### **Requirement Document for Online Ticketing System**

#### **1. Introduction**

The Online Ticketing System is designed to automate the process of ticket booking for events, travel, and other occasions. The system will allow users to search for events, view available seats, and book tickets online. The objective is to provide a user-friendly and efficient platform that simplifies ticket purchasing and management for both users and administrators.

#### **2. System Overview**

The Online Ticketing System will have two primary user types: Customers and Administrators. Customers will use the system to browse, select, and purchase tickets. Administrators will manage events, ticket inventory, and user data.

#### **3. Functional Requirements**

##### **3.1 User Registration and Authentication**

* **User Registration**: Users must be able to register with an email address, password, and basic personal information.
* **Login/Logout**: Users must be able to log in and out securely.
* **Password Recovery**: Users must be able to recover their passwords via email.

##### **3.2 Event Management**

* **Event Creation**: Administrators must be able to create events with details such as title, description, date, time, venue, and ticket pricing.
* **Event Editing**: Administrators must be able to edit event details.
* **Event Deletion**: Administrators must be able to delete events.

##### **3.3 Ticket Management**

* **Ticket Availability**: The system must display the availability of tickets for each event.
* **Seat Selection**: Users must be able to select specific seats from a seating chart, if applicable.
* **Ticket Booking**: Users must be able to book tickets by providing payment information.
* **Booking Confirmation**: Users must receive a booking confirmation via email.
* **Ticket Cancellation**: Users must be able to cancel their tickets within a specified period.

##### **3.4 Payment Processing**

* **Payment Gateway Integration**: The system must integrate with multiple payment gateways to accept credit/debit cards, digital wallets, and other payment methods.
* **Secure Transactions**: All payment transactions must be secure and compliant with industry standards.
* **Refund Processing**: The system must handle refund requests and process them promptly.

##### **3.5 User Profile Management**

* **Profile Update**: Users must be able to update their personal information and preferences.
* **Booking History**: Users must be able to view their past bookings and transaction history.

##### **3.6 Notifications and Alerts**

* **Email Notifications**: Users must receive email notifications for registration, booking confirmation, and event reminders.
* **SMS Alerts**: Optionally, users can receive SMS alerts for critical updates and reminders.

##### **3.7 Search and Filter**

* **Event Search**: Users must be able to search for events using keywords, date range, category, and location.
* **Advanced Filters**: Users must be able to apply filters to narrow down search results.

#### **4. Non-Functional Requirements**

##### **4.1 Usability**

* **User Interface**: The system must have an intuitive and responsive user interface.
* **Accessibility**: The system must be accessible to users with disabilities, following relevant accessibility guidelines.

##### **4.2 Performance**

* **Scalability**: The system must handle a high volume of simultaneous users and transactions.
* **Response Time**: The system should provide quick response times for all user interactions.

##### **4.3 Security**

* **Data Protection**: The system must ensure the protection of user data.
* **Access Control**: The system must implement role-based access control to restrict administrative functions.
* **Audit Logging**: The system must maintain logs of user and administrative actions.

##### **4.4 Reliability**

* **Uptime**: The system must guarantee 99.9% uptime.
* **Backup and Recovery**: The system must have regular data backup and recovery procedures in place.

##### **4.5 Compliance**

* **Regulatory Compliance**: The system must comply with relevant legal and regulatory requirements for data protection and payment processing.

#### **5. System Architecture**

* **Client-Server Model**: The system will follow a client-server architecture.
* **Database**: A robust and scalable database system must be used to store all data.
* **APIs**: The system will expose APIs for integration with third-party services.

#### **6. Deployment and Maintenance**

* **Cloud Deployment**: The system will be deployed on a cloud platform to ensure scalability and reliability.
* **Maintenance**: Regular maintenance schedules must be defined to ensure system health and performance.

#### **7. Acceptance Criteria**

* **Functional Testing**: All functional requirements must be tested and verified.
* **Performance Testing**: The system must pass performance benchmarks under load conditions.
* **Security Testing**: The system must undergo rigorous security testing to identify and mitigate vulnerabilities.

#### **8. Conclusion**

The Online Ticketing System aims to provide a seamless and efficient ticket booking experience for users while offering robust management tools for administrators. By adhering to the outlined requirements, the system will achieve high usability, performance, and security standards.