**Project Proposal: Event and Venue Management & Booking System**

**1. Project Summary**

The **Event and Venue Management & Booking System** is a comprehensive platform designed to streamline the management, booking, and administration of venues and events. It enables venue owners, event organizers, and customers to efficiently handle the entire event lifecycle, from listing and booking venues to managing payments, schedules, and reviews. The system will facilitate real-time availability checks, secure booking, and provide reviews for better decision-making .

This platform is intended to bridge the gap between venue providers and customers, providing an intuitive and reliable digital solution that enhances operational efficiency and improves the overall user experience.

**A. User Features**

1. **User Registration & Authentication:**
   * Secure login/sign-up with email with Token.
   * Role-based access (Customer, Venue Owner, Admin).
2. **Venue Search & Booking:**
   * Browse venues by location, capacity, type, and availability.
   * View detailed venue profiles with images, pricing, and capacity.
   * Book venues in real-time.
3. **Booking Management:**
   * Track booking status (Pending, Confirmed, Cancelled).
   * Receive notifications for booking updates.
4. **Reviews & Ratings:**
   * Leave reviews for venues.
   * Rate venues based on services and amenities.

**B. Venue Owner Features**

1. **Venue Management:**
   * Add, update, and remove venue listings.
   * Set pricing, and capacity , description.
   * Upload gallery images.
2. **Booking Approval & Management:**
   * Approve or reject booking requests.
   * View upcoming bookings and generate reports.

**C. Admin Features**

**Reports & Analytics:**

* Generate detailed reports for bookings, revenue, and customer engagement.
* Identify top-performing venues and user trends.

**3. Workflow**

1. **User Registration/Login:** Users register or log in to the system and select their role.
2. **Venue Browsing:** Users browse available venues with filters for location, type, capacity, and date.
3. **Booking Process:** Users select a venue, choose a date/time, and book online.
4. **Booking Approval:** Venue owners receive booking requests and confirm or reject them.
5. **Event Execution & Review:** Users attend the event, and post-event reviews can be submitted.
6. **Admin Oversight:** Admins monitor all activities, generate reports, and ensure smooth operations.

**4. API Design**

**The system will provide RESTful APIs for seamless interaction between the frontend and backend:**

**A. User APIs**

* **POST /api/users/register – Register a new user.**
* **POST /api/users/login – Authenticate a user.**
* **GET /api/users/profile – Retrieve user profile.**

**B. Venue APIs**

* **GET /api/venues – List all venues with optional filters.**
* **GET /api/venues/{id} – Get details of a specific venue.**
* **POST /api/venue/create – Add a new venue (Owner/Admin).**
* **PUT /api/venue/update/{id} – Update venue details.**
* **DELETE /api/venue/delete/{id} – Delete a venue.**

**C. Booking APIs**

* **POST /api/bookings – Create a new booking.**
* **GET /api/bookings/user/{userId} – List bookings for a user.**
* **PUT /api/bookings/{bookingId}/status – Update booking status (Approved/Rejected).**
* **DELETE /api/bookings/{bookingId} – Cancel a booking.**

**D. Review APIs**

* **POST /api/reviews – Add a review for a venue.**
* **GET /api/reviews/venue/{venueId} – Get all reviews for a venue.**

**E. Admin APIs**

* **GET /api/admin/users – List all users.**
* **GET /api/admin/venues – List all venues.**
* **GET /api/admin/bookings – List all bookings.**
* **GET /api/admin/reports – Generate system-wide reports.**

**Conclusion**

* This **Event and Venue Management & Booking System** will provide a robust, scalable, and user-friendly platform that caters to all stakeholders—customers, venue owners, and administrators. By centralizing venue management and booking operations, it will save time, reduce operational complexity, and enhance customer satisfaction.