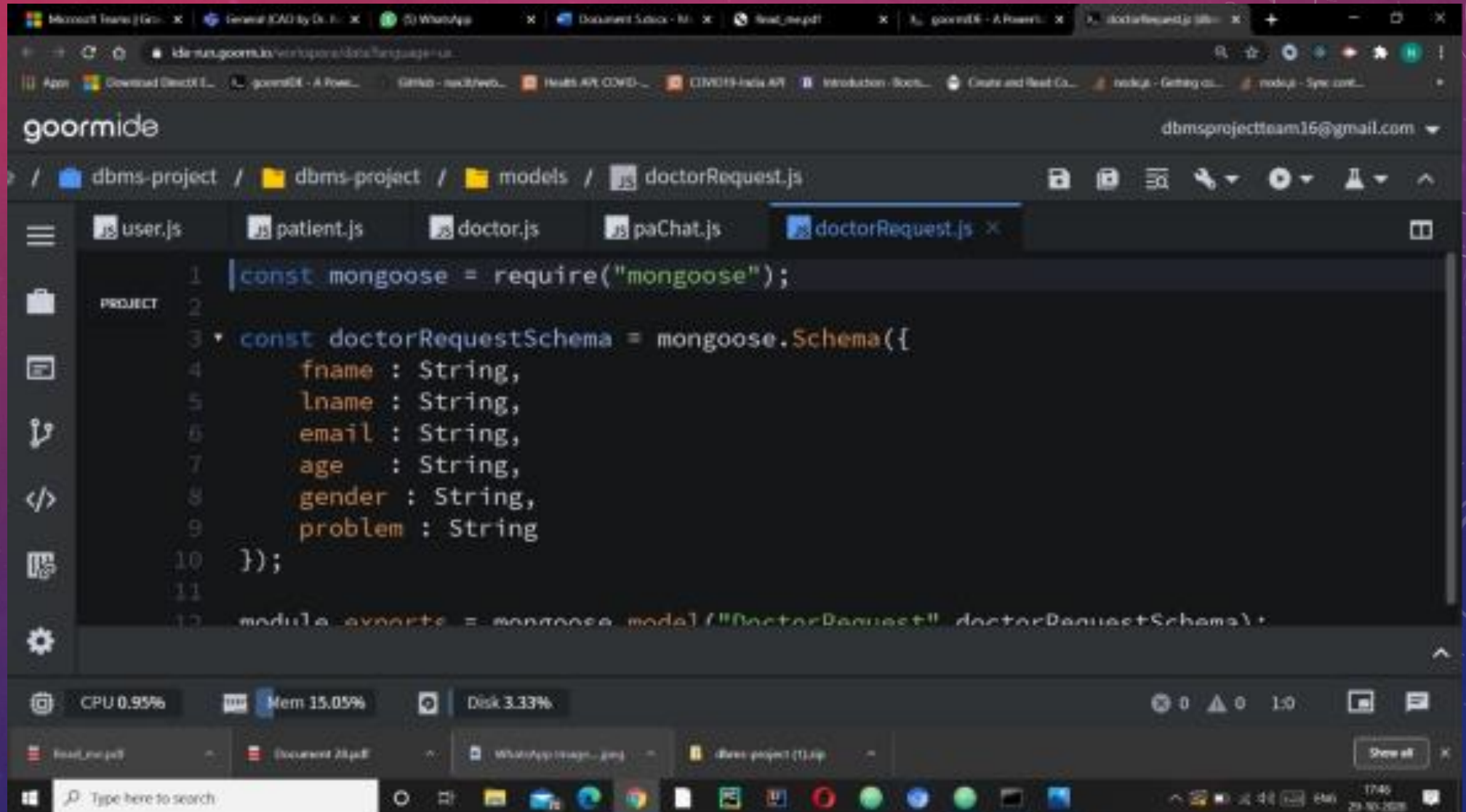


# PATIENT-ADMIN CHAT DATABASE (PACHAT)



```
1 const mongoose = require('mongoose');
2
3 const paChatSchema = mongoose.Schema({
4   author : String,
5   text : String,
6   isRequestingDoctor : {
7     type : Boolean,
8     default : false
9   },
10  doctorRequest : {
11    type : mongoose.Schema.Types.ObjectId,
12    ref : "DoctorRequest"
13  },
14  isSendingReport : {
15    type : Boolean,
16    default : false
17  },
18  report : {
19    type : mongoose.Schema.Types.ObjectId,
20    ref : "Report"
21  }
22 });
23
24 module.exports = mongoose.model("PaChat",paChatSchema);
```

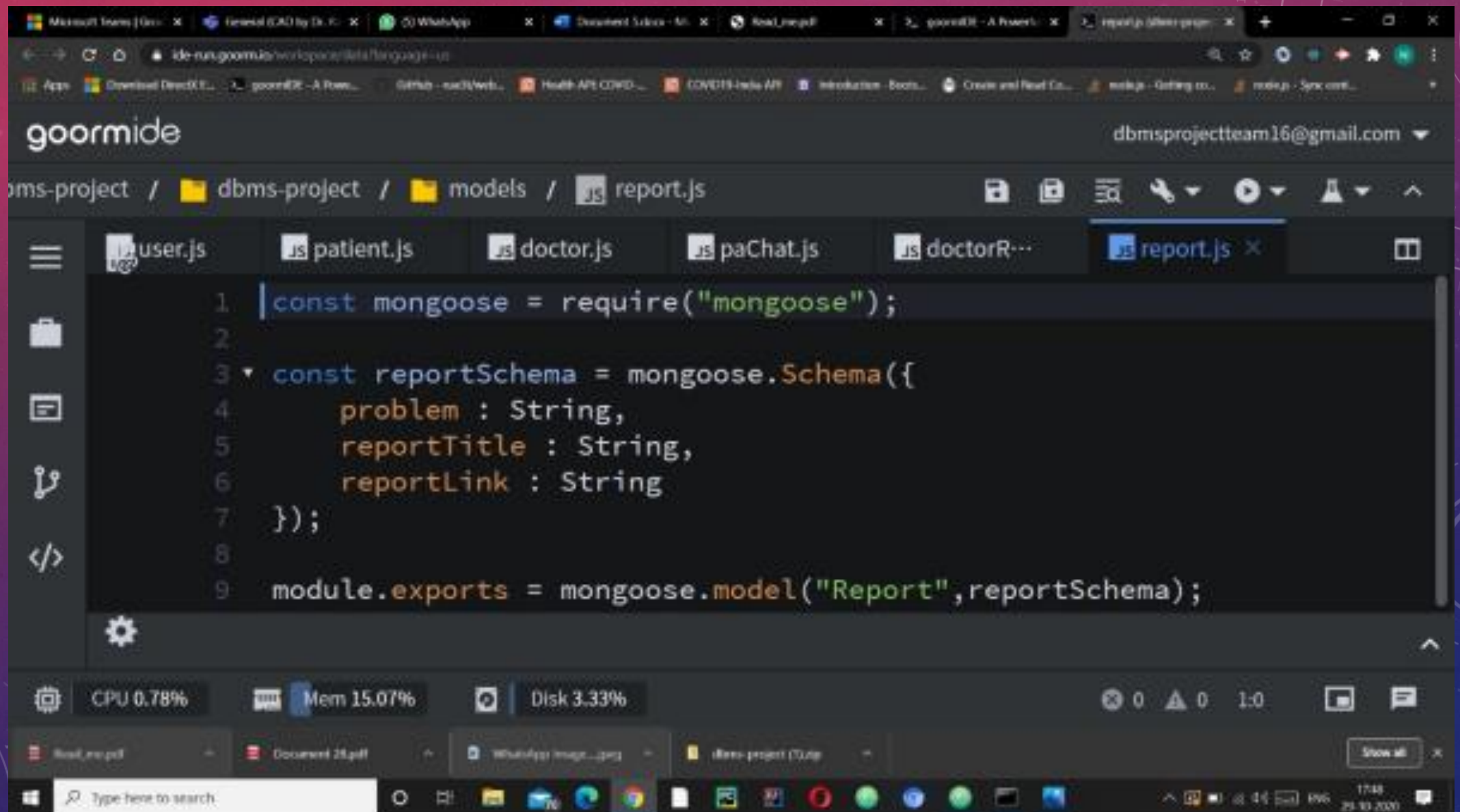
# DOCTOR REQUEST DATABASE



The screenshot displays a web-based code editor interface for a project named 'dbms-project'. The editor is showing the file 'doctorRequest.js' within the 'models' directory. The code defines a Mongoose schema for a 'DoctorRequest' model. The schema includes fields for 'fname', 'lname', 'email', 'age', 'gender', and 'problem', all of type 'String'. The editor also shows a sidebar with other files like 'user.js', 'patient.js', 'doctor.js', 'paChat.js', and 'doctorRequest.js'. The bottom status bar indicates system metrics: CPU 0.95%, Mem 15.05%, and Disk 3.33%.

```
1 const mongoose = require("mongoose");
2
3 const doctorRequestSchema = mongoose.Schema({
4   fname : String,
5   lname : String,
6   email : String,
7   age   : String,
8   gender : String,
9   problem : String
10 });
11
12 module.exports = mongoose.model("DoctorRequest", doctorRequestSchema);
```

# REPORT DATABASE



```
1 |const mongoose = require("mongoose");
2
3 |const reportSchema = mongoose.Schema({
4 |    problem : String,
5 |    reportTitle : String,
6 |    reportLink : String
7 |});
8
9 |module.exports = mongoose.model("Report", reportSchema);
```



# PATIENT-DOCTOR CHAT DATABASE (PDCHAT)

```
1 const mongoose = require("mongoose");
2
3 const pdChatSchema = mongoose.Schema({
4   author : String,
5   text : String,
6   isSendingReport : {
7     type : Boolean,
8     default : false
9   },
10  report : {
11    type : mongoose.Schema.Types.ObjectId,
12    ref : "Report"
13  },
14  doctor : {
15    type : mongoose.Schema.Types.ObjectId,
16    ref : "Doctor"
17  }
18 });
19
20 module.exports = mongoose.model("PdChat",pdChatSchema);
```



**THANK YOU**