Doctor Booking System API

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Introduction

1. **Project Overview**
   Using the Doctor's Booking System, a Laravel-based online application, patients can schedule appointments with doctors. It offers a platform for effectively scheduling appointments and serves patients as well as doctors.

2. **Description**
   The Doctor Booking System's APIs are described in this documentation along with how they work. It covers a number of modules, such as patient/user interactions, appointment management, doctor-specific features, and authentication.

3. **Important Notes**
   - The project is able to be accessed on GitHub.
   - The project follows to a particular design pattern that is described in the README.md file.
   - Within the project, there are detailed database schema designs available.

Authentication

To access the APIs, users must be authenticated. Unauthorized access is restricted.

Doctor Model:

- When a doctor registers or logs in, generate a unique device token for that doctor.
- Store this device token in the doctor's database record.

Patient Model:

- When a patient registers or logs in, generate a unique device token for that patient.
- Store this device token in the patient's database record.

API Authentication:

- For each API request, check the request headers to ensure that a device token is included.

- Verify the device token against the records in the doctor and patient models to determine if the user is a doctor or a patient.

- If the device token matches a doctor's token, allow access to doctor-specific API endpoints.

- If the device token matches a patient's token, allow access to patient-specific API endpoints.

- If the device token does not match any records, reject the request as unauthorized.

Appointment Module

The Appointment Module is designed for patients to book and manage appointments. It includes four main APIs:

1. Create Appointment

Endpoint: /api/ addAppointment/

Method: POST

Description:

Allows patients to create appointments.

Prevents two patients from booking an appointment at the same date and time.

Appointments are RSVP until approved by the doctor.

Request Parameters

patient_id (integer): ID of the patient creating the appointment.

doctor_id (integer): ID of the doctor the patient wants to book an appointment with.

appointment_date (string, format: 'Y-m-d'): Date of the appointment.

Appointment_start_time (string, format: 'H:i'): Start time of the appointment.

appointment_end_time will be added automatically of 30 min

Response:

Success (HTTP Status Code: 201 Created): Returns a success message upon successful appointment creation.

Error (HTTP Status Code: 400 Bad Request or 409 Conflict): Returns an error message if the appointment conflicts with an existing one.

2. Update Appointment

Endpoint: /api/ updateAppointment

Method: POST

Description:

Allows patients to update the date and time of their appointments.

Ensures that the new date and time do not conflict with existing appointments.

Request Parameters

appointment_date (string, format: 'Y-m-d'): New date for the appointment.

appointment_start_time (string, format: 'H:i'): New start time for the appointment.

appointment_end_time will be added automatically of 30 min

Response

Success (HTTP Status Code: 200 OK): Returns a success message upon successful update.

Error (HTTP Status Code: 400 Bad Request or 409 Conflict): Returns an error message if the new date and time conflict with existing appointments.

3. Doctor Update Status of Appointment

Endpoint: /api/ changeStatus/{id}

Method: POST

Description:

Allows doctors to update the status of appointments they manage.

Status options: 'approved', 'cancelled', 'postponed'.

Request Parameters

id (integer, path): ID of the appointment to update.

status (string): New status for the appointment.

appointment_date (date, format: 'Y-m-d') [Required if status is 'postponed']: New date for the appointment.

appointment_start_time (time, format: 'H:i') [Required if status is 'postponed']: New start time for the appointment.

appointment_end_time will be added automatically of 30 min

Response

Success (HTTP Status Code: 200 OK): Returns a success message upon successful status update.

Error (HTTP Status Code: 401 Unauthorized or 404 Not Found): Returns an error message if the appointment or doctor is not valid.

4. View All List of Appointments

Endpoint: /api/ listAllAppointments

Method: POST

Description:

Allows patients to view a list of their appointments.

Provides filtering by date.

Returns user-specific appointment information.

Request Parameters

date (string, format: 'Y-m-d'): Optional date for filtering appointments.

Response

Success (HTTP Status Code: 200 OK): Returns a list of appointments based on the filter criteria.

Error (HTTP Status Code: 401 Unauthorized or 404 Not Found): Returns an error message if the user or appointments are not found.

Patient / User Module

The Patient/User Module allows users to interact with the system. It includes five main APIs:

1. Create Patient

Endpoint: /api/ adminSignup

Method: POST

Description:

Allows the creation of patient profiles.

Requires essential patient information such as name, contact details, date of birth, and more.

Request Parameters

first_name (string): First name of the patient.

last_name (string): Last name of the patient.

email (string, format: email): Email address of the patient.

phone (string): Phone number of the patient.

DOB (date, format: 'Y-m-d'): Date of birth of the patient.

gender (string): Gender of the patient.

device_token (string): Device token for authentication.

image (file): Profile image of the patient.

Response

Success (HTTP Status Code: 201 Created): Returns a success message upon successful patient profile creation.

Error (HTTP Status Code: 400 Bad Request): Returns an error message if the patient profile creation fails.

2. Update Patient Info

Endpoint: /api/ adminUpdate

Method: POST

Description:

Allows patients to update their profile information.

Request Parameters

Any parameters that need to be updated (e.g., first_name, last_name, etc.).

Response

Success (HTTP Status Code: 200 OK): Returns a success message upon successful profile update.

Error (HTTP Status Code: 400 Bad Request): Returns an error message if the update fails.

3. User Login

Endpoint: /api/userLogin

Method: POST

Description:

Allows users (patients) to log in using their email and password.

Request Parameters:

email (string, format: email) [Required]: Email address of the user.

password (string) [Required]: User's password.

Response:

Success (HTTP Status Code: 200 OK):

Returns a success message along with an access token upon successful login.

Error (HTTP Status Code: 401 Unauthorized):

Returns an error message if the provided credentials are invalid.

Error (HTTP Status Code: 400 Bad Request):

Returns an error message if the required parameters (email and password) are missing.

4. Create Appointment

Endpoint: /api/ addAppointment

Method: POST

Description:

Allows patients to create appointments.

Prevents two patients from booking an appointment at the same date and time.

Appointments are RSVP until approved by the doctor.

Request Parameters

patient_id (integer): ID of the patient creating the appointment.

doctor_id (integer): ID of the doctor the patient wants to book an appointment with.

appointment_date (string, format: 'Y-m-d'): Date of the appointment.

appointment_start_time (string, format: 'H:i'): Start time of the appointment.

appointment_end_time will be added automatically of 30 min

Response

Success (HTTP Status Code: 201 Created): Returns a success message upon successful appointment creation.

Error (HTTP Status Code: 400 Bad Request or 409 Conflict): Returns an error message if the appointment conflicts with an existing one.

5. Update Appointment

Endpoint: /api/ updateAppointment

Method: POST

Description:

Allows patients to update the date and time of their appointments.

Ensures that the new date and time do not conflict with existing appointments.

Request Parameters

appointment_date (string, format: 'Y-m-d'): New date for the appointment.

Appointment_ start_time (string, format: 'H:i'): New start time for the appointment.

appointment_end_time will be added automatically of 30 min

Response

Success (HTTP Status Code: 200 OK): Returns a success message upon successful update.

Error (HTTP Status Code: 400 Bad Request or 409 Conflict): Returns an error message if the new date and time conflict with existing appointments.

6. View List of Their Appointments

Endpoint: /api/ listAppointmentsByUser

Method: POST

Description:

Allows patients to view a list of their appointments.

Provides filtering by date.

Returns user-specific appointment information.

Request Parameters

date (string, format: 'Y-m-d'): Optional date for filtering appointments.

Response

Success (HTTP Status Code: 200 OK): Returns a list of appointments based on the filter criteria.

Error (HTTP Status Code: 401 Unauthorized or 404 Not Found): Returns an error message if the user or appointments are not found.

Doctor Module

The Doctor Module is designed for doctors to manage their appointments and doctor-specific information. It includes four main APIs:

1. Create Doctor

Endpoint: /api/adminSignup

Method: POST

Description:

Allows the creation of doctor profiles.

Requires essential doctor information such as name, contact details, specialty, and more.

Request Parameters

first_name (string): First name of the doctor.

last_name (string): Last name of the doctor.

email (string, format: email): Email address of the doctor.

phone (string): Phone number of the doctor.

speciality (string): Specialty of the doctor.

languages (string): Languages spoken by the doctor.

education (string): Educational qualifications of the doctor.

DOB (date, format: 'Y-m-d'): Date of birth of the doctor.

gender (string): Gender of the doctor.

device_token (string): Device token for authentication.

image (file): Profile image of the doctor.

Response

Success (HTTP Status Code: 201 Created): Returns a success message upon successful doctor profile creation.

Error (HTTP Status Code: 400 Bad Request): Returns an error message if the doctor profile creation fails.

2. Update Doctor Info

Endpoint: /api/adminUpdate

Method: POST

Description:

Allows doctors to update their profile information.

Request Parameters

Any parameters that need to be updated (e.g., first_name, last_name, etc.).

Response

Success (HTTP Status Code: 200 OK): Returns a success message upon successful profile update.

Error (HTTP Status Code: 400 Bad Request): Returns an error message if the update fails.

3.Doctor Login

Endpoint: /api/adminLogin

Method: POST

Description:

Allows doctors to log in using their email and password.

Request Parameters:

email (string, format: email) [Required]: Email address of the doctor.

password (string) [Required]: Doctor's password.

Response:

Success (HTTP Status Code: 200 OK):

Returns a success message along with an access token upon successful login.

Error (HTTP Status Code: 401 Unauthorized):

Returns an error message if the provided credentials are invalid.

Error (HTTP Status Code: 400 Bad Request):

Returns an error message if the required parameters (email and password) are missing.

4. View Appointments

Endpoint: /api/listAppointmentsByDoctor

Method: POST

Description:

Allows doctors to view a list of their appointments.

Provides filtering by date.

Returns user-specific appointment information.

Request Parameters

date (string, format: 'Y-m-d'): Optional date for filtering appointments.

Response

Success (HTTP Status Code: 200 OK): Returns a list of appointments based on the filter criteria.

Error (HTTP Status Code: 401 Unauthorized or 404 Not Found): Returns an error message if the doctor or appointments are not found.

5. Update Status of Appointment (Doctor)

Endpoint: /api/ changeStatus /{id}

Method: POST

Description:

Allows doctors to update the status of appointments they manage.

Status options: 'approved', 'cancelled', 'postponed'.

Request Parameters

status (string): New status for the appointment.

appointment_date (date, format: 'Y-m-d') [Required if status is 'postponed']: New date for the appointment.

appointment_start_time (time, format: 'H:i') [Required if status is 'postponed']: New start time for the

appointment

appointment_end_time will be added automatically of 30 min

Response

Success (HTTP Status Code: 200 OK): Returns a success message upon successful status update.

Error (HTTP Status Code: 401 Unauthorized or 404 Not Found): Returns an error message if the appointment or doctor is not valid.