Movie Ticket Booking API Test Report

API (Application Programming Interface) testing is a critical process in software development to ensure that APIs function correctly, reliably, and securely. Unlike UI testing, which focuses on the user interface, API testing verifies the functionality of the backend services by sending requests to API endpoints and validating the responses. This includes checking for correct status codes (e.g., 200 OK, 201 Created), response data accuracy, performance (e.g., response time), and security. API testing is essential for applications like the Movie Ticket Booking system, where seamless interaction between the client (e.g., a mobile app or website) and the server is necessary for features such as user authentication, movie listings, theater selection, booking creation, and payment processing.

Test Plan - Movie Ticket Booking System

1. Test Strategy

1.1 Scope

- Frontend Components
- User Flows
- Integration Points
- Performance
- Security
- Cross-browser Compatibility

1.2 Test Types

- Unit Testing
- End-to-End Testing
- Usability Testing

1.3 Tools

- Jest + React Testing Library (Unit & Integration)
- Postman

2. Test Environment

2.1 Development

- Node.js v18+
- npm v9+
- Modern browsers (Chrome, Firefox, Safari, Edge)
- Desktop & Mobile devices

2.2 Testing Tools Setup

Command:

```
npm install --save-dev jest @testing-library/react @testing-library/jest-dom @testing-library/user-event
```

3. Test Cases

3.1 Unit Tests

Components

- Navbar
  - City selection
  - Search functionality
  - Mobile responsiveness

- Movie Components
  - MovieCard rendering
  - MovieCarousel navigation

- Booking Components
  - SeatSelection logic
  - Seat status updates
  - Price calculation
  - Validation rules

Context

- AuthContext
  - User authentication
  - Session management
  - Permission checks

3.2 Integration Tests

User Flows

- Complete booking process
- Payment workflow
- User authentication
- Admin operations

API Integration

- Data fetching
- Error handling
- Loading states
- Cache management

Admin Functions

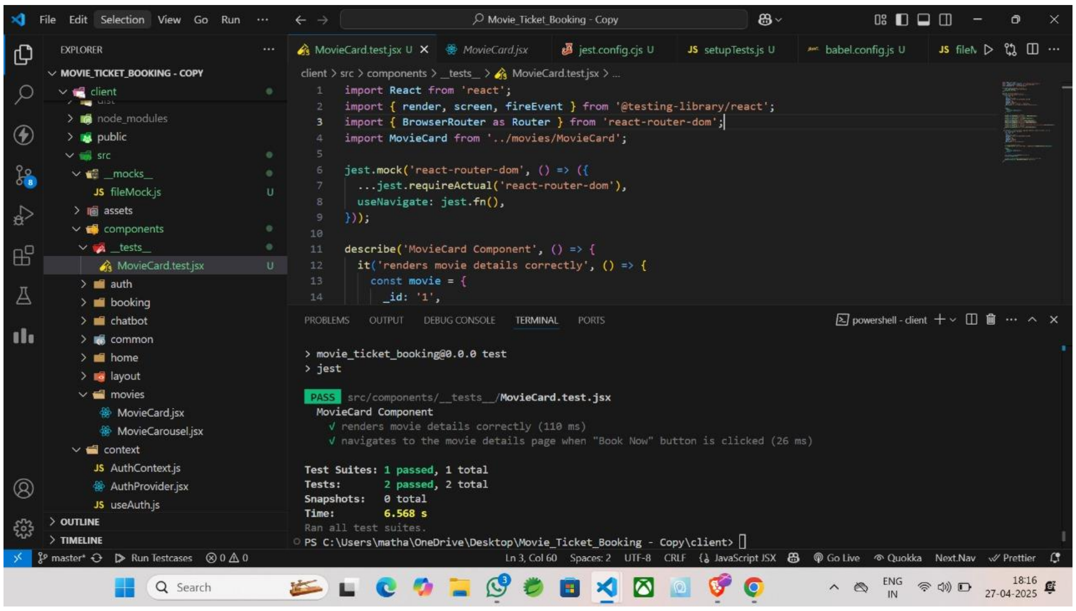
- Movie management
- User management
- Report generation
- System configuration

4. Documentation

- Test results
- Bug reports
- Performance reports

UI Testing:

Testing the movie card Component:



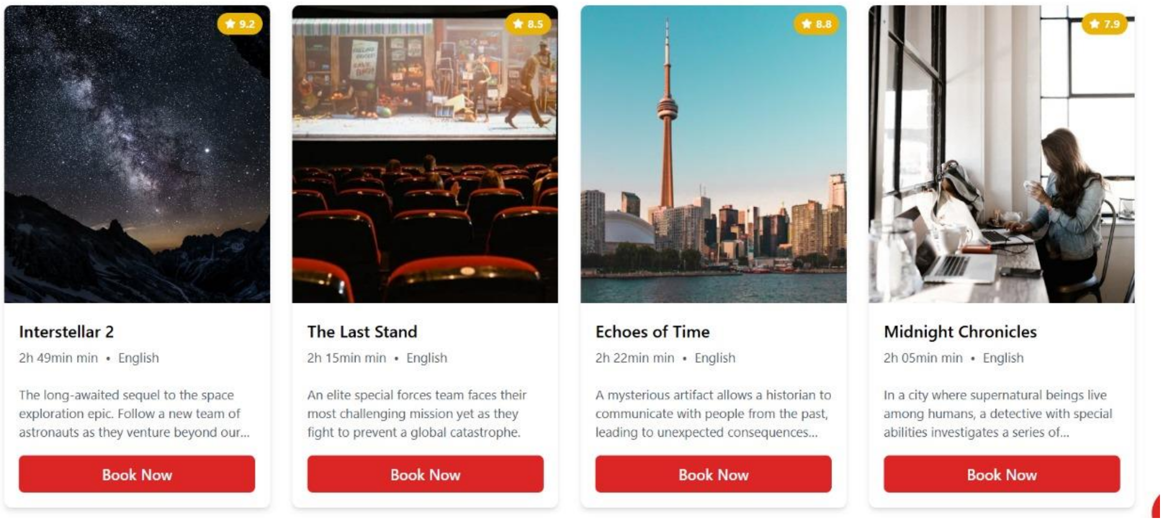
```
import React from 'react';
import { render, screen, fireEvent } from '@testing-library/react';
import { BrowserRouter as Router } from 'react-router-dom';
import MovieCard from '../movies/MovieCard';

jest.mock('react-router-dom', () => ({
  ...jest.requireActual('react-router-dom'),
  useNavigate: jest.fn(),
}));

describe('MovieCard Component', () => {
  it('renders movie details correctly', () => {
    const movie = {
      _id: '1',
```

```
> movie_ticket_booking@0.0.0 test
> jest

PASS src/components/__tests__/MovieCard.test.jsx
  MovieCard Component
    √ renders movie details correctly (110 ms)
    √ navigates to the movie details page when "Book Now" button is clicked (26 ms)

Test Suites: 1 passed, 1 total
Tests:       2 passed, 2 total
Snapshots:   0 total
Time:        6.568 s
Ran all test suites.
PS C:\Users\matha\OneDrive\Desktop\Movie_Ticket_Booking - Copy\client>
```

1. The **MovieCard** component was successfully tested, ensuring correct rendering and interactions.

2. All unit tests passed, verifying expected behavior and seamless functionality.

Result:



9.2
Interstellar 2
2h 49min min • English
The long-awaited sequel to the space exploration epic. Follow a new team of astronauts as they venture beyond our...
Book Now
8.5
The Last Stand
2h 15min min • English
An elite special forces team faces their most challenging mission yet as they fight to prevent a global catastrophe.
Book Now
8.8
Echoes of Time
2h 22min min • English
A mysterious artifact allows a historian to communicate with people from the past, leading to unexpected consequences...
Book Now
7.9
Midnight Chronicles
2h 05min min • English
In a city where supernatural beings live among humans, a detective with special abilities investigates a series of...
Book Now

The following endpoints were tested:

1.Login

2.Register

3.Get available movies

4. Get theaters by city

5. Chatbot query for available movies

6.Create a booking

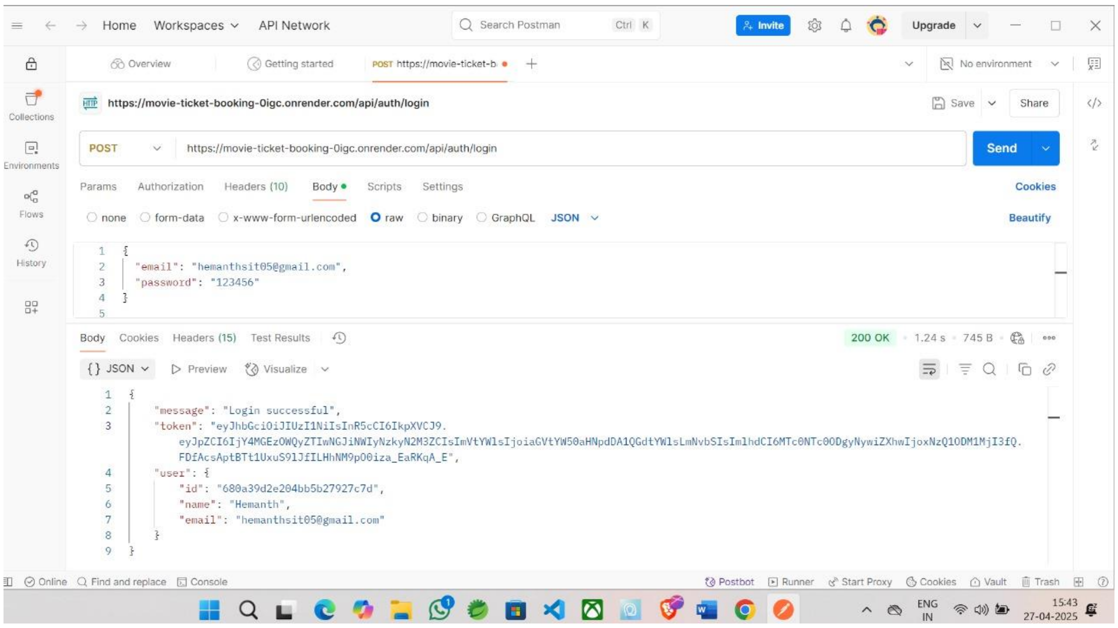
7.Create payment intent

8.Get booking details

Test Results

Login: Authenticates users via POST request, verifying credentials and returning a token; testing ensures 200 OK for valid inputs.

Result: Successful response (200 OK).



https://movie-ticket-booking-0igc.onrender.com/api/auth/login

POST https://movie-ticket-booking-0igc.onrender.com/api/auth/login

none / form-data / x-www-form-urlencoded / [✓ raw] / binary / GraphQL — JSON

```
{
  "email": "hemanthsit05@gmail.com",
  "password": "123456"
}
```

Body — 200 OK · 1.24 s · 745 B

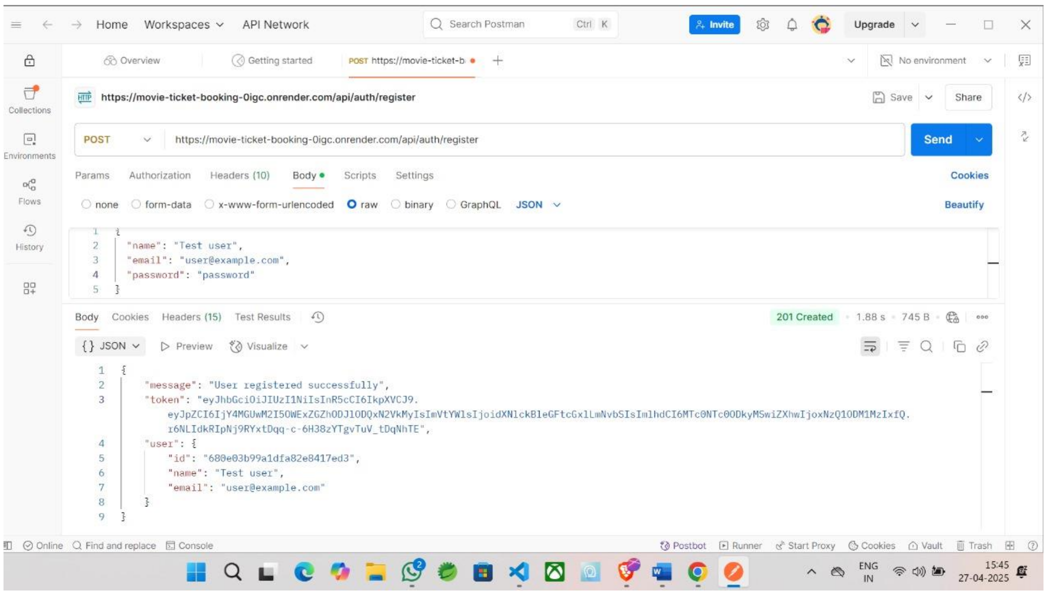
{} JSON

```
{
  "message": "Login successful",
  "token": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.
    eyJpZCI6IjY4MGEzOWQyZTIwNGJiNWIyNzkyN2M3ZCIsImVtYWlsIjoiaGVtYW50aHNpdDA1QGdtYWlsLmNvbSIsImlhdCI6MTc0NTc0ODgyNywiZXhwIjoxNzQ1ODM1MjI3fQ.
    FDfAcsAptBTt1UxuS9lJfILHhNM9p00iza_EaRKqA_E",
  "user": {
    "id": "680a39d2e204bb5b27927c7d",
    "name": "Hemanth",
    "email": "hemanthsit05@gmail.com"
  }
}
```

ENG IN 15:43 27-04-2025

2.Register: Creates user accounts via POST, storing validated data; testing confirms 201 Created for successful registrations.

Result: Successful response (201 Created).



POST https://movie-ticket-booking-0igc.onrender.com/api/auth/register

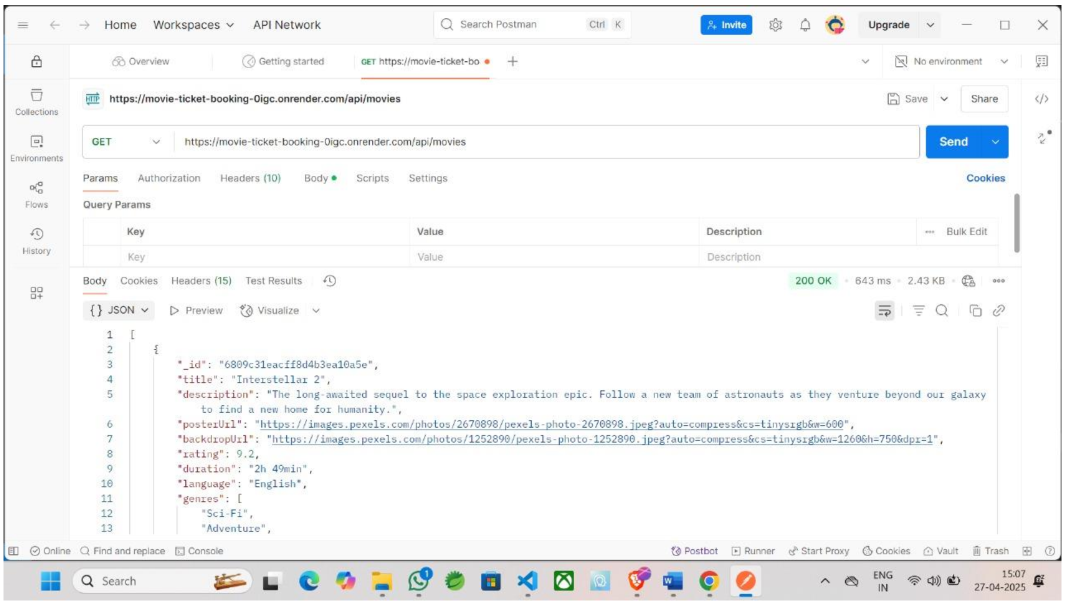
```
{
  "name": "Test user",
  "email": "user@example.com",
  "password": "password"
}
```

201 Created · 1.88 s · 745 B

```
{
    "message": "User registered successfully",
    "token": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.
        eyJpZCI6IjY4MGUwM2I5OWExZGZhODJlODQxN2VkMyIsImVtYWlsIjoidXNlckBleGFtcGxlLmNvbSIsImlhdCI6MTc0NTc0ODkyMSwiZXhwIjoxNzQ1ODM1MzIxfQ.
        r6NLIdkRIpNj9RYxtDqq-c-6H38zYTgvTuV_tDqNhTE",
    "user": {
        "id": "680e03b99a1dfa82e8417ed3",
        "name": "Test user",
        "email": "user@example.com"
    }
}
```

3. Get Available Movies: Retrieves movie listings via GET; testing verifies 200 OK with accurate movie data.

Result: Successful response (200 OK).



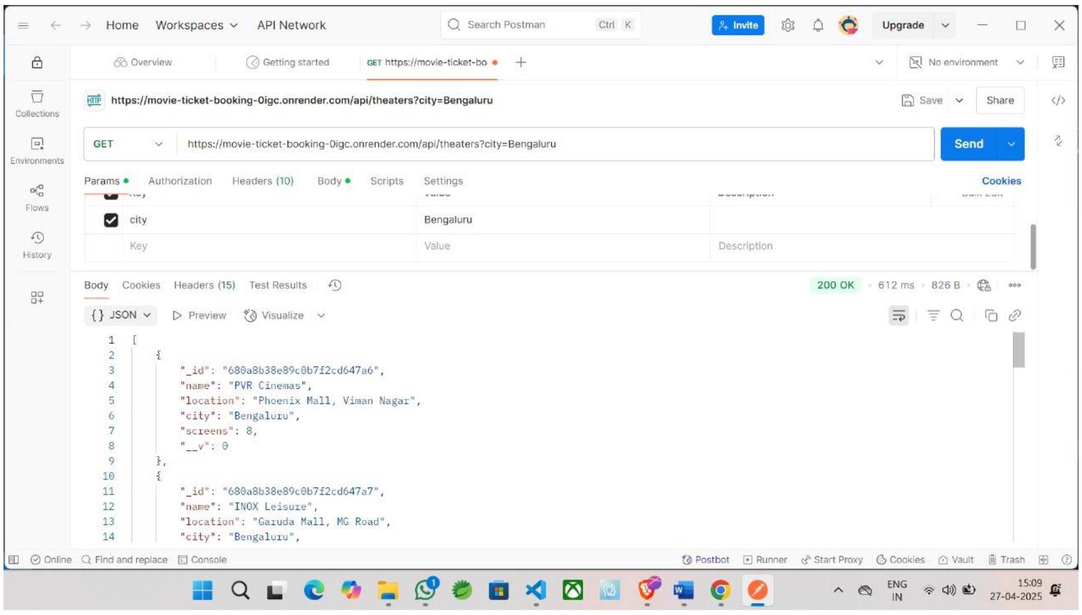
GET https://movie-ticket-booking-0igc.onrender.com/api/movies

200 OK · 643 ms · 2.43 KB

```
[
    {
        "_id": "6809c31eacff8d4b3ea10a5e",
        "title": "Interstellar 2",
        "description": "The long-awaited sequel to the space exploration epic. Follow a new team of astronauts as they venture beyond our galaxy
            to find a new home for humanity.",
        "posterUrl": "https://images.pexels.com/photos/2670898/pexels-photo-2670898.jpeg?auto=compress&cs=tinysrgb&w=600",
        "backdropUrl": "https://images.pexels.com/photos/1252890/pexels-photo-1252890.jpeg?auto=compress&cs=tinysrgb&w=1260&h=750&dpr=1",
        "rating": 9.2,
        "duration": "2h 49min",
        "language": "English",
        "genres": [
            "Sci-Fi",
            "Adventure",
```

4. **Get Theaters by City**: Fetches theaters by city via GET; testing ensures 200 OK with correct theater details.

Result: Successful response (200 OK).



GET https://movie-ticket-booking-0igc.onrender.com/api/theaters?city=Bengaluru

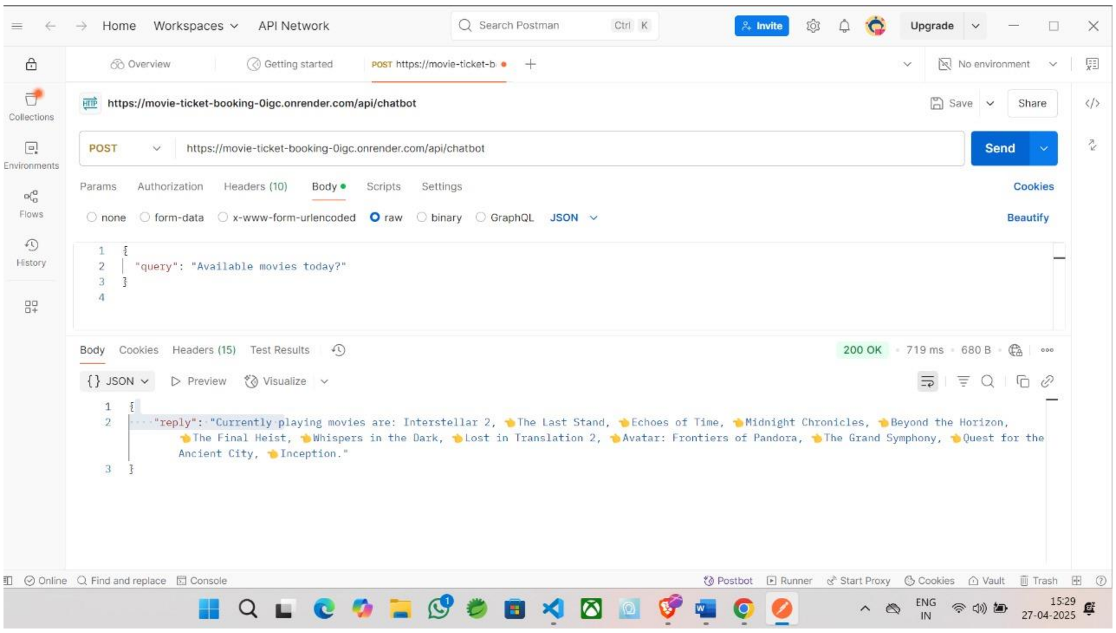
Key	Value	Description
✓ city	Bengaluru	

200 OK · 612 ms · 826 B

```
[
    {
        "_id": "680a8b38e89c0b7f2cd647a6",
        "name": "PVR Cinemas",
        "location": "Phoenix Mall, Viman Nagar",
        "city": "Bengaluru",
        "screens": 8,
        "__v": 0
    },
    {
        "_id": "680a8b38e89c0b7f2cd647a7",
        "name": "INOX Leisure",
        "location": "Garuda Mall, MG Road",
        "city": "Bengaluru",
```

5. **Chatbot Query for Available Movies**: Processes movie queries via POST/GET; testing confirms 200 OK with relevant results.

Result: Successful response (200 OK).



POST https://movie-ticket-booking-0igc.onrender.com/api/chatbot

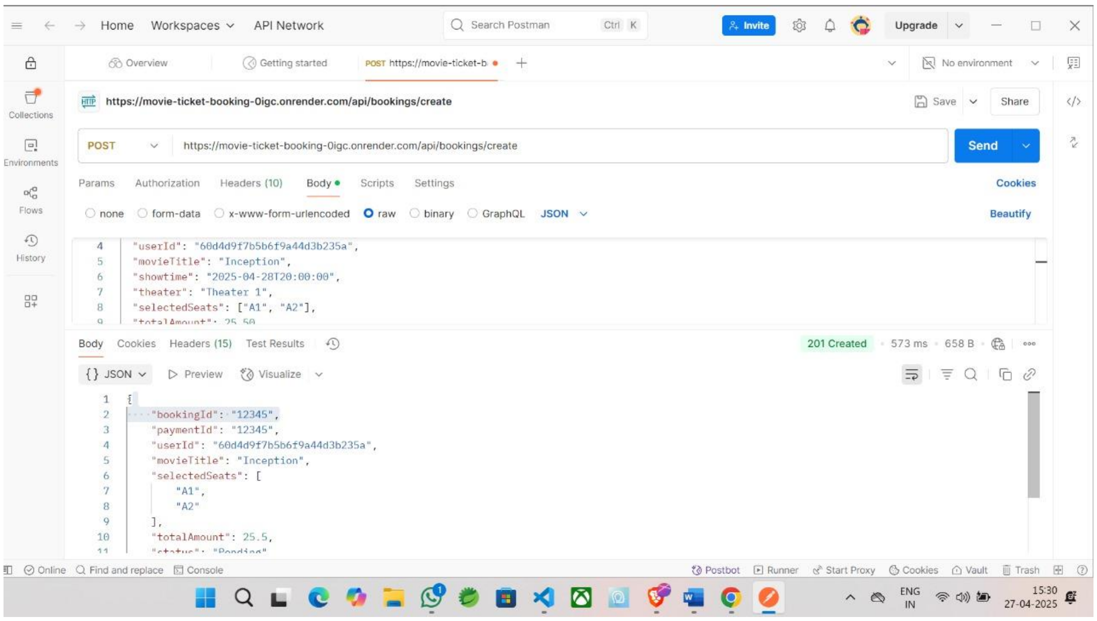
```
{
  "query": "Available movies today?"
}
```

200 OK · 719 ms · 680 B

```
{
    "reply": "Currently playing movies are: Interstellar 2, 👉The Last Stand, 👉Echoes of Time, 👉Midnight Chronicles, 👉Beyond the Horizon, 👉The Final Heist, 👉Whispers in the Dark, 👉Lost in Translation 2, 👉Avatar: Frontiers of Pandora, 👉The Grand Symphony, 👉Quest for the Ancient City, 👉Inception."
}
```

6. **Create a Booking**: Reserves seats via POST, validating availability; testing verifies 201 Created for valid bookings.

Result: Successful response (201 Created).



POST https://movie-ticket-booking-0igc.onrender.com/api/bookings/create

Body: raw JSON

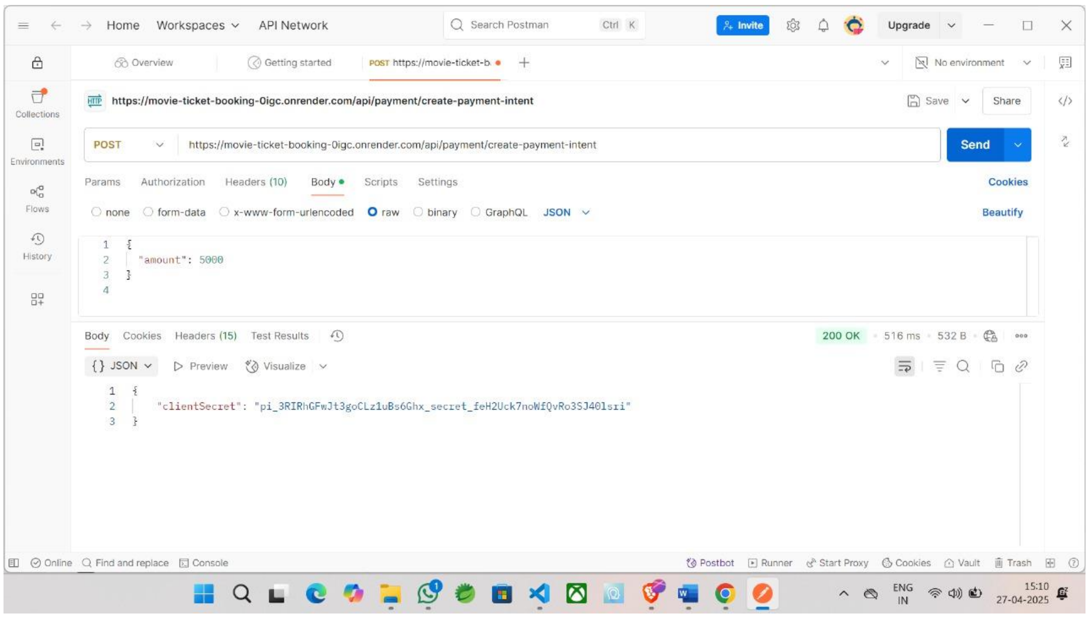
```
"userId": "60d4d9f7b5b6f9a44d3b235a",
"movieTitle": "Inception",
"showtime": "2025-04-28T20:00:00",
"theater": "Theater 1",
"selectedSeats": ["A1", "A2"],
```

201 Created · 573 ms · 658 B

```
{
    "bookingId": "12345",
    "paymentId": "12345",
    "userId": "60d4d9f7b5b6f9a44d3b235a",
    "movieTitle": "Inception",
    "selectedSeats": [
        "A1",
        "A2"
    ],
    "totalAmount": 25.5,
```

7. **Create Payment Intent**: Initiates payment via POST; testing ensures 201 Created with secure payment details.

Result: Successful response (201 Created).



POST https://movie-ticket-booking-0igc.onrender.com/api/payment/create-payment-intent

Body: raw JSON

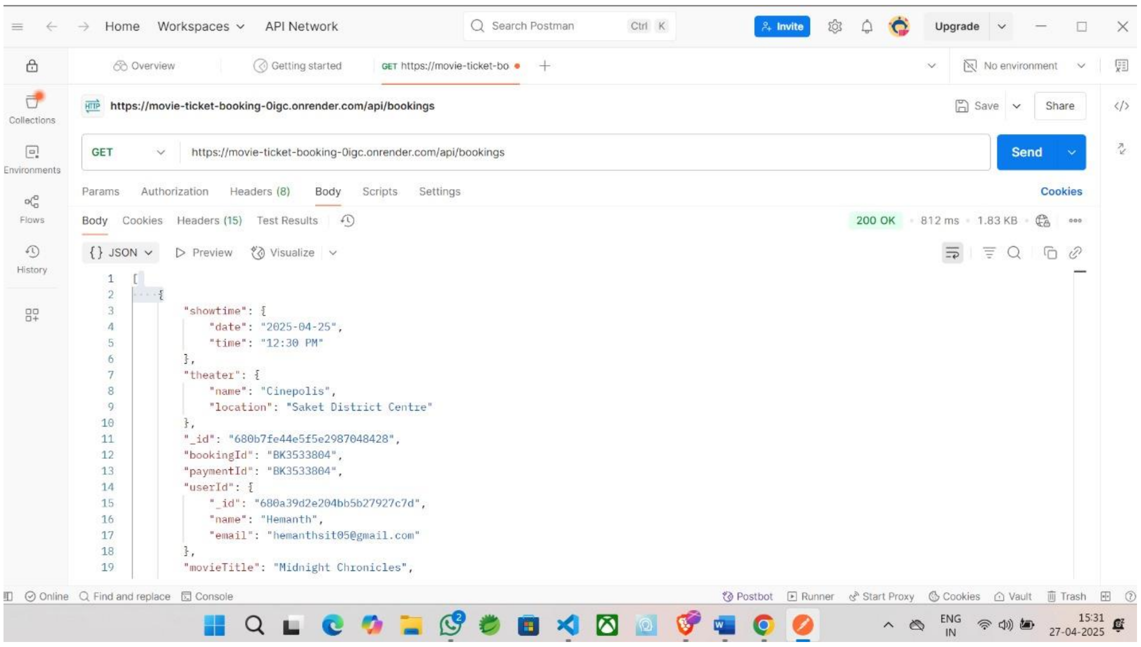
```
{
  "amount": 5000
}
```

200 OK · 516 ms · 532 B

```
{
    "clientSecret": "pi_3RIRhGFwJt3goCLz1uBs6Ghx_secret_feH2Uck7noWfQvRo3SJ40lsri"
}
```

8. **Get Booking Details**: Retrieves booking info via GET; testing confirms 200 OK with accurate details.

Result: Successful response (200 OK).



GET https://movie-ticket-booking-0igc.onrender.com/api/bookings

200 OK · 812 ms · 1.83 KB

```
[
    {
        "showtime": {
            "date": "2025-04-25",
            "time": "12:30 PM"
        },
        "theater": {
            "name": "Cinepolis",
            "location": "Saket District Centre"
        },
        "_id": "680b7fe44e5f5e2987048428",
        "bookingId": "BK3533804",
        "paymentId": "BK3533804",
        "userId": {
            "_id": "680a39d2e204bb5b27927c7d",
            "name": "Hemanth",
            "email": "hemanthsit05@gmail.com"
        },
        "movieTitle": "Midnight Chronicles",
```

Summary

All tested endpoints returned successful responses (200 OK or 201 Created). Response times ranged from 516 ms to 812 ms, and response sizes were between 532 B and 2.43 KB. The API appears to be functioning as expected for movie listings, theater information, chatbot interaction, booking creation, payment intent, and booking retrieval.