

Non-Functional Requirements

Performance

- The system shall respond to user requests (searching venues, booking slots) within **2 seconds** under normal load
- The system shall handle at least **50 simultaneous bookings per minute** without failure
- The statistics dashboard shall load and render **within 3 seconds** for a tenant

Scalability

- The system shall allow **adding more tenants and venues** without major changes to the architecture
- The system shall support **hundreds of clients simultaneously** in the MVP phase, with the ability to scale as demand grows

Security

- The system shall use **JWT authentication with role-based access control**:
 - Tenant
 - User
 - Admin
- Passwords shall be **hashed and salted** in the database
- Sensitive data (payments, user info) shall be transmitted over **HTTPS** only
- Tenants shall only be able to access their own venue and booking data
- Admins can access all tenant data, but only authenticated admins can log in

Reliability / Availability

- The system shall have **99% uptime** for the MVP (local server or cloud)
- The system shall **prevent double-bookings** even under concurrent booking attempts
- Booking and payment operations shall be **transactional**, so partial updates do not leave data inconsistent

Maintainability

- The codebase shall be modular (backend services, frontend components) to allow **easy updates and feature additions**
- Documentation shall exist for **API endpoints, database schema, and key workflows**

Usability

- The system shall provide a **simple and intuitive UI** for all roles, even non-technical users

- Forms (login, booking, venue creation) shall provide **clear validation messages**
- Mobile and desktop clients shall support **basic** responsiveness

Compatibility

- The client app shall work on modern browsers
- The backend shall support **standard PostgreSQL database** and modern REST API clients

Logging / Monitoring

- All bookings, cancellations, and subscription events shall be logged
- Admin shall have **access to basic logs** for debugging
- Errors shall be reported and logged for further investigation