VISHWAKARMA UNIVERSITY
Maximising Human Potential

Activity based

Project 1 Report on

Application Security

Submitted to Vishwakarma University, Pune

Under the Initiative of

Contemporary Curriculum, Pedagogy, and Practice (C2P2)

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Academic Year

2023-2024

Project Statement:

PS: Noble Hospital is tasked with rectifying the absence of role-based access controls in its web application. The hospital must highlight the potential risks that come with unrestricted access to medical and patient data. The implementation of RBAC principles is crucial for Noble Hospital to assign roles and permissions, thereby showcasing how this strategy improves security by restricting access to sensitive information in accordance with the roles of various healthcare staff members

Introduction:

In today's digital age, ensuring the security of sensitive information is paramount, particularly in the healthcare sector. Noble Hospital recognizes the need to enhance its web-based system's security by implementing a role based access control. This framework will incorporate a Username & Password

Authentication Scheme to authenticate users, control access, and manage passwords securely.

Objectives:

- Implement a Username & Password Authentication Scheme to authenticate users.
- Ensure robust password management, including encryption and secure storage.
- Establish a page-level security framework to control access to different parts of the web -based system.

Design (Usecase Model, ER Model, DFDs)
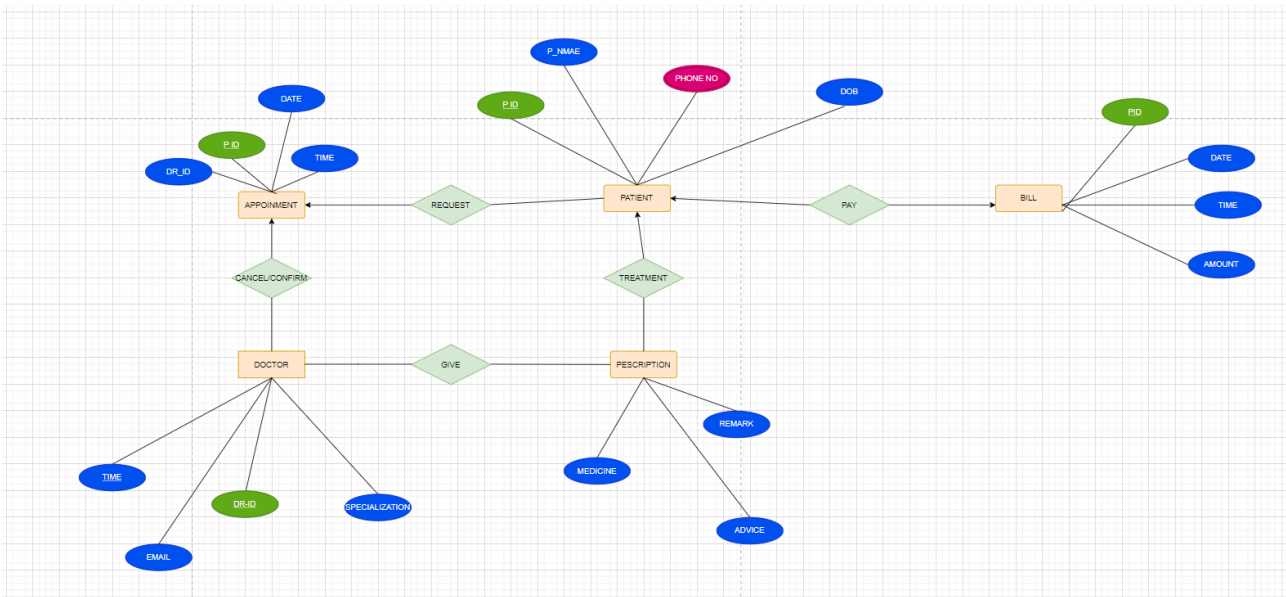
Implementation:

CODE

WEBSITE:

```html
<!DOCTYPE html>
<html lang="en">
    <head>
<title>NOBLE HOSPITAL</title>
<link rel="stylesheet" href="as.css">
    </head>
    <body>
<div class="container">
    <nav>
        <div class="logo">
            <h1>NOBLE HOSPITAL</h1>
        </div>
        <ul>
            <li><a href="">Home</a></li>
            <li><a href="#doctor">Doctor's</a></li>
            <li><a href="#speciality">Speciality's</a></li>
            <li><a href="#patient">Patient Reviews</a></li>
            <li><a href="#contact">Contact Us</a></li>
            <li><a href="yt.html">Login</a></li>
            <li><a href="yt.html">Register</a></li>
        </ul>
    </nav>

    <div class="main">
        <div class="mainText">
```

```
            <h1>The Hospital that<br>Care for you</h1>
        <h3>Best Team's</h3>
        <button>Show more</button>
         </div>
         <img src="mains.png" alt="">
    </div>

    <div id="doctor">
        <div class="head">
            <h1>Our Doctor's</h1>
        </div>
        <div class="doctor">

            <div class="card">
                <img src="dt1.jpg">
                <p>Alexa</p>
                <p>Surgeon</p>
            </div>

            <div class="card">
                <img src="dt2.jpg">
                <p>aayush</p>
                <p>Surgeon</p>
            </div>

            <div class="card">
                <img src="dt3.jpg">
                <p>Piyush</p>
                <p>Surgeon</p>
            </div>

        </div>
    </div>

<div id="speciality">
    <div class="head">
        <h1>Our Speciality</h1>

    </div>
    <div class="speciality">
        <div class="spcard">
            <img src="s1.png">
            <p>Knee Surgery</p>
            <p>Lorem ipsum dolor sit, amet consectetur adipisicing elit. Iste
maiores temporibus, enim facere quos ut debitis, asperiores cupiditate omnis
ratione quisquam soluta provident illum voluptas voluptates expedita inventore
assumenda neque!</p>
        </div>
        <div class="spcard">
```

```html
            <img src="s2.png">
            <p>Knee Surgery</p>
            <p>Lorem ipsum dolor sit, amet consectetur adipisicing elit. Iste
maiores temporibus, enim facere quos ut debitis, asperiores cupiditate omnis
ratione quisquam soluta provident illum voluptas voluptates expedita inventore
assumenda neque!</p>
        </div>
        <div class="spcard">
            <img src="s3.png">
            <p>Knee Surgery</p>
            <p>Lorem ipsum dolor sit, amet consectetur adipisicing elit. Iste
maiores temporibus, enim facere quos ut debitis, asperiores cupiditate omnis
ratione quisquam soluta provident illum voluptas voluptates expedita inventore
assumenda neque!</p>
        </div>
    </div>
</div>
<div id="patient">
    <div class="head">
        <h1>Patient Review's</h1>
    </div>
    <div class="reviews">
        <div class="patientReview">
            <img src="p1.png">
            <img src="p2.png">
        </div>

        <div class="patientReview">
            <img src="p3.jpg">
            <img src="p4.jpg">
        </div>
        <div class="patientReview">
            <img src="p5.jpg">
            <img src="p6.jpg">
        </div>
    </div>
</div>
<div id="contact">
    <div class="head">
        <h1>Contact us</h1>
    </div>
<div class="contact">
    <h1>Connect With Us</h1>
    <input type="text" placeholder="Enter Email" id="email">
    <input type="password" placeholder="Enter Password" id="pass">
<button id="connectBtn">Connect</button>
</div>
</div>
<div class="footer">
```

```html
    <div class="text">
<h3>About Us</h3>
<p>24 Hours</p>
<p>Top Doctor</p>
<p>Best Care</p>
<p>Patient</p>
</div>
    <div class="text">
        <h3>Speciality</h3>
        <p>Knee Surgery</p>
        <p>Spin Surgery</p>
        <p>Leg Surgery</p>
        <p>Tendon Surgery</p>
    </div>

    <div class="text">
        <h3>Best Teams</h3>
        <p>Doctors</p>
        <p>Nursing</p>
        <p>Staff</p>
        <p>Hospital</p>
    </div>

    <div class="text">
        <h3>Address</h3>
        <p>Near MG Road</p>
        <p>Galaxy Care</p>
        <p>333-09093</p>
        <p>09-883-090</p>
    </div>
</div>

</div>
<script src="as.js"></script>
    </body>
    <script type="module">
        // Import the functions you need from the SDKs you need
        import { initializeApp } from
"https://www.gstatic.com/firebasejs/10.8.0/firebase-app.js";
        import { getDatabase } from
"https://www.gstatic.com/firebasejs/10.8.0/firebase-database.js";
        import { getAuth, createUserWithEmailAndPassword } from
"https://www.gstatic.com/firebasejs/10.8.0/firebase-auth.js";
        // TODO: Add SDKs for Firebase products that you want to use
        // https://firebase.google.com/docs/web/setup#available-libraries

        // Your web app's Firebase configuration
        const firebaseConfig = {
          apiKey: "AIzaSyDr4YMaGbR-2a7jZYiEPE7LIQQgXm5r9kA",
```

```
          authDomain: "rbac-cie.firebaseapp.com",
          databaseURL: "https://rbac-cie-default-rtdb.firebaseio.com",
          projectId: "rbac-cie",
          storageBucket: "rbac-cie.appspot.com",
          messagingSenderId: "354579930719",
          appId: "1:354579930719:web:c1d16e243ebd6a0f5545ea"
        };

        // Initialize Firebase
        const app = initializeApp(firebaseConfig);
        const database = getDatabase(app);
        const auth = getAuth();
    </script>
</html>
```

WEBSITE.CSS

```css
*{
    margin: 0%;
    padding: 0%;
}
body{
    font-family: system-ui, -apple-system, BlinkMacSystemFont, 'Segoe UI', Roboto,
Oxygen, Ubuntu, Cantarell, 'Open Sans', 'Helvetica Neue', sans-serif;
    background-color: #e6e6e6;
    }
nav{
    display: flex;
    align-items: center;
    justify-content: space-around;
    padding: 20px;
    background-color: rgb(11,78,78);
    color: white;
    position: fixed;
    top: 0%;
    width: 100%;
}
ul{
    display: flex;
}
ul li{
list-style: none;
}
ul li a{
    text-decoration: none;
    font-size: 20px;
    margin-inline: 16px;
    color: white;
}
```

```css
ul li a:hover{
    color: black;
    border-bottom: 2px soild black;
}
.logo{
    font-size: 23px;
}

.main{
    display: flex;
    align-items: center;
    justify-content: space-around;
    background-color: rgb(14,100,100);
    height: 640px;
    color: white;
}
.mainText h1{
 font-size: 60px;
}

.mainText h3{
    font-size: 30px;
    margin-top: 20px;
    }
    .mainText button{
    width: 140px;
    height: 40px;
    background-color: black;
    color: white;
    border: none;
    margin-top: 20px;
    font-size: 20px;
    }

.mainText button:hover{
    border: 2px solid black;
    background-color: transparent;
}

.doctor{
    display: flex;
    flex-wrap: wrap;
    justify-content: center;
}

.card{
    width: 300px;
    height: 390px;
    background-color: #fff;
```

```css
        border-radius: 5px;
        margin-inline :20px; ;
}

.card img{
        width: 100%;
        height: 300px;
        border-radius: 5px;
}

.card p{
        margin-top: 11px;
        margin-left: 11px;
}
.head{
        text-align: center;
        padding: 80px;
        }

.speciality{
        display: flex;
        justify-content:center;
}
.speciality .spcard{
        width: 300px;
        padding: 22px;
        background-color: #fff;
        text-align: center;
        border-radius: 5px;
        margin-inline: 20px;

}
.spcard img{
        width: 200px;
}

.spcard p{
        margin-top: 11px;
}

.reviews{
        width: 800px;
        height: 400px;
        position:relative;
        margin: auto;
overflow: hidden;
z-index: -1;
}
.patientReview{
```

```css
    display: flex;
    justify-content: center;
    width: 100%;
    height: 100%;
    position: absolute;
   transition:all 1s ease;
}
.patientReview img{
    width: 300px;
    margin-inline: 18px;
   border-radius: 4px;
}

.contact{
    width :300px;
    background-color: #fff;
    padding: 22px;
    border-radius: 4px;
    text-align: center;
    margin: auto;
}
.contact input{
    width:90%;
    font-size: 18px;
    padding: 9px;
    margin-top: 22px;
    border: none;
    outline: none;
    background-color: #e4e1e1;
    border-radius: 2px;

}
.contact button{
    width: 100px;
    height: 30px;
    background-color: rgb(13,98,98);
    color:white;
font-size: 17px;
margin-top: 22px;;
}
.contact h1{
    color:rgb(13,98,98);
}

.footer{
    display: flex;
    justify-content: space-around;
    padding: 66px;
    margin-top: 66px;
```

```css
    background-color: rgb(13,98,98);
    color:#fff;
}
.text{
    margin-top: 12px;
}
```

WEBSITE.JS

```javascript
let slide=document.querySelectorAll(".patientReview");
let connectBtn= document.getElementById("connectBtn")
let count = 0;

 slide.forEach(function(slides, index){
    slides.style.left=`${index * 100}%`
 })

 function myfun(){
    slide.forEach(function(curVal){
        curVal.style.transform=`translateX(-${count * 100}%)`
    })
 }
 setInterval(function(){
    count++;
if(count==slide.length){
    count=0;
}
    myfun()
 },2000)

 connectBtn.addEventListener("click",function(){
    let email=document.getElementById("email")
    let pass=document.getElementById("pass")
    if(email.value==""&& pass.value==""){
    alert("Enter Details")
}else{
    alert("you logged in")
    }}
    )
```

Login Page

```html
<!DOCTYPE html>
<html>
    <head>
        <meta charset="utf-8">
        <title>Login + Firebase Database</title>
```

```html
        <!-- Cool Google Fonts -->
        <!-- Our stylesheet -->
        <link rel="stylesheet" type="text/css" href="yt.css">
    </head>
    <body>
        <div id="content_container">
            <div id="form_container">
                <div id="form_header_container">
                    <h2 id="form_header"> Login + Firebase Database </h2>
                </div>

                <div id="form_content_container">
                    <div id="form_content_inner_container">
                        <input type="text" id="full_name" placeholder="Full name">
                        <input type="email" id="email" placeholder="Email">
                        <input type="password" id="password" placeholder="New
Password">
                        <input type="text" id="moblieno" placeholder="Enter Your
Moblie Number">
                        <input type="text" id="id"
placeholder="Admin/Doctor/Patient">

                        <div id="button_container">
                            <button onclick="login()">Login</button>
                            <button onclick="register()">Register</button>
                        </div>

                    </div>
                </div>
            </div>
        </div>
    </body>
    <!-- The core Firebase JS SDK is always required and must be listed first -->
    <script src="https://www.gstatic.com/firebasejs/8.6.8/firebase-
app.js"></script>

    <!-- TODO: Add SDKs for Firebase products that you want to use
         https://firebase.google.com/docs/web/setup#available-libraries -->
    <script src="https://www.gstatic.com/firebasejs/8.6.8/firebase-
auth.js"></script>
    <script src="https://www.gstatic.com/firebasejs/8.6.8/firebase-
database.js"></script>

    <!-- Our script must be loaded after firebase references -->
    <script src="yt.js"></script>

</html>
```

Login.css

```css
html, body {
    width: 100%;
    height: 100%;
    background: -webkit-linear-gradient(25deg, #FFBE0B, #FB5607, #FF006E, #8338EC,
#3A86FF);

    display: flex;
    justify-content: center;
    align-items: center;
}

* {
    margin: 0;
    padding: 0;
    box-sizing: border-box;
    border: none;
    outline: none;
}
#content_container {
    width: 30%;
    height: 70%;
}

#form_container {
    width: 100%;
    height: 100%;

    background-color: #370617;
    box-shadow: 0 0 50px -20px #000;
    border-radius: 2%;

    overflow: hidden;
}

#form_header_container {
    width: 100%;
    height: 5%;

    display: flex;
    justify-content: center;
    align-items: center;
    float: left;

    padding: 20px;
    padding-bottom: 30px;
    padding-top: 30px;

    border-bottom: 1px solid transparent;
```

```css
    border-image: -webkit-linear-gradient(25deg, #FFBE0B, #FB5607, #FF006E,
#8338EC, #3A86FF) 20;
    background: #000;
}

#form_header {
    display: inline-block;
    font-size: 15px;
    font-family: Bowlby One SC;
    font-weight: 900;
    text-transform: uppercase;
    letter-spacing: 1px;


    background: -webkit-linear-gradient(25deg, #FFBE0B, #FB5607, #FF006E, #8338EC,
#3A86FF);
      -webkit-background-clip: text;
      -webkit-text-fill-color: transparent;
}

#form_content_container {
    width: 100%;
    height: 90%;

    float: left;

    display: flex;
    justify-content: center;
    align-items: center;

    padding-top: 30px;
}

#form_content_inner_container {
    width: 75%;
    height: 100%;

    float: left;

}

input {
    width: 100%;
    height: 40px;

    padding-left: 10px;
    margin-bottom: 20px;

    background: #000;
```

```css
    font-family: Montserrat;
    font-weight: 500;
    color: #fff;
    font-size: 12px;

    border-bottom: 2px solid transparent;
    border-top-left-radius: 2%;
    border-top-right-radius: 2%;
    border-image: -webkit-linear-gradient(25deg, #FFBE0B, #FB5607, #FF006E,
#8338EC, #3A86FF) 1;
}

#button_container {
    width: 100%;
    height: 10%;

    background-image: linear-gradient(80deg, #FFBE0B, #FB5607 50%, #FF006E 50%,
#8338EC);
    color: #fff;

    float: left;

    margin-top: 5px;
}

#button_container button {
    width: 50%;
    height: 100%;
    float: left;

    background: transparent;
    color: inherit;

    font-family: Montserrat;
    letter-spacing: 1px;
    font-weight: 900;
    font-size: 12px;

    cursor: pointer;

    display: flex;
    justify-content: center;
    align-items: center;
}
```

Login.js

```javascript
// Your web app's Firebase configuration
var firebaseConfig = {
```

```javascript
    apiKey: "AIzaSyDfCIAXNh19rwLejb6eKJRpBzJOnrZ1Q8A",
    authDomain: "cieas-d62ae.firebaseapp.com",
    projectId: "cieas-d62ae",
    storageBucket: "cieas-d62ae.appspot.com",
    messagingSenderId: "52222435833",
    appId: "1:52222435833:web:e39db9e65d11699fad5d28"
};
// Initialize Firebase
firebase.initializeApp(firebaseConfig);
// Initialize variables
const auth = firebase.auth()
const database = firebase.database()

// Set up our register function
function register () {
  // Get all our input fields
  email = document.getElementById('email').value
  password = document.getElementById('password').value
  full_name = document.getElementById('full_name').value
  moblieno= document.getElementById('moblieno').value
  id = document.getElementById('id').value

  // Validate input fields
  if (validate_email(email) == false || validate_password(password) == false) {
    alert('Email or Password is Outta Line!!')
    return
    // Don't continue running the code
  }
  if (validate_field(full_name) == false || validate_field(moblieno) == false ||
validate_field(id) == false) {
    alert('One or More Extra Fields is Outta Line!!')
    return
  }

  // Move on with Auth
  auth.createUserWithEmailAndPassword(email, password)
  .then(function() {
    // Declare user variable
    var user = auth.currentUser

    // Add this user to Firebase Database
    var database_ref = database.ref()

    // Create User data
    var user_data = {
      email : email,
      full_name : full_name,
      id : id,
      moblieno:moblieno,
```

```javascript
        last_login : Date.now()
    }

    // Push to Firebase Database
    database_ref.child('users/' + user.uid).set(user_data)

    // DOne
    alert('User Created!!')
  })
  .catch(function(error) {
    // Firebase will use this to alert of its errors
    var error_code = error.code
    var error_message = error.message

    alert(error_message)
  })
}

// Set up our login function
function login () {
  // Get all our input fields
  email = document.getElementById('email').value
  password = document.getElementById('password').value

  // Validate input fields
  if (validate_email(email) == false || validate_password(password) == false) {
    alert('Email or Password is Outta Line!!')
    return
    // Don't continue running the code
  }

  auth.signInWithEmailAndPassword(email, password)
  .then(function() {
    // Declare user variable
    var user = auth.currentUser

    // Add this user to Firebase Database
    var database_ref = database.ref()

    // Create User data
    var user_data = {
      last_login : Date.now()
    }

    // Push to Firebase Database
    database_ref.child('users/' + user.uid).update(user_data)

    // DOne
```

```
      alert('User Logged In!!')


  })
  .catch(function(error) {
    // Firebase will use this to alert of its errors
    var error_code = error.code
    var error_message = error.message

    alert(error_message)
  })
}




// Validate Functions
function validate_email(email) {
  expression = /^[^@]+@\w+(\.\w+)+\w$/
  if (expression.test(email) == true) {
    // Email is good
    return true
  } else {
    // Email is not good
    return false
  }
}

function validate_password(password) {
  // Firebase only accepts lengths greater than 6
  if (password < 6) {
    return false
  } else {
    return true
  }
}

function validate_field(field) {
  if (field == null) {
    return false
  }

  if (field.length <= 0) {
    return false
  } else {
    return true
  }
}
```

Admin.html

```html
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <link rel="stylesheet" href="admin.css">
    <title>Admin Panel</title>
</head>

<body>
    <div class="side-menu">
        <div class="brand-name">
            <h1>Noble Hospital</h1>
        </div>
        <ul>
            <li><span>Dashboard</span> </li>
            <li><span>Staff</span> </li>
            <li><span>Doctor</span> </li>
            <li><span>Patient</span> </li>
            <li><span>Income</span> </li>
            <li><span>Help</span></li>
            <li><span>Settings</span> </li>
        </ul>
    </div>
    <div class="container">
        <div class="header">
            <div class="nav">
                <div class="search">
                    <input type="text" placeholder="Search..">
                    <button type="submit"></button>
                </div>
                <div class="user">
                    <a href="#" class="btn">Add New</a>
                    <div class="img-case">
                    </div>
                </div>
            </div>
        </div>
        <div class="content">
            <div class="cards">
                <div class="card">
                    <div class="box">
                        <h1>985</h1>
                        <h3>Patient</h3>
                    </div>
                    <div class="icon-case">
                    </div>
```

```
        </div>
        <div class="card">
            <div class="box">
                <h1>126</h1>
                <h3>Doctor</h3>
            </div>
            <div class="icon-case">
            </div>
        </div>
        <div class="card">
            <div class="box">
                <h1>500</h1>
                <h3>Rooms</h3>
            </div>
            <div class="icon-case">
            </div>
        </div>
        <div class="card">
            <div class="box">
                <h1>150</h1>
                <h3>Staff</h3>
            </div>
            <div class="icon-case">
            </div>
        </div>
    </div>
    <div class="content-2">
        <div class="recent-payments">
            <div class="title">
                <h2>Recent Payments</h2>
                <a href="#" class="btn">View All</a>
            </div>
            <table>
                <tr>
                    <th>Name</th>
                    <th>Doctor</th>
                    <th>Amount</th>
                    <th>Option</th>
                </tr>
                <tr>
                    <td>Ram</td>
                    <td> Aaram</td>
                    <td>12000</td>
                    <td><a href="#" class="btn">View</a></td>
                </tr>
                <tr>
                    <td>Aditya</td>
                    <td>Piyush</td>
                    <td>2000</td>
```

```
                <td><a href="#" class="btn">View</a></td>
            </tr>
            <tr>
                <td>Soham</td>
                <td>Aakar</td>
                <td>4850</td>
                <td><a href="#" class="btn">View</a></td>
            </tr>
            <tr>
                <td>Kavya</td>
                <td>Yash</td>
                <td>120000</td>
                <td><a href="#" class="btn">View</a></td>
            </tr>
            <tr>
                <td>Prem</td>
                <td>Piyush</td>
                <td>45120</td>
                <td><a href="#" class="btn">View</a></td>
            </tr>
        </table>
    </div>
    <div class="new-students">
        <div class="title">
            <h2>New Patient</h2>
            <a href="#" class="btn">View All</a>
        </div>
        <table>
            <tr>
                <th>Name</th>
                <th>Room no</th>

                <th>DR_ID</th>
            </tr>
            <tr>
                <td>Aryan</td>

                <td>150</td>

                <td>AG224</td>
                </tr>
            <tr>
                <td>Ishaan</td>

                <td>85</td>
                <td>WI122</td>
```

```
                        </tr>
                        <tr>
                            <td>Aarav</td>

                            <td>15</td>
                            <td>RT122</td>
                              </tr>
                        <tr>

                            <td>Aliya</td>

                            <td>65</td>
                            <td>PO990</td>
                              </tr>

                  </table>
              </div>
            </div>
         </div>
      </div>
</body>

</html>
```

Doctor.html

```
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <link rel="stylesheet" href="admin.css">
    <title>Admin Panel</title>
</head>

<body>
    <div class="side-menu">
        <div class="brand-name">
            <h1>Noble Hospital</h1>
        </div>
        <ul>
            <li><span>Dashboard</span> </li>
            <li><span>Doctor</span> </li>
            <li><span>Patient</span> </li>
            <li><span>Income</span> </li>
            <li><span>Help</span></li>
            <li><span>Settings</span> </li>
```

```html
        </ul>
    </div>
<div class="container">
    <div class="header">
        <div class="nav">
            <div class="search">
                <input type="text" placeholder="Search..">
                <button type="submit"></button>
            </div>
            <div class="user">
                <div class="img-case">
                </div>
            </div>
        </div>
    </div>
    <div class="content">
        <div class="cards">
            <div class="card">
                <div class="box">
                    <h1>25</h1>
                    <h3>Patient</h3>
                </div>
                <div class="icon-case">
                </div>
            </div>
            <div class="card">
                <div class="box">
                    <h1>WI122</h1>
                    <h3>Doctor</h3>
                </div>
                <div class="icon-case">
                </div>
            </div>
            <div class="card">
                <div class="box">
                    <h1>500</h1>
                    <h3>Rooms</h3>
                </div>
                <div class="icon-case">
                </div>
            </div>
            <div class="card">
                <div class="box">
                    <h1>150</h1>
                    <h3>Staff</h3>
                </div>
                <div class="icon-case">
                </div>
            </div>
```

```html
        </div>
        <div class="content-2">
            <div class="recent-payments">
                <div class="title">
                    <h2>Patient Information</h2>
                    <a href="#" class="btn">View All</a>
                </div>
                <table>
                    <tr>
                        <th>Patient</th>
                        <th>Time</th>
                        <th>Room</th>
                        <th></th>
                    </tr>
                    <tr>
                        <td>Ram</td>
                        <td>11:30</td>
                        <td>150</td>
                        <td><a href="#" class="btn">View</a></td>
                    </tr>
                    <tr>
                        <td>Aditya</td>
                        <td>1:05</td>
                        <td>20</td>
                        <td><a href="#" class="btn">View</a></td>
                    </tr>
                    <tr>
                        <td>Soham</td>
                        <td>10:05</td>
                        <td>48</td>
                        <td><a href="#" class="btn">View</a></td>
                    </tr>
                    <tr>
                        <td>Kavya</td>
                        <td>12:05</td>
                        <td>120</td>
                        <td><a href="#" class="btn">View</a></td>
                    </tr>
                    <tr>
                        <td>Prem</td>
                        <td>18:05</td>
                        <td>45</td>
                        <td><a href="#" class="btn">View</a></td>
                    </tr>
                </table>
            </div>
            <div class="new-students">
                <div class="title">
                    <h2>New Patient</h2>
```

```html
                    <a href="#" class="btn">View All</a>
                </div>
                <table>
                    <tr>
                        <th>Name</th>
                        <th>Room no</th>
                        <th>Moblie No</th>
                    </tr>
                    <tr>
                        <td>Aryan</td>

                        <td>150</td>

                        <td>545456464</td>
                        </tr>
                    <tr>
                        <td>Ishaan</td>

                        <td>85</td>
                        <td>858226222</td>




                    </tr>
                    <tr>
                        <td>Aarav</td>

                        <td>15</td>
                        <td>825445632</td>
                         </tr>
                    <tr>

                        <td>Aliya</td>

                        <td>65</td>
                        <td>7828226226</td>
                         </tr>

                </table>
            </div>
          </div>
        </div>
    </div>
</body>

</html>
```

Patient.html

```html
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <link rel="stylesheet" href="admin.css">
    <title>Admin Panel</title>
</head>

<body>
    <div class="side-menu">
        <div class="brand-name">
            <h1>Noble Hospital</h1>
        </div>
        <ul>
            <li><span>Dashboard</span> </li>
            <li><span>Doctor</span> </li>
            <li><span>Patient</span> </li>
            <li><span>Bill</span> </li>
            <li><span>Help</span></li>
            <li><span>Settings</span> </li>
        </ul>
    </div>
    <div class="container">
        <div class="header">
            <div class="nav">
                <div class="search">
                    <input type="text" placeholder="Search..">
                    <button type="submit"></button>
                </div>
                <div class="user">
                    <div class="img-case">
                    </div>
                </div>
            </div>
        </div>
        <div class="content">
            <div class="cards">
                <div class="card">
                    <div class="box">
                        <h1>PA225</h1>
                        <h3>Patient_id</h3>
                    </div>
                    <div class="icon-case">
                    </div>
                </div>
                <div class="card">
```
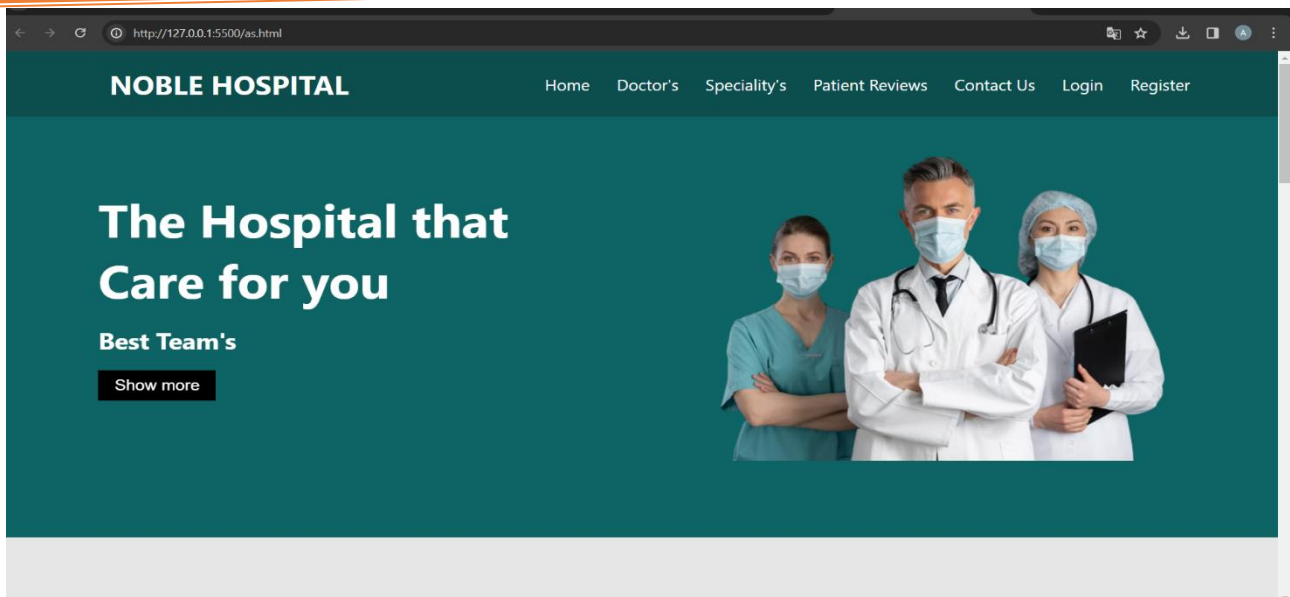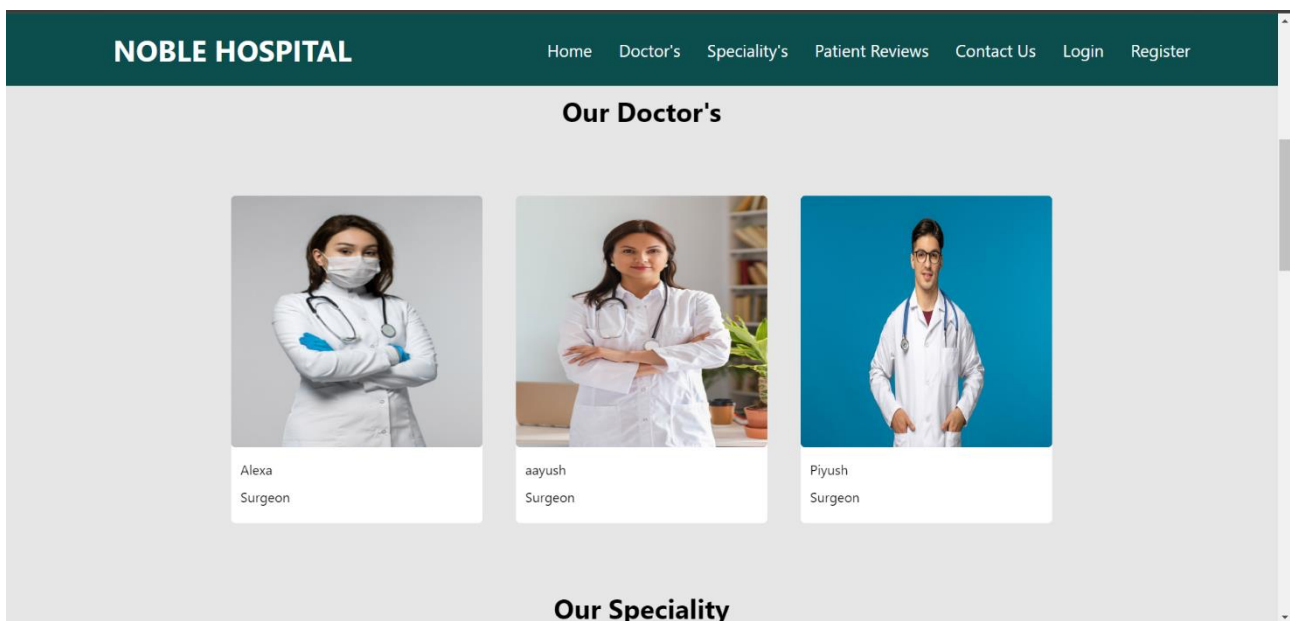
```html
            <div class="box">
                <h1>WI122</h1>
                <h3>Doctor</h3>
            </div>
            <div class="icon-case">
            </div>
        </div>
        <div class="card">
            <div class="box">
                <h1>500</h1>
                <h3>Room No</h3>
            </div>
            <div class="icon-case">
            </div>
        </div>
        <div class="card">
            <div class="box">
                <h1>7854525625</h1>
                <h3>Moblie No</h3>
            </div>
            <div class="icon-case">
            </div>
        </div>
    </div>
</div>
<div class="content-2">
    <div class="recent-payments">
        <div class="title">
            <h2>Patient Information</h2>
            <a href="#" class="btn">View All</a>
        </div>
        <table>
            <tr>
                <th>Doctor</th>
                <th>Time</th>

                <th></th>
            </tr>
            <tr>
                <td>Ram</td>
                <td>11:30</td>

                <td><a href="#" class="btn">View</a></td>
            </tr>
            <tr>
                <td>Aditya</td>
                <td>1:05</td>

                <td><a href="#" class="btn">View</a></td>
            </tr>
```

```html
                    <tr>
                        <td>Soham</td>
                        <td>10:05</td>

                        <td><a href="#" class="btn">View</a></td>
                    </tr>
                    <tr>
                        <td>Kavya</td>
                        <td>12:05</td>

                        <td><a href="#" class="btn">View</a></td>
                    </tr>
                    <tr>
                        <td>Prem</td>
                        <td>18:05</td>

                        <td><a href="#" class="btn">View</a></td>
                    </tr>
                </table>
            </div>

        </div>
    </div>
</body>

</html>
```
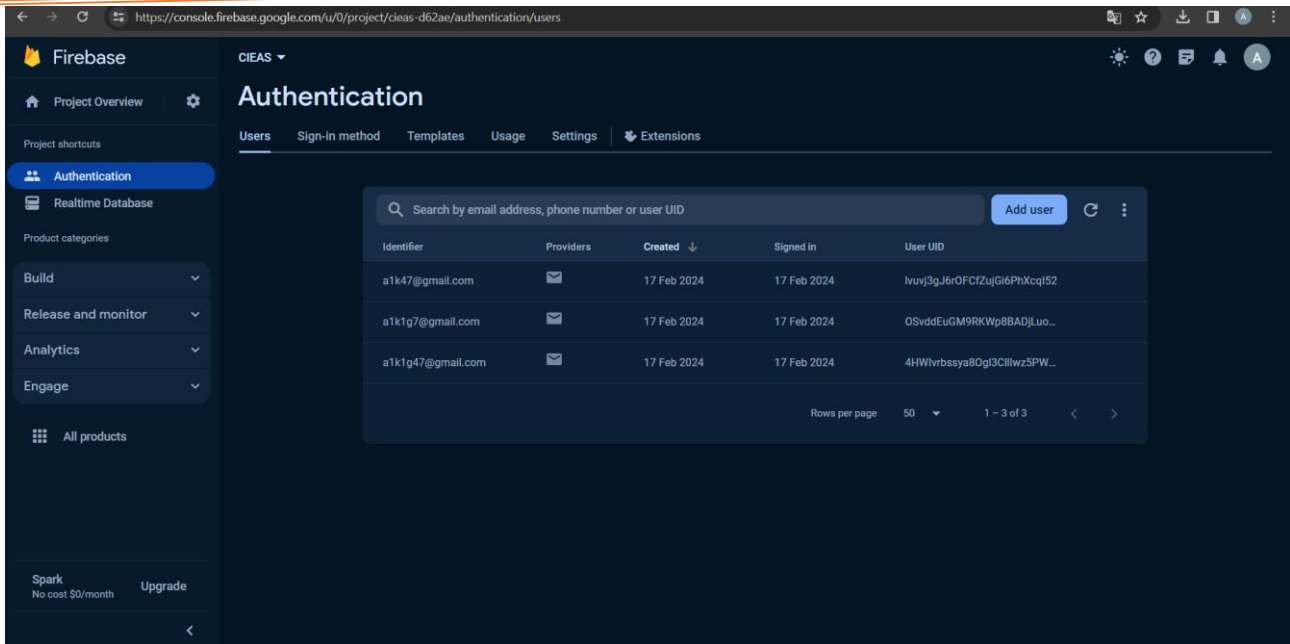
Hospital.css

```css
body {
    font-family: Arial, sans-serif;
    margin: 0;
    padding: 0;
}

header {
    background-color: #333;
    color: white;
    padding: 20px;
    text-align: center;
}

.container {
    margin: 20px;
}

#appointmentForm {
    margin-bottom: 20px;
}
```

```css
input[type="text"],
input[type="datetime-local"],
button {
  margin-bottom: 10px;
  display: block;
  width: 100%;
  padding: 8px;
}

button {
  background-color: #4CAF50;
  color: white;
  border: none;
  cursor: pointer;
}

button:hover {
  opacity: 0.8;
}

ul {
  list-style-type: none;
  padding: 0;
}

li {
  margin-bottom: 5px;
}
```

Results

(screenshot of output)

Results

(screenshot of output)

FIG NO:1

FIG NO:2

LOGIN.PAGE

Doctor.html

Patient.html

Admin.html

Database:

Application Security

Conclusion :

 The project also implements role-based access to differentiate users based on their roles, in this case, **Doctor** and **Patient** have different pages and tasks available for use.

The project uses **Firebase Authentication** for authenticating users by their email address and password.

Also, the project uses **Firebase Realtime Database**, which uses **NoSQL (Cloud-Based)** database to store the data securely in a **Dictionary** format.

By achieving the objectives of user authentication, robust password management, and role acess control, Noble Hospital can significantly enhance its system's security posture. This project not only safeguards sensitive information but also makes users confident regarding the security of their data.