

Sports Complex Booking App

Table of Contents

1. Project Overview
2. Technologies Used
3. Features
 - User Authentication
 - Booking System
 - User Profile Management
4. API Endpoints
 - User Endpoints
 - Booking Endpoints
5. Usage
6. Deployment
7. Screenshots
8. Future Enhancements
9. Conclusion

Project Overview

The **Sports Complex Booking App** is a comprehensive web application designed to simplify the process of booking sports facilities. It empowers users to find available sports facilities, view real-time schedules, and manage their bookings in an intuitive manner. The application aims to provide a seamless experience for sports enthusiasts while ensuring efficient facility management.

Objectives

- To provide a user-friendly interface for booking sports facilities.
- To implement secure user authentication for managing user accounts.
- To allow users to view and manage their bookings effectively.

Technologies Used

The project utilizes a modern tech stack for both frontend and backend development:

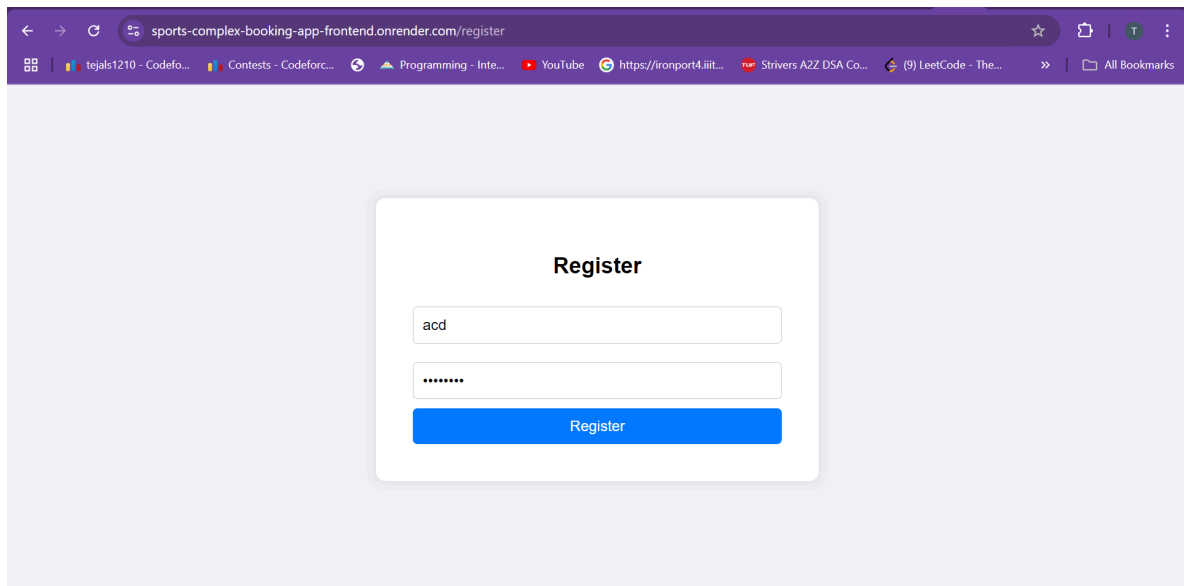
- **Frontend:**
 - **React.js:** For building dynamic user interfaces.

- **CSS:** For responsive and visually appealing design.
- **Backend:**
 - **Node.js:** For running the server-side logic.
 - **Express.js:** For creating robust API endpoints.
 - **MongoDB:** For storing user and booking data.
- **Authentication:**
 - **JSON Web Tokens (JWT):** For secure user authentication and session management.
- **Deployment:**
 - **Render:** For deploying the application and ensuring uptime.

Features

User Authentication

- **Registration:**
 - Users can register by filling out a form with their username, email, and password. The password is securely hashed before storage.



The screenshot shows a web browser window with the address bar displaying 'sports-complex-booking-app-frontend.onrender.com/register'. The browser's bookmark bar is visible with several links. The main content area features a white registration form centered on a light purple background. The form has a title 'Register', two input fields (the first contains 'acd' and the second is masked with dots), and a blue 'Register' button at the bottom.

-
- **Login:**

- Users can log in using their credentials (either username or email) to access their account.

The screenshot shows a web browser window with the URL `sports-complex-booking-app-frontend.onrender.com/login`. The page features a central white login form with the title "Login". Inside the form, there are two input fields: "Username" and "Password", followed by a green "Login" button. To the right of the form, there is a link "New User?" and a blue "Register" button. The browser's address bar and tabs are visible at the top.

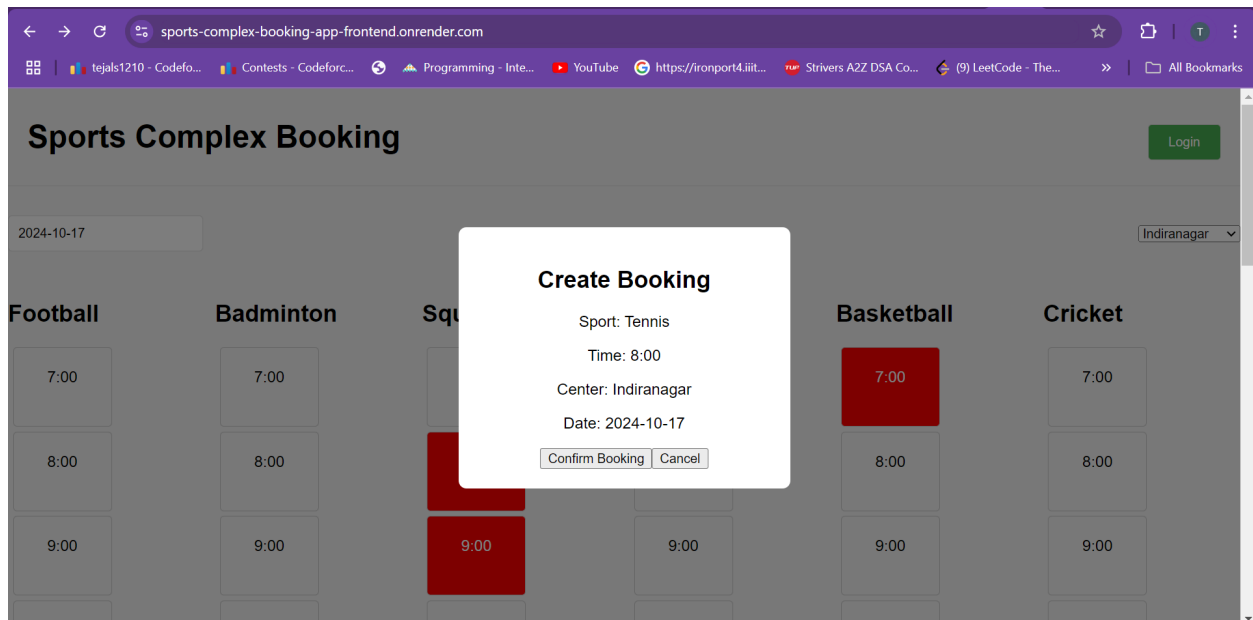
Booking System

- **Available Sports Facilities:**
 - Users can select a location from a dropdown menu to view available sports facilities.
- **Hourly Schedule:**
 - The application displays an hourly schedule in a grid format, showing available time slots for booking.
 - Users can easily see when facilities are free.

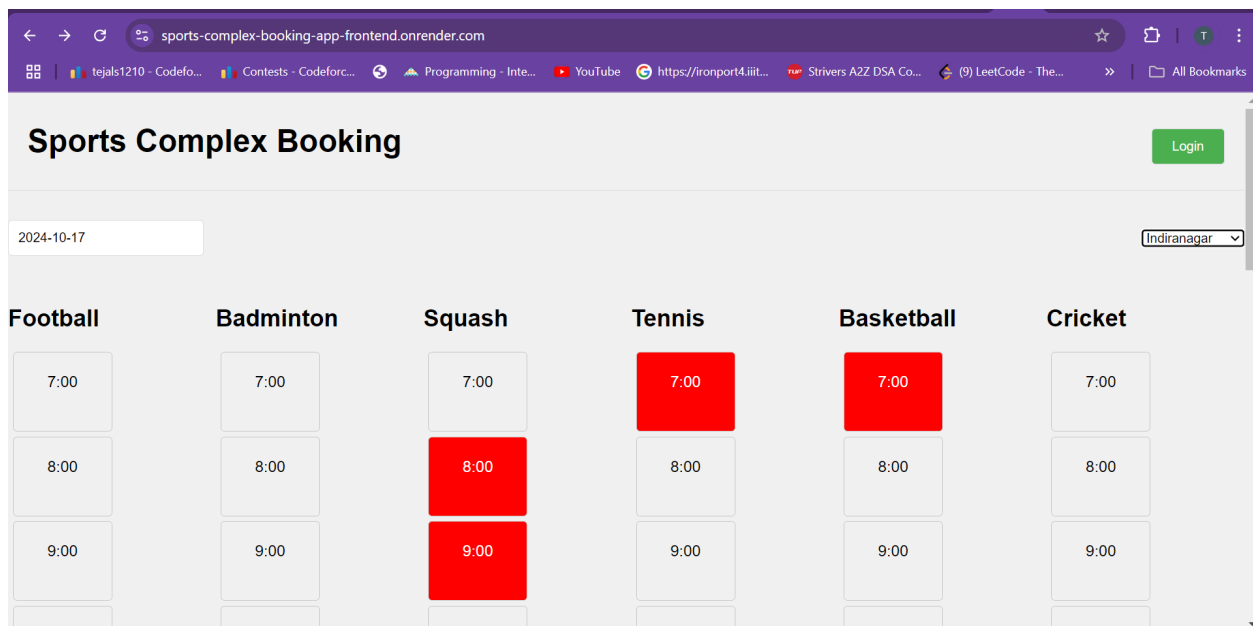
The screenshot displays the "Sports Complex Booking" interface. At the top, there is a header with the title "Sports Complex Booking" and a green "Login" button. Below the header, a date selector shows "2024-10-17" and a dropdown menu for "Select Center". The main content area is a grid of time slots for six sports: Football, Badminton, Squash, Tennis, Basketball, and Cricket. Each sport has a column of three time slots: 7:00, 8:00, and 9:00. The slots are represented by light gray boxes with the time displayed inside.

Sport	7:00	8:00	9:00
Football	7:00	8:00	9:00
Badminton	7:00	8:00	9:00
Squash	7:00	8:00	9:00
Tennis	7:00	8:00	9:00
Basketball	7:00	8:00	9:00
Cricket	7:00	8:00	9:00

- **Booking Creation:**
 - After selecting a time slot, users confirm their booking through a pop-up window, making the process straightforward.



- **View Bookings:**
 - Users can view all the bookings



API Endpoints

User Endpoints

- **POST** `/api/auth/register`:
 - **Description:** Registers a new user.

Request Body:

```
{
  "username": "string",
  "password": "string"
}
```

- **Response:** 201 Created or 409 Conflict if the user already exists.

- **POST** `/api/auth/login`:
 - **Description:** Logs in an existing user.

Request Body:

```
{
  "username": "string" ,
  "password": "string"
}
```

- **Response:** 200 OK with user details and access token or 401 Unauthorized if credentials are invalid.

- **POST** `/api/auth/logout`:
 - **Description:** Logs out the logged-in user.
 - **Response:** 200 OK indicating successful logout.

Booking Endpoints

- **GET** `/api/bookings`:
 - **Description:** Retrieves all bookings
 - **Response:** 200 OK with a list of bookings.
- **POST** `/api/bookings`:
 - **Description:** Creates a new booking.

Request Body:

```
{
  "date": "YYYY-MM-DD",
  "timeSlot": "HH:MM",
  "sport": "string",
}
```

```
    "court": "string"
  }
}
```

- **Response:** 201 Created with booking details.

Usage

1. **Register a New Account:**
 - Fill in the registration form with your name, email, and password.
2. **Log In:**
 - Use your registered credentials to log in to your account.
3. **Select a Location:**
 - Choose a sports facility from the dropdown menu to view available times.
4. **View Hourly Schedule:**
 - Check the grid format schedule for open slots and select your preferred time.
5. **Confirm Your Booking:**
 - A pop-up window will appear for you to confirm your booking.

Deployment

The Sports Complex Booking App is deployed on Render. To access the deployed frontend, visit the following URL: [Deployed Frontend](#).

Future Enhancements

- **Payment Integration:** Implement payment gateways to allow users to pay for bookings directly through the app.
- **Admin Panel:** Develop an admin panel for managing facilities, bookings, and user accounts.
- **Real-time Notifications:** Add features for sending email/SMS notifications for booking confirmations and reminders.
- **Mobile Responsiveness:** Ensure the app is fully responsive and optimized for mobile devices.
- **User Reviews:** Allow users to leave reviews for facilities they have booked.

Conclusion

The Sports Complex Booking App is designed to simplify the booking process for sports facilities while providing users with an intuitive experience. With secure authentication, a robust booking system, and a user-friendly interface, this application fulfills its objective of enhancing

the management of sports facility bookings. Future enhancements will further improve the app's functionality and user experience, making it a comprehensive solution for sports enthusiasts.