Software Requirement Specification

TicketBooth

TicketBooth™ is an online platform to enable event organizers to upload upcoming concerts and advertise said events to concert goers who are also able to purchase tickets on the website. The System will create a unique ID for Event Organizers and Customers. Event Organizers will be able to upload descriptions of the event such as venue, venue capacity, timing, and parking availability. Customers will be able to view ticket availability or, in the case of an indoor event, seat availability. Customers will be able to choose their seats and make upgrades. Event Organizers can charge different prices for access of different areas in the concert halls. The System will generate unique barcodes for each ticket to discourage the sale of fake tickets and scalping. The tickets generated will only be available on the app. Tickets cannot be screenshotted (similar to Netflix), to ensure that they cannot be resold. Apps are accessible using the unique ID and Password combination provided upon registration. A maximum of five (5) tickets can be purchased for an event. Wholesalers must create a different type of account in order to avoid any form of reselling.

Functional Requirements

- Registration
  Account types include Event Organizers, Customers, and Wholesalers.

- Login
  A user must only be able to log-in with a valid username and password.

- Create Event
  Only Event Organizers type account can access this function. Events will be pending until approved by System Administrators.

- Upload Supporting Documents
  Event Organizers must upload documents (ie. permits, proof of entertainment) to prove the legitimacy of their events upon creating events.

- Cancel Event

  Only Event Organizers with an active upcoming Event can access this function. When an event is cancelled, the system must notify customers that they are eligible for a refund.

- Send Modify / Update Event Request

  Only Event Organizers with an active upcoming Event can access this function. This feature allows Event Organizers to change timing / performers / event description by sending a request. Additional supporting documents may also be uploaded at this time, if necessary. The System Administrators will examine the request and approve or deny the changes.

- Approve Update Event Request

  The System Administrators approve the request, marking any major changes as Critical. The system then sends the appropriate notifications to the Event Organizers and the Customers.

- Send Refund Eligibility Notification

  The system alerts the customer that they are eligible for a refund after an event is cancelled or there is any major change to the event.

- Issue Refunds

  The system issues all of the refunds that have been approved during the working day.

- Approve Highest Bidder

  The system approves the highest bidders for all of the contested catalog spots, then the catalog is updated.

- Boost Event

  Only Event Organizers with an active upcoming Event can access this function and bid for the top spots in the catalog for the next boosting cycle (5 days). Each Event Organizer can only attempt to boost one of their events.

- Set Bid for Catalog Position

To secure the catalog positions, Event Organizers must bid against other Event Organizers. The highest bids are selected by the system at the end of the previous 5 day period and the spots for the next boosting period are updated.

- Alert / Notify Customers

  System sends some form of notification to Customers about changes made to their upcoming Event.

- Issue Refund Eligibility Alert

  The system alerts the customers who have purchased tickets to an event that they are eligible for a refund upon cancellation or critical modifications to an event.

- Reminders

  System sends reminders to Customers and Event Organizers about upcoming Events and Boosting Events respectively.

- Purchase Tickets

  Customers must be able to purchase tickets. This includes:
  - Picking the Event
  - Pick Timing (If Applicable)
  - Pick Ticket Type
  - Pick Seat

- Purchase tickets in Bulk

  Only Wholesale accounts should be allowed to purchase more than 5 tickets at a time.

- Browse Catalog

  Users must be able to:
  - See seat availability
  - Filter events by type

- Search Catalog

  Users must be able to search the catalog based on:

  1. Name
  2. Location
  3. Date
  4. Type

- View Event Organizer Documents

  In order to approve events, System administrators must be able to view the supporting documents that Event Organizers have uploaded.

- View Pending Events

  System administrators must be able to view all pending events so that they may approve them.

- Publish Event

  System Administrators must be able to publish an event to the catalog after approving it.

- Generate Tickets

  System sends customers their unique ticket with a unique barcode.

- Generate Confirmations / Send emails

  System sends Customers a confirmation email regarding their purchase.

- Update Seat / Capacity Availability

  Upon purchase of a ticket, the seat availability of an event must be updated to reflect the new seat availability.

- Update Catalog

  The catalog must be updated upon the publishing of any new events or the updating of any old events.

- The application must not take longer than 3 seconds to load any data or respond to any user requests.
- All confirmation emails must be sent within 2 minutes of a ticket purchase.
- New users should be acclimated to the system in under 15 minutes.
- The system should be available all day, every day of the year.
- The system must be able to handle up to 100,000 concurrent users.
- All vacant accounts must be deleted after a year of inactivity to preserve database space.
- The database should be secure to protect the privacy of customers and event organizers.
- There must be no decreases in database performance despite a growth rate of ~15% annually.
- The database must be fully backed up once every 3 days.
- The font of the application's interface must be large and easily readable.
- The system must be able to handle up to 200 concurrent payment transactions at peak hours.
- The system documentation must be of a high standard.
- A user's log-in session must only end once they have closed the application or logged out.
- A user must not be able to log in for a while after 5 failed attempts.
- The system should not be unavailable for more than 1 hour per 100 hours of uptime.
- The system should restart in under a minute in the event of failure.
- Any system update must leave the contents of the database untouched.
- The operation of the system must not be specific to any one operating system.
- The system must be available for use on MacOS, Linux and Windows.
- No more than 0.05% of data must be lost in the event of a crash.