

A CENTER FOR INTER-DISCIPLINARY RESEARCH
2021-22

TITLE

HOSPITAL APPOINTMENT MANAGER

SUPERVISED BY

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INSTITUTE OF ENGINEERING AND TECHNOLOGY
AUTONOMOUS

Advanced Academic Center

(A Center For Inter-Disciplinary Research)

This is to certify that the project titled

“ HOSPITAL APPOINTMENT MANAGER ”

is a bonafide work carried out by the following students in partial fulfilment of the requirements for Advanced Academic Center intern, submitted to the chair, AAC during the academic year 2021-22.

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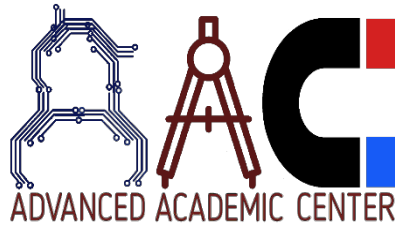
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ACKNOWLEDGEMENTS

We express our deep sense of gratitude to our respected Director, Gokaraju Rangaraju Institute of Engineering and Technology, for the valuable guidance and for permitting us to carry out this project.

With immense pleasure, we extend our appreciation to our respected Principal, for permitting us to carry out this project.

We are thankful to the Associate Dean, Advanced Academic Centre, for providing us an appropriate environment required for the project completion.

We are grateful to our project supervisor who spared valuable time to influence us with their novel insights.

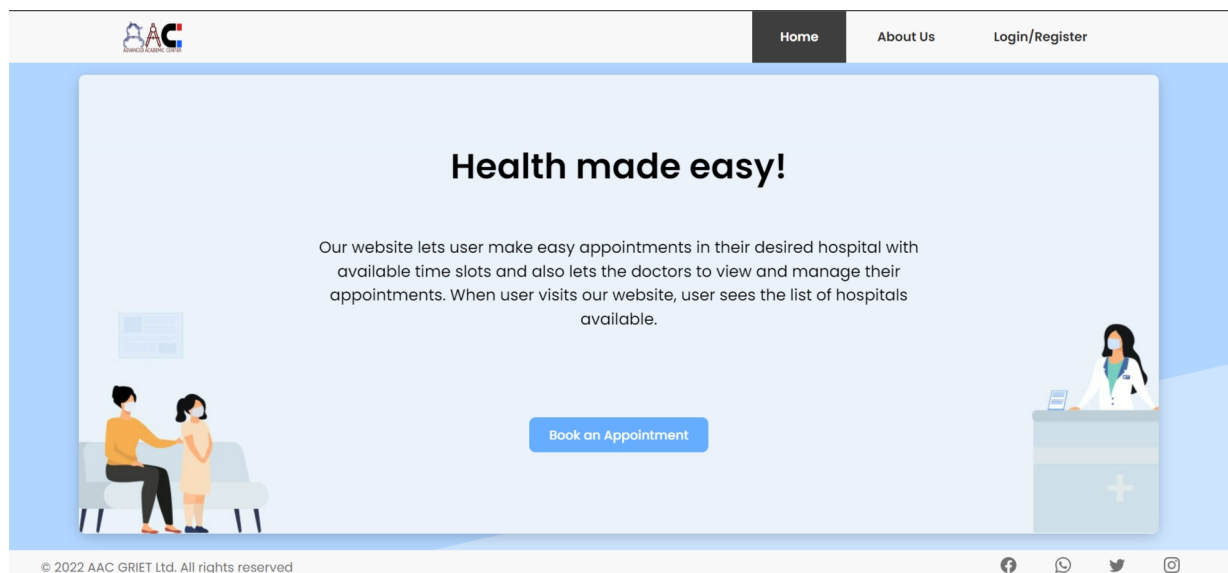
We are indebted to all the above mentioned people without whom we would not have concluded the project.

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ABSTRACT:

The problem to book an appointment for a hospital is that people face many difficulties while booking an appointment which includes waiting in a queue, busy signals. If patient scheduling is only available by phone, your front office staff likely spends most of their day answering calls. Booking appointments isn't a task that requires a human touch, so it's not an efficient use of their time.

Creating a website in which we can book an appointment in required time slot , in our desired hospital makes it easy for patients to go and consult a doctor without a third person involvement.



INTRODUCTION:

Web Development:

Web development involves the creation and maintenance of websites. Modern web development also includes web applications. Web applications are software packages that run on a web server and are accessed through the internet. This is unlike a traditional application that runs on your computer, tablet, or phone.

There are Front-end and Back-end developers in web development. Front-end web development has to do with the interface that you, the user, interact with when you visit a website or use a web application. Front-End Developers create everything you see on a web page, including:

- Colors
- Layout
- Navigation

Back-end web development has to do with the parts of a website that you cannot see, particularly how website information is stored and retrieved. While loading a webpage for

the first time or sign into a website with a username and password, it is the work of Back-End

Developers to make it possible to access website information efficiently and securely.

Framework?

A Web framework (WF) supports the creation, development, and publishing of web applications and web sites. This can include web services, APIs, and other resources. Web frameworks are software frameworks that offer a standard and accessible way to build and

develop web applications.

Types of Frameworks:

- Angular
- Django
- Laravel

HOSPITAL APPOINTMENT MANAGER:

Generally, we see people who want to book an appointment in a particular hospital making calls or taking tokens by waiting in queues to consult the doctor. Most of the times, people get busy signals. If patient scheduling is only available by phone, front office staff spends most of their day answering calls. Booking appointments is not a task that requires a human touch, so it is not an efficient use of their time.

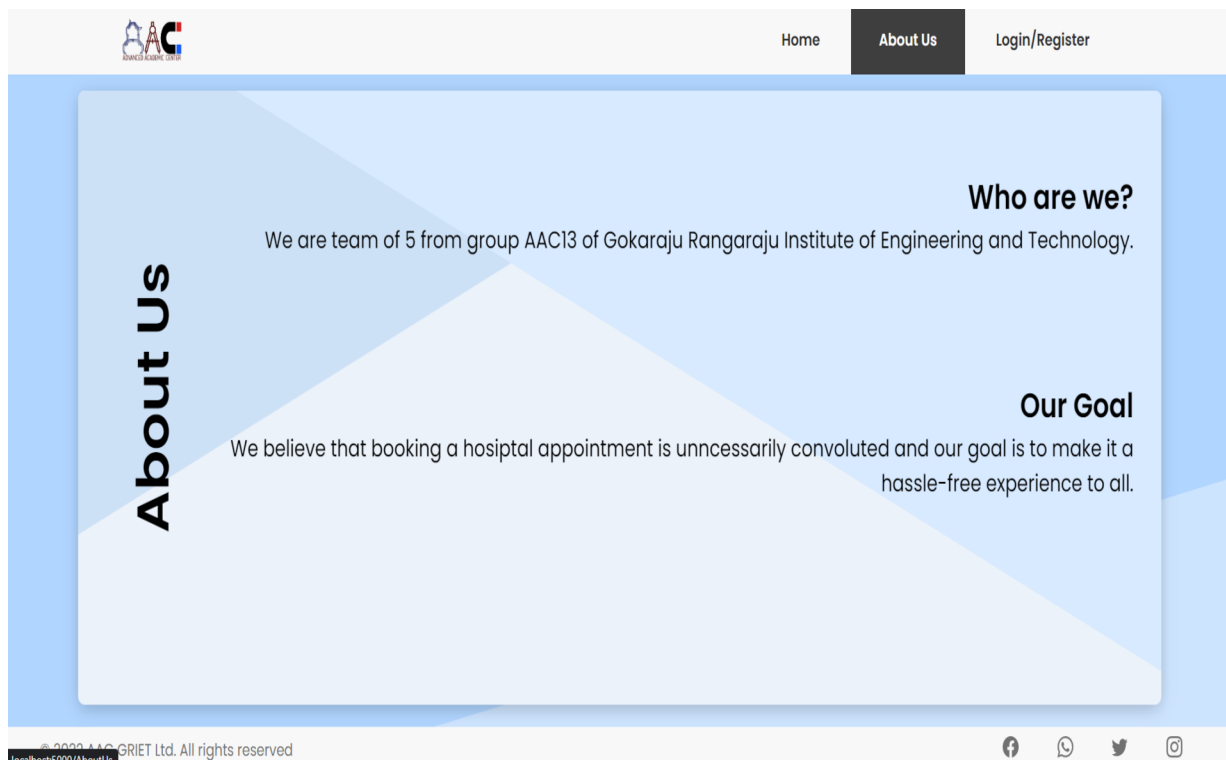
Our website Hospital Appointment Manager is a web application which allows the user to book an appointment in any of the desired hospitals of user's wish.

FEATURES:

In Hospital Appointment Manager, there are 6 web pages. Website includes Login Authentication from user (Sign-up and Sign-in). All the data is stored in Firebase. Website then redirects the user to Book an appointment page which requires user's location. This has filters which gives user flexibility to choose the specializations based on user's requirements. When a user books an appointment in a desired hospital a confirmation e-mail will be sent to the doctor immediately. Our website lets the doctors to either accept, decline, ⁴⁾ or re-adjust the patient's appointment according to his/her availability. This way an appointment is booked and user can consult the doctor with ease.

Use-Case:

Website can be used as appointment manager for anything, be it gyms, cinemas etc. But we found hospitals as its best option.



[Home](#)[About Us](#)[Login/Register](#)[Sign in](#)[Sign up](#)

Enter Your Credentials

First Name

Enter First name

Last Name

Enter Last name

Email

latha@gmail.com

Password

☐ I accept the [Terms and Conditions](#)[Sign up](#)

Having Issues? Contact us at support@example.com

[Home](#)[About Us](#)[Login/Register](#)[Sign in](#)[Sign up](#)

Enter Your Credentials

Email

latha@gmail.com

Password

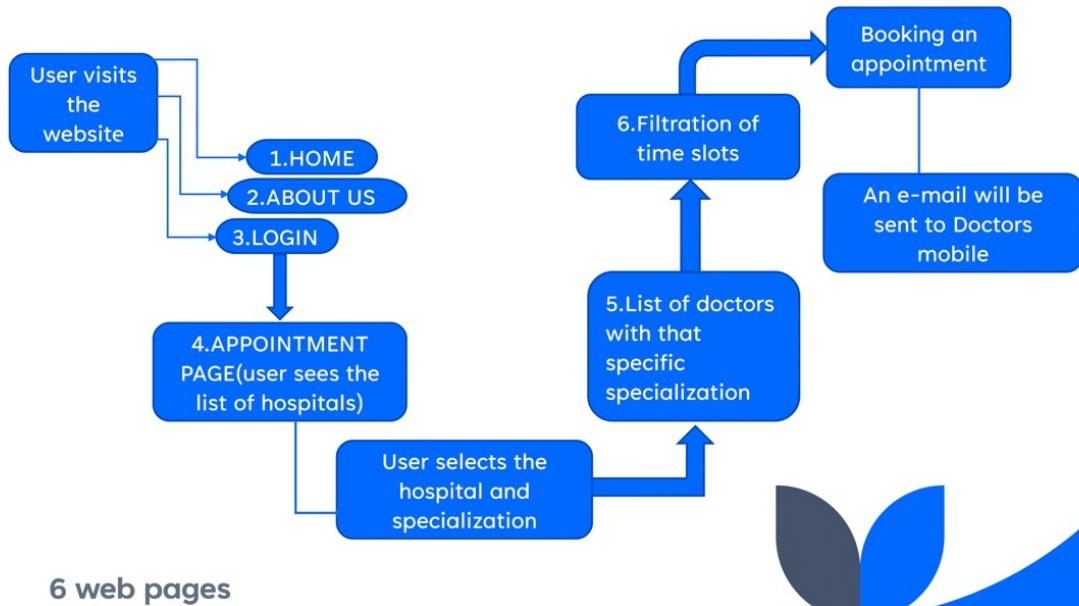
[Forgot password?](#)☐ Show Password[Sign in](#)

localhost:5000/ULogin

Having Issues? Contact us at support@example.com

WORK FLOW:

USER INTERFACE



Once the user visits the website , the user sees the home page . The user can see 3 options in the navbar(home, about us, login). To book an appointment ,the user has to first sign up /sign in. After this the user will be redirected to the appointment page. Here in this page, user sees the list of hospitals and also has an option to choose the specialization according to his requirement. Then user selects the desired hospital. Now user sees the list of doctors in that particular hospital . The user can now select the date and time for booking the appointment. Once the appointment is booked, an e-mail will be sent to doctor where he can either accept or reschedule . This is how the process goes on.

Code:

```
Home2.html Home.html AAC_HMS • views # home.css appointment.ejs Home.html AAC_HMS • public X
AAC_HMS > public > Home.html > html > body
1 |DOCTYPE html>
2 |html lang="en">
3 |<head>
4 |  <meta charset="UTF-8" />
5 |  <meta http-equiv="X-UA-Compatible" content="IE=edge" />
6 |  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
7 |  <title>Home</title>
8 |  <link rel="stylesheet" href="css/global.css" />
9 |  <link rel="stylesheet" href="css/home.css" />
10 |</head>
11 |
12 |<body>|
13 |  <!-- Titled Box -->
14 |
15 |  <div id="box-container">
16 |    <div id="tilted-box"></div>
17 |  </div>
18 |
19 |  <!-- Navbar -->
20 |
21 |  <nav>
22 |    <div id="nav-contents">
23 |      <div class="nvlogo">
24 |        
25 |      </div>
26 |      <ul id="nav-links">
27 |        <a href="Home">
28 |          <li id="home" style="background: #3e3e3e; color: white">Home</li>
29 |        </a>
30 |        <a href="AboutUs">
31 |          <li id="aboutus">About Us</li>
32 |        </a>
33 |        <a href="ULogin">
34 |          <li id="login">Login/Register</li>
35 |        </a>
36 |      </ul>
37 |    </div>
38 |  </nav>
```

```
AAC_HMS > public > Home.html > html > body
51 |    </div>
52 |  </div>
53 |  <div id="mobmenu">
54 |    <a href="Home.html" style="background: #3e3e3e; color: white; onclick="toggleMenu();">
55 |      <div class="moblink" style="background: #3e3e3e; color: white;">
56 |        Home
57 |      </div>
58 |    </a>
59 |    <a href="AboutUs.html" onclick="toggleMenu();">
60 |      <div class="moblink">
61 |        About Us
62 |      </div>
63 |    </a>
64 |    <a href="ULogin.html" onclick="toggleMenu();">
65 |      <div class="moblink">
66 |        Login/Register
67 |      </div>
68 |    </a>
69 |  </div>
70 |</nav>
71 |
72 |  <!-- Contents -->
73 |
74 |  <div id="blackbox">
75 |  </div>
76 |  <div id="content">
77 |    <div id="appointment-box">
78 |      
79 |      
80 |      <div class="text">
81 |        <h1>Health made easy!</h1>
82 |        <h2>
83 |          our Website lets user make easy appointments in their desired hospitals with available time slots and also lets the users to v
84 |        </h2>
85 |        <div class="location-selector">
86 |          <label for="location">Your Location</label>
87 |          <select name="cars" id="cars">
88 |            <option value="Kukatpally">Kukatpally</option>
```

AAC_HMS > public > Home.html > html > body

```
100 <!-- Footer -->
101
102 <div id="footer">
103   <p class="desk">&copy; 2022 AAC GRIET Ltd. All rights reserved</p>
104   <p class="mob">&copy; 2022 AAC GRIET Ltd.</p>
105   <div class="secured">
106     <svg xmlns="http://www.w3.org/2000/svg" width="16" height="16" fill="currentColor" class="bi bi-file-earmark-lock2" viewBox="0 0 1
107     <path d="M10 7v1.076c.54.166 1 .597 1 1.224v2.4c0 .816-.781 1.3-1.5 1.3h-3c-.719 0-1.5-.484-1.5-1.3v9.3c0-.627.46-1.058 1-1.224V
108     <path d="M14 14v4.5L9.5 0H4a2 2 0 0 0-2 2v12a2 2 0 0 2 2h8a2 2 0 0 2 2zM9.5 3A1.5 1.5 0 0 0 11 4.5h2V14a1 1 0 0 1-1 1H4a1 1
109     </svg>
110     Secured
111   </div>
112   <ul id="footer-list">
113     <li>
114       <a href="">
115         <svg
116           xmlns="http://www.w3.org/2000/svg"
117           width="16"
118           height="16"
119           fill="currentColor"
120           class="bi bi-facebook"
121           viewBox="0 0 16 16"
122         >
123           <path
124             d="M16 8.049c0-4.446-3.582-8.05-8.05-8.05C3.58 0-.002 3.603-.002 8.05c0 4.017 2.926 7.347 6.75 7.951v-5.625h-2.03V8.05H6.75V6
125           </path>
126         </svg>
127       </a>
128     </li>
129     <li>
130       <a href="">
131         <svg
132           xmlns="http://www.w3.org/2000/svg"
133           width="16"
134           height="16"
135           fill="currentColor"
136           class="bi bi-whatsapp"

```

AAC_HMS > public > ULogin.html > html > head

```
89
90   <div class="form">
91     <div class="title">Enter Your Credentials</div>
92     <div class="tab-content">
93       <div class="form-content active" data-tab-content id="signin">
94         <form action="/Ulogin" method="post" id="signinformid">
95           <div class="email-login">
96             Email
97             <input type="email" name="email" id="email-field" class="fields"
98               placeholder="Enter your email" />
99           </div>
100           <div class="password-login">
101             <div class="password">
102               Password <a href="" class="forgot">Forgot password?</a>
103             </div>
104             <input type="password" name="Password" id="login-Pword" class="fields"
105               placeholder="Enter your Password" style="margin-bottom: 6px;"/>
106           </div>
107           <div class="showpass">
108             <input type="checkbox" id="showpass" onclick="showPass()">
109             <div class="passtext" onclick="showPassText()">
110               Show Password
111             </div>
112           </div>
113           <div class="signin-button">
114             <button type="submit" id="signin-btn">Sign in</button>
115             <!-- <div class="doctor-text">
116               Are you a Doctor?
117               <a href="/dlogin" class="doctor-prompt">Click Here</a>
118             </div> -->
119           </div>
120         </form>
121       </div>
122       <div class="form-content" id="signup" data-tab-content>
123         <!-- <form action="/signup" method="post">
124
125           Username:<br>
126           <input type="text" name="username" id="username" required/>

```

```

AAC_HMS > views > appointmentEjs > html > body > nav > div#nav-contents > ul#nav-links > a
76 </div>
77 <p><strong>Filters</strong></p>
78 <div style="margin-left: 5px; font-size: 16px">Specialisation</div>
79 <div class="filters">
80 <form>
81 <label><input type="checkbox" name="fl-colour" value="Orthopedics" id="Orthopedics" />
82 Orthopedics</label>
83 <hr />
84 <label><input type="checkbox" name="fl-colour" value="Dermatology" id="Dermatology" />
85 Dermatology</label>
86 <hr />
87 <label><input type="checkbox" name="fl-colour" value="Pediatrics" id="Pediatrics" />
88 Pediatrics</label>
89 <hr />
90 <label><input type="checkbox" name="fl-colour" value="Radiology" id="Radiology" />
91 Radiology</label>
92 <hr />
93 <label><input type="checkbox" name="fl-colour" value="Ophthalmology" id="Ophthalmology" />
94 Ophthalmology</label>
95 <hr />
96 <label><input type="checkbox" name="fl-colour" value="ENT" id="ENT" />
97 ENT</label>
98 <hr />
99 <label><input type="checkbox" name="fl-colour" value="Gynecology" id="Gynecology" />
100 Gynecology</label>
101 <hr />
102 <label><input type="checkbox" name="fl-colour" value="Neurology" id="Neurology" />
103 Neurology</label>
104 <hr />
105 <label><input type="checkbox" name="fl-colour" value="other" id="other" />
106 Other</label>
107 </form>
108 </div>
109 <button onclick='${input[type=checkbox]}.prop("checked",false);' class="clear">
110 <svg xmlns="http://www.w3.org/2000/svg" width="16" height="16" fill="currentColor" class="bi bi-x-lg cross"
111 viewBox="0 0 16 16">
112 <path

```

```

AAC_HMS > views > appointmentEjs > html > body > nav > div#nav-contents > ul#nav-links > a
118 <!-- <div class="flowers"> -->
119 <div class="results">
120 <div class="heading">
121 <center>BOOK AN APPOINTMENT</center>
122 </div>
123 <div class="search">
124 <input type="text" id="hospname" onkeyup="search();" placeholder="Search by Hospital name" />
125 </div>
126 <!-- <div class="Select">Select Hospital</div> -->
127 <div class="hospitals">
128 <ul id="myUL">
129 <% data.hospitals.forEach(function(o) { %>
130 <li>
131
132 <div class="flower name" data-id="Omni Hospital" data-category="Dermatology Neurology europe">
133 <% if( o.name == 'Remedy'){ %>
134 
135 <% } else if ( o.name == 'Omni Hospitals'){ %>
136 
137 <% } else if ( o.name == 'Appolo Hospitals'){ %>
138 
139 <% } else if ( o.name == 'Landmark'){ %>
140 
141 <% } else if ( o.name == 'Deeksha Hospital'){ %>
142 
143 <% } else if ( o.name == 'Prime Hospitals'){ %>
144 
145 <% } %>
146
147
148 <div class="docInfo">
149 <%= o.name %>
150 <div class="location">
151 <div class="locIcon">
152 <svg xmlns="http://www.w3.org/2000/svg" width="14" height="14" fill="currentColor"
153 class="bi bi-geo-alt" viewBox="0 0 16 16">
154 <path

```


AC_HMS > {} package.json > ...

```
1  {
2    "name": "aac_hms",
3    "version": "1.0.0",
4    "description": "",
5    "main": "index.js",
6    "scripts": {
7      "test": "echo \\\"Error: no test specified\\\" && exit 1",
8      "start": "nodemon server.js"
9    },
10   "author": "abhinav",
11   "license": "ISC",
12   "dependencies": {
13     "body-parser": "^1.20.0",
14     "cookie-parser": "^1.4.6",
15     "cors": "^2.8.5",
16     "ejs": "^3.1.8",
17     "express": "^4.18.1",
18     "express-session": "^1.17.3",
19     "firebase": "^8.10.1",
20     "firebase-admin": "^11.1.0"
21   },
22   "devDependencies": {
23     "nodemon": "^2.0.19"
24   }
25 }
```

AAC_HMS > JS server.js > app.get('/appointment') callback

```
1
2  const cors = require("cors");
3  const Db = require("./config");
4  const express = require('express');
5  const session = require("express-session");
6  const cookieParser = require("cookie-parser");
7
8  const app = express()
9  const port = 5000
10  const bodyParser = require('body-parser'); // middleware
11
12
13
14  // Static Files
15  app.use(express.static('public'));
16  app.use(express.json());
17  app.use(cors());
18  // Specific folder example
19  app.use('/css', express.static( var __dirname: string s'))
20  app.use('/js', express.static(__dirname + 'public/js'))
21  app.use('/img', express.static(__dirname + 'public/images'))
22  app.use(bodyParser.urlencoded({ extended: true }));
23  app.use(cookieParser());
24  app.use(session({ secret: "gumpu2002", saveUninitialized: true, resave: true }));
25
26
27  // Set Views
28  app.set('views', './views');
29  app.engine('html', require('ejs').renderFile);
30  //app.set('view engine', 'html');
31  app.set('view engine', 'ejs');
32  const User = Db.collection("Users")
33  const Hospital = Db.collection("hospitals")
34
35
36
37  // Navigation
```

AAC_HMS > JS server.js > app.get('/appointment') callback

```
47
48 })
49 app.get('/AboutUs', (req, res) => {
50   res.render('AboutUs.html')
51 })
52 app.get('/ULogin', (req, res) => {
53   res.render('ULogin')
54 })
55 app.get('/Dlogin', (req, res) => {
56   res.render('Dlogin.html')
57 })
58 app.get('/DSelector', (req, res) => {
59   res.render('DSelector.html')
60 })
61 app.get('/consult', (req, res) => {
62   res.render('consult.html')
63 })
64 app.get('/Home', (req, res) => {
65   res.render('Home.html')
66 })
67
68 app.get('/appointment', async(req, res) => {
69
70   try {
71     if(req.session.user.email)
72     {
73       //res.render('appointment.html',{user:req.session.user.email })
74       // res.render('appointment.html')
75
76       console.log("Email"+req.session.user.email)
77       const snapshot= await Hospital.get()
78       let hospitalsList=[]
79
80       snapshot.forEach((doc) => {
81         hospitalList.push( doc.data())
82       });
83
84
```

AAC_HMS > JS server.js > app.get('/appointment') callback

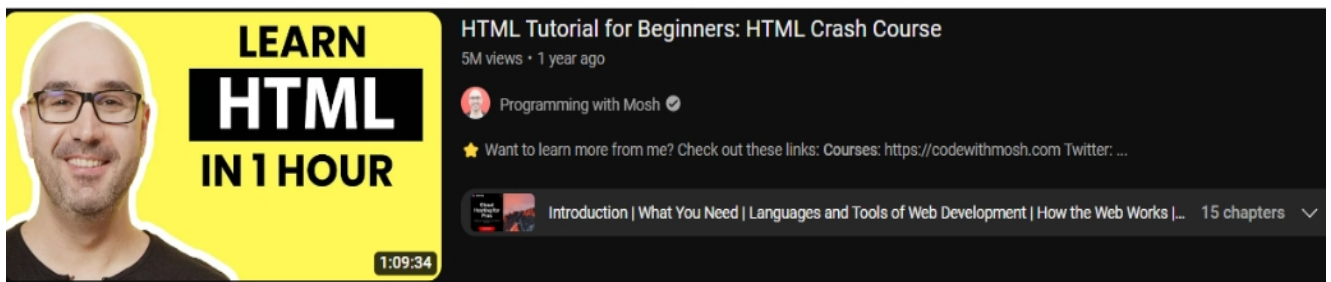
```
103 })
104 app.post('/ULogin', async(req, res) => {
105
106   let email = req.body.email
107   let Password = req.body.Password
108   const user = {
109     email: req.body.email,
110     Password: req.body.Password
111   };
112   //console.log({user})
113   const snapshot = await User.where('email','=','${email}')
114     .where('Password','=','${Password}')
115     .get();
116   if (snapshot.empty) {
117     console.log('No matching documents. ');
118     res.send("No User Available")
119     res.render('ULogin.html')
120   }
121   else{
122
123     console.log('User available. ');
124     console.log(` email: ${email} Password: ${Password} `)
125     req.session.user = user;
126     req.session.save();
127     res.redirect('/appointment')
128   }
129
130
131
132   // res.render('ULogin.html')
133 })
134 app.get('/hospitals',async(req,res)=>{
135   const Hospitals = Db.collection('hospitals')
136   const snapshot = await Hospitals.get();
137   snapshot.forEach(doc => {
138     console.log(doc.id, '=>', doc.data());
139   });
140
```

```
app.get('/Logout', (req, res) => {  
  
  req.session.destroy()  
  res.render('Home.html')  
  
})  
app.post('/signup', async(req, res) => {  
  
  let Tnc = req.body.Tnc  
  let fName = req.body.fName  
  let lName = req.body.lName  
  let email = req.body.email  
  let Password = req.body.Password  
  let data= req.body  
  
  await User.add(data );  
  
  //console.log(data)  
  res.render('ULogin.html')  
  
})  
  
app.listen(port, () => console.info(`App listening on port ${port}`))
```

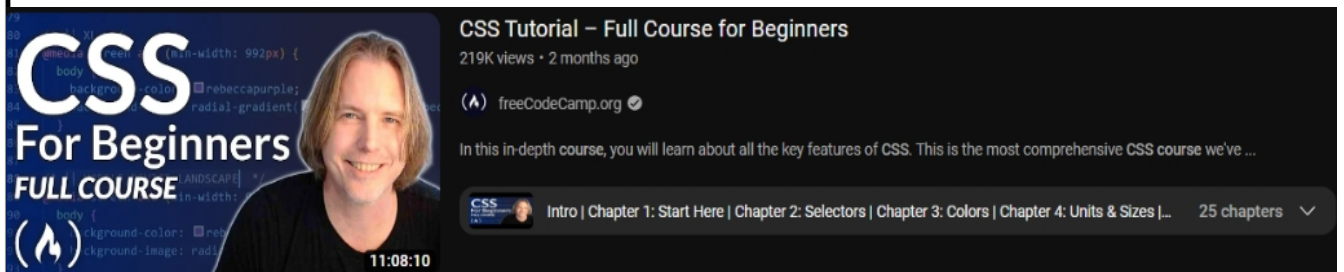

Future Developments:

1. We would like to convert the HTML code of our project to React. So that we can make it clean and easy to edit in the future for more developments. We will try to add new features to our website to look and work in this modern world. Our project will also have some parts of Angular and jQuery to function smoothly.
2. We make use of SQL and NOSQL for Database management. As there is a lot of information to be taken into the website and we will post all the medical updates so it will require a complex Database. By using different Server-side programs, we can make the database big and make the project a fully functional website.
3. We are trying to make our own Video Conferencing platform for our website. By this we don't have to depend on other platforms to hold conferences. By this we can keep our information between the user and doctor. And make sure that we can build a conversation between the doctor and user about their health.

Resources:



This video by Mosh familiarised us with basics of HTML and got us up and running.
The video link: - <https://youtu.be/qz0aGYrrlhU>



We started styling elements to improve webpage's look after this simple video.
The video link: - https://youtu.be/OXGznpKZ_sA



This helped in improving the overall responsiveness of our website.
The video link: - <https://youtu.be/0ohtVzCSHqs>