### 1. Project Proposal

#### Project Proposal Document

**Title**: **Online Appointment Booking System**

**Client**: A local medical clinic

**Description**: The Online Appointment Booking System allows patients to book appointments with doctors through a web interface. Patients can view available slots, book an appointment, modify or cancel their bookings, and receive confirmation via email. The system also allows the clinic staff to manage appointments, view patient details, and update the schedule.

**Information Displayed**:

* Doctor's schedule and availability
* Patient's appointment details
* Confirmation and cancellation messages

**Team Members**:

1. [Student 1 Name]
2. [Student 2 Name]
3. [Student 3 Name]

**Step 1: Project Directory Setup**

Create the following directory structure:

bash

Copy code

/project

/css

- styles.css

/js

- validation.js

- manage.js

/views

- index.php

- book.php

- manage.php

/controllers

- AppointmentController.php

/models

- Appointment.php

/config

- database.php

/public

- index.php

.htaccess

**Step 2: Create .htaccess File**

Add an .htaccess file in the root directory to ensure friendly URLs:

apache

Copy code

RewriteEngine On

RewriteRule ^book$ /project/views/book.php [L]

RewriteRule ^manage$ /project/views/manage.php [L]

RewriteRule ^$ /project/views/index.php [L]

**Step 3: Create CSS File**

**css/styles.css**:

css

Copy code

body {

font-family: Arial, sans-serif;

margin: 0;

padding: 0;

}

header, nav, footer {

background-color: #f8f9fa;

padding: 1em;

text-align: center;

}

nav ul {

list-style-type: none;

padding: 0;

}

nav ul li {

display: inline;

margin-right: 10px;

}

main {

padding: 1em;

}

form {

max-width: 600px;

margin: auto;

}

form label {

display: block;

margin: 0.5em 0 0.2em;

}

form input, form select {

width: 100%;

padding: 0.5em;

margin-bottom: 1em;

}

table {

width: 100%;

border-collapse: collapse;

}

table, th, td {

border: 1px solid #ddd;

padding: 8px;

}

th {

background-color: #f2f2f2;

}

**Step 4: Create JavaScript Files**

**js/validation.js**:

js

Copy code

function validateForm() {

var patientName = document.getElementById("patient\_name").value;

var doctorId = document.getElementById("doctor\_id").value;

var appointmentDate = document.getElementById("appointment\_date").value;

var status = document.getElementById("status").value;

if (patientName == "" || doctorId == "" || appointmentDate == "" || status == "") {

alert("All fields must be filled out");

return false;

}

if (isNaN(doctorId) || doctorId <= 0) {

alert("Doctor ID must be a positive number");

return false;

}

return true;

}

**js/manage.js**:

js

Copy code

document.addEventListener("DOMContentLoaded", function() {

fetchAppointments();

});

function fetchAppointments() {

fetch('../public/index.php')

.then(response => response.json())

.then(data => {

const tbody = document.querySelector('#appointments tbody');

tbody.innerHTML = '';

data.forEach(appointment => {

const row = document.createElement('tr');

row.innerHTML = `

<td>${appointment.id}</td>

<td>${appointment.patient\_name}</td>

<td>${appointment.doctor\_id}</td>

<td>${appointment.appointment\_date}</td>

<td>${appointment.status}</td>

<td>

<button onclick="updateAppointment(${appointment.id})">Update</button>

<button onclick="deleteAppointment(${appointment.id})">Delete</button>

</td>

`;

tbody.appendChild(row);

});

});

}

function updateAppointment(id) {

// Implement update functionality

}

function deleteAppointment(id) {

fetch(`../public/index.php?id=${id}`, {

method: 'DELETE'

})

.then(response => response.json())

.then(data => {

alert(data.message);

fetchAppointments();

});

}

**Step 5: Create View Files**

**views/index.php**:

php

Copy code

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>Appointment Booking System</title>

<link rel="stylesheet" href="../css/styles.css">

</head>

<body>

<header>

<h1>Welcome to Our Clinic</h1>

</header>

<nav>

<ul>

<li><a href="index.php">Home</a></li>

<li><a href="book.php">Book Appointment</a></li>

<li><a href="manage.php">Manage Appointment</a></li>

</ul>

</nav>

<main>

<section>

<h2>Book an Appointment</h2>

<p>Use our online system to book your appointments with ease.</p>

</section>

</main>

<footer>

<p>&copy; 2024 Our Clinic. All rights reserved.</p>

</footer>

</body>

</html>

**views/book.php**:

php

Copy code

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>Book Appointment</title>

<link rel="stylesheet" href="../css/styles.css">

<script src="../js/validation.js"></script>

</head>

<body>

<header>

<h1>Book an Appointment</h1>

</header>

<nav>

<ul>

<li><a href="index.php">Home</a></li>

<li><a href="book.php">Book Appointment</a></li>

<li><a href="manage.php">Manage Appointment</a></li>

</ul>

</nav>

<main>

<section>

<form id="bookForm" action="../public/index.php" method="post" onsubmit="return validateForm()">

<label for="patient\_name">Patient Name:</label>

<input type="text" id="patient\_name" name="patient\_name" required>

<label for="doctor\_id">Doctor ID:</label>

<input type="number" id="doctor\_id" name="doctor\_id" required>

<label for="appointment\_date">Appointment Date:</label>

<input type="date" id="appointment\_date" name="appointment\_date" required>

<label for="status">Status:</label>

<select id="status" name="status" required>

<option value="pending">Pending</option>

<option value="confirmed">Confirmed</option>

<option value="cancelled">Cancelled</option>

</select>

<input type="submit" value="Book Appointment">

</form>

</section>

</main>

<footer>

<p>&copy; 2024 Our Clinic. All rights reserved.</p>

</footer>

</body>

</html>

**views/manage.php**:

php

Copy code

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>Manage Appointment</title>

<link rel="stylesheet" href="../css/styles.css">

</head>

<body>

<header>

<h1>Manage Appointments</h1>

</header>

<nav>

<ul>

<li><a href="index.php">Home</a></li>

<li><a href="book.php">Book Appointment</a></li>

<li><a href="manage.php">Manage Appointment</a></li>

</ul>

</nav>

<main>

<section>

<h2>Current Appointments</h2>

<table id="appointments">

<thead>

<tr>

<th>ID</th>

<th>Patient Name</th>

<th>Doctor ID</th>

<th>Appointment Date</th>

<th>Status</th>

<th>Actions</th>

</tr>

</thead>

<tbody>

<!-- JavaScript will populate this table with appointment data -->

</tbody>

</table>

</section>

</main>

<footer>

<p>&copy; 2024 Our Clinic. All rights reserved.</p>

</footer>

<script src="../js/manage.js"></script>

</body>

</html>

**Step 6: Create Controller and Model Files**

**controllers/AppointmentController.php**:

php

Copy code

<?php

include\_once '../models/Appointment.php';

class AppointmentController {

public function createAppointment

php

Copy code

public function createAppointment($patient\_name, $doctor\_id, $appointment\_date, $status) {

$appointment = new Appointment();

$result = $appointment->create($patient\_name, $doctor\_id, $appointment\_date, $status);

return json\_encode(['message' => $result ? 'Appointment created successfully' : 'Failed to create appointment']);

}

public function getAppointments() {

$appointment = new Appointment();

$appointments = $appointment->getAll();

return json\_encode($appointments);

}

public function deleteAppointment($id) {

$appointment = new Appointment();

$result = $appointment->delete($id);

return json\_encode(['message' => $result ? 'Appointment deleted successfully' : 'Failed to delete appointment']);

}

}

?>

**models/Appointment.php**:

php

Copy code

<?php

include\_once '../config/database.php';

class Appointment {

private $conn;

public function \_\_construct() {

$database = new Database();

$this->conn = $database->getConnection();

}

public function create($patient\_name, $doctor\_id, $appointment\_date, $status) {

$query = "INSERT INTO appointments (patient\_name, doctor\_id, appointment\_date, status) VALUES (?, ?, ?, ?)";

$stmt = $this->conn->prepare($query);

$stmt->bind\_param("siss", $patient\_name, $doctor\_id, $appointment\_date, $status);

return $stmt->execute();

}

public function getAll() {

$query = "SELECT \* FROM appointments";

$result = $this->conn->query($query);

$appointments = [];

while ($row = $result->fetch\_assoc()) {

$appointments[] = $row;

}

return $appointments;

}

public function delete($id) {

$query = "DELETE FROM appointments WHERE id = ?";

$stmt = $this->conn->prepare($query);

$stmt->bind\_param("i", $id);

return $stmt->execute();

}

}

?>

**config/database.php**:

php

Copy code

<?php

class Database {

private $host = 'localhost';

private $db\_name = 'clinic';

private $username = 'root';

private $password = '';

public $conn;

public function getConnection() {

$this->conn = null;

$this->conn = new mysqli($this->host, $this->username, $this->password, $this->db\_name);

if ($this->conn->connect\_error) {

die("Connection failed: " . $this->conn->connect\_error);

}

return $this->conn;

}

}

?>

**Step 7: Create Public Index Handling**

**public/index.php**:

php

Copy code

<?php

header("Access-Control-Allow-Origin: \*");

header("Content-Type: application/json; charset=UTF-8");

header("Access-Control-Allow-Methods: POST, GET, DELETE");

header("Access-Control-Allow-Headers: Content-Type, Access-Control-Allow-Headers, Authorization, X-Requested-With");

include\_once '../controllers/AppointmentController.php';

$controller = new AppointmentController();

if ($\_SERVER['REQUEST\_METHOD'] == 'POST') {

$patient\_name = $\_POST['patient\_name'];

$doctor\_id = $\_POST['doctor\_id'];

$appointment\_date = $\_POST['appointment\_date'];

$status = $\_POST['status'];

echo $controller->createAppointment($patient\_name, $doctor\_id, $appointment\_date, $status);

} else if ($\_SERVER['REQUEST\_METHOD'] == 'GET') {

echo $controller->getAppointments();

} else if ($\_SERVER['REQUEST\_METHOD'] == 'DELETE') {

parse\_str(file\_get\_contents("php://input"), $data);

$id = $data['id'];

echo $controller->deleteAppointment($id);

}

?>

**Step 8: Database Setup**

Create the database and table:

sql

Copy code

CREATE DATABASE clinic;

USE clinic;

CREATE TABLE appointments (

id INT AUTO\_INCREMENT PRIMARY KEY,

patient\_name VARCHAR(255) NOT NULL,

doctor\_id INT NOT NULL,

appointment\_date DATE NOT NULL,

status ENUM('pending', 'confirmed', 'cancelled') NOT NULL

);

**Step 9: Testing**

1. **Ensure Apache and MySQL servers are running**.
2. **Place the project folder in the appropriate directory for your web server (e.g., htdocs for XAMPP or www for WAMP)**.
3. **Access the application via your web browser at http://localhost/project**.
4. **Test the "Book Appointment" and "Manage Appointment" pages to ensure they are functional**.

This step-by-step guide should help you set up and complete your project. If you encounter any issues, please let me know so I can assist further.