**SRS for E- ticketing**

**1. Introduction**

**1.1 Purpose**

The purpose of the E-Ticketing System is to automate and streamline the process of ticket booking, issuance, and management to provide convenience and efficiency for both users and ticketing authorities.

**1.2 Scope**

The system will cover the entire lifecycle of ticket management, including ticket booking, payment processing, ticket issuance, seat allocation, and ticket delivery.

It will also include features for tracking ticket status, managing user accounts, and generating reports.

**1.3 Definitions, Acronyms, and Abbreviations**

SRS: System Requirements Specification

ETS: E-Ticketing System

**2. Overall Description**

**2.1 Product Perspective**

The ETS will be a standalone system interacting with external databases for payment processing and seat allocation.

It should integrate with existing ticketing systems and payment gateways to ensure seamless transactions.

**2.2 Product Functions**

1. User Registration and Authentication:

* Allow users to register for an account.
* Authenticate users securely through multi-factor authentication.

2. Ticket Booking:

* Provide an online platform for ticket booking.
* Validate and process payment securely.

3. Seat Allocation:

* Automatically allocate seats based on user preferences and availability.

4. Ticket Issuance:

* Generate electronic tickets with unique identifiers.
* Send tickets to users via email or mobile app.

5. Ticket Delivery:

* Track and manage ticket delivery logistics.
* Notify users upon ticket dispatch and delivery.

6. Status Tracking:

* Provide users with a tracking system for their ticket status.
* Update status in real-time.
  1. **User Classes and Characteristics**
* Users: Individuals booking tickets for events or travel.
* Ticketing Authorities: Personnel responsible for managing ticketing operations.
* System Administrators: Responsible for system maintenance and user management.

**2.4 Operating Environment**

The ETS will operate on a web-based platform, accessible through standard web browsers.

It will require a secure internet connection for transactions and communication.

**3. Specific Requirements**

**3.1 External Interface Requirements**

3.1.1 User Interfaces

* Intuitive and user-friendly web interfaces for users and administrators.

3.1.2 Hardware Interfaces

* Standard hardware requirements for servers hosting the ETS.
* Compatibility with printers for ticket issuance.

3.1.3 Software Interfaces

* Integration with payment gateways for secure transactions.
* Compatibility with standard web browsers (e.g., Chrome, Firefox).

**3.2 Functional Requirements**

3.2.1 User Registration and Authentication

* Users must provide valid information during registration.
* Multi-factor authentication for enhanced security.

3.2.2 Ticket Booking

* Online form with mandatory fields for ticket booking.
* Validation checks for entered data.

3.2.3 Seat Allocation

* Automated seat allocation based on user preferences and availability.

3.2.4 Ticket Issuance

* Generation of electronic tickets with unique identifiers.
* Secure delivery of tickets to users.

3.2.5 Ticket Delivery

* Logistics tracking for ticket delivery.
* Notification to users upon dispatch and delivery.

3.2.6 Status Tracking

* Real-time status updates for users.
* Secure access to status information.

**3.3 Performance Requirements**

* The system should handle a minimum of 1000 concurrent users.
* Response time for user actions should be within 3 seconds.

**3.4 Security Requirements**

* Encryption of sensitive user data during transmission.
* Role-based access control for different user classes.
* Regular security audits and updates.

**3.5 Reliability and Availability**

* The system should have 99.9% uptime.
* Regular backups of data to prevent data loss.

**3.6 Maintainability**

* Easy system updates and patches.
* Comprehensive user and administrator documentation.

**4.Other Non-functional Requirements**

**4.1 Cultural and Regulatory Requirements**

* Compliance with international standards for ticketing.
* Adherence to data protection and privacy regulations.

**4.2 Documentation Requirements**

* Comprehensive user manuals for users and administrators.
* Technical documentation for system administrators.

**4.3 Training Requirements**

* Training sessions for ticketing authorities on using the ETS.
* Online tutorials for users.

**5. Appendices**

**5.1 Glossary**

* List of terms and acronyms used in the document.