**1. List All Hotels**

**Endpoint:** /api/hotels

**Method:** GET

**Description:** Retrieves a list of all hotels.

**Response:**

[

{

"id": 1,

"name": "Hotel Sunshine",

"location": "New York",

"bookings": []

},

{

"id": 2,

"name": "Ocean View",

"location": "Los Angeles",

"bookings": []

}

]

**2. Filter Hotels by Location**

**Endpoint:** /api/hotels/filter

**Method:** GET

**Query Parameters:**

* location (string): The location to filter hotels by.

**Description:** Retrieves a list of hotels filtered by the specified location.

**Example Request:**

GET /api/hotels/filter?location=New York

**Response:**

[

{

"id": 1,

"name": "Hotel Sunshine",

"location": "New York",

"bookings": []

}

]

**3. Get Unique Locations**

**Endpoint:** /api/hotels/locations

**Method:** GET

**Description:** Retrieves a list of unique hotel locations.

**4. Create a Booking**

**Endpoint:** /api/hotels/:hotelId/bookings

**Method:** POST

**Path Parameters:**

* hotelId (integer): The ID of the hotel to create a booking for.

**Description:** Creates a new booking for the specified hotel.

**Request Body:**

**Response:** 201 Created

**5. List All Bookings**

**Endpoint:** /api/bookings

**Method:** GET

**Description:** Retrieves a list of all bookings.

**6. Update a Booking**

**Endpoint:** /api/hotels/:hotelId/bookings/:bookingId

**Method:** PUT

**Path Parameters:**

* hotelId (integer): The ID of the hotel the booking belongs to.
* bookingId (integer): The ID of the booking to update.

**Description:** Updates the specified booking.

**7. Delete a Booking**

**Endpoint:** /api/hotels/:hotelId/bookings/:bookingId

**Method:** DELETE

**Path Parameters:**

* hotelId (integer): The ID of the hotel the booking belongs to.
* bookingId (integer): The ID of the booking to delete.

**Description:** Deletes the specified booking.

**Response:** 200 OK

**Example Usage**

**Creating a Booking**

To create a booking for a hotel with ID 1, make a POST request to /api/hotels/1/bookings with the following JSON body:

**{**

"userName":

string"John Doe"

"userAddress":

string"123 Main St, Springfield"

"numberOfRooms":

int2

"checkInDate":

string"2023-05-01"

"checkOutDate":

string"2023-05-05"

**}**

**Listing All Bookings**

To list all bookings, make a GET request to /api/bookings.

**Updating a Booking**

To update a booking with ID 1 for a hotel with ID 1, make a PUT request to /api/hotels/1/bookings/1 with the following JSON body:

**{**

"id":

int1

"hotelId":

int1

"userName":

string"John Doe"

"userAddress":

string"123 Main St, Springfield"

"numberOfRooms":

int2

"checkInDate":

string"2023-05-01"

"checkOutDate":

string"2023-05-05"

**}**

**Cancel Booking**

To cancel a booking with ID 1 for a hotel with ID 1, make a DELETE request to /api/hotels/1/bookings/1.