

1. Introduction

1.1 Purpose

The purpose of this document is to specify the software requirements for *Eventify*, a centralized web-based platform that connects venue owners, event organizers, and attendees. The system streamlines venue management, event booking, and ticketing processes, providing transparency and efficiency for all stakeholders.

1.2 Project Summary

Eventify is a centralized web-based platform designed to simplify and streamline the event management process for all stakeholders. The system connects **venue owners**, **event organizers**, and **attendees** in a single ecosystem. Venue owners can list and manage their spaces with real-time availability and pricing. Event organizers can search, book venues, manage events, set ticketing options, and receive payments. Attendees can browse events, purchase tickets securely, and provide feedback. By offering transparency, efficiency, and accessibility, Eventify enhances the overall experience of planning, managing, and attending events.

1.3 Scope

Eventify will allow:

- **Admins** to review and approve rooms and events.
- **Venue Owners** to manage their spaces, accept event requests, and receive rental payments.
- **Event Organizers** to browse venues, book events, set pricing, and sell tickets.
- **Attendees** to explore events, purchase tickets, and rate their experiences.

The system includes secure payment integration, a user-friendly interface, and real-time availability tracking.

1.4 References

- IEEE SRS standard template (IEEE 830-1998).
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2. Overall Description

2.1 Product Perspective

Eventify will be a standalone web-based application accessible from modern browsers. It will integrate with third-party payment gateways and provide secure authentication for all user roles.

2.2 Product Functions

- User registration and authentication
- User profile management and verification
- Room and event submission with admin approval
- Calendar-based availability management
- Search and filter functionality
- Ticketing system with seat selection
- Secure online payments
- Rating and feedback system
- Notifications and messaging system
- Administration panel for system management

2.3 User Classes and Characteristics

- **Admin:** Manages approvals, ensures compliance, manages admins.
- **Venue Owner:** Manages room listings, accepts bookings, and handles rental income.
- **Organizer:** Books venues, manages events, sets ticket prices, reopen the event and provides venue ratings.
- **Attendee:** Purchases tickets, attends events, and provides venue and event ratings.

2.4 Operating Environment

- Web-based platform (desktop and mobile browsers)

2.5 Design and Implementation Constraints

- Backend server (.NET)
- Database (SQL server)
- Payment gateway integration (e.g., PayPal, Stripe)

2.6 Assumptions and Dependencies

- Users have internet access and a modern browser
- Payment gateways are available in target regions
- Venues and organizers comply with legal requirements

3. System Features and Functional Requirements

3.1 User Registration and Authentication

3.1.1 User Registration

- Users should be able to sign up using email.
- Required fields: Name, Email, Password, Phone Number.

Validation Rules

- Email must be valid and unique.
- Password must be at least 8 characters long, contain at least one number, one uppercase letter, and one special character.

Acceptance Criteria

- Users can successfully register and log in using email.

3.1.2 User Login

- Users should be able to log in using email.
- Password recovery option must be available.

Validation Rules

- Email must be in valid format.
- Password must match security rules.

Acceptance Criteria

- User can successfully log in and access profile, bookings, and dashboard.

3.1.3 Reset Password

- Users can reset their password if forgotten.
- OTP is sent to registered email for verification.

Validation Rules

- New password must follow security rules.

Acceptance Criteria

- User resets password and logs in with the new credentials.

3.2 Admin Panel (Admin)

3.2.1 Room Submission Review

- Admin reviews new or edited room submissions.
- Admin can approve, reject, or request modifications.

Validation Rules

- Room details must be complete (Title, Description, Photos, Location, Capacity, seating layout(If needed)).

Acceptance Criteria

- Approved rooms appear in the marketplace.

3.2.2 Event Submission Review

- Admin reviews submitted events.
- Admin can approve, reject, or request modifications.

Validation Rules

- Event details must be complete (Title, Description, Public or Private, date, time, type).

Acceptance Criteria

- Approved public events by the admin and the venue owner are visible in the search and ticketing system.
- Approved private events by the admin and the venue owner (by link).

3.2.3 Admins Management

- Admin can view, add, or delete admins.
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3.3 Room Management (Venue Owners)

3.3.1 Room Listing and Editing

- Owners can create, edit, or delete room listings.
- Required details: Title, Description, Location, Size, Photos, Capacity

Validation Rules

- Title: 5–100 characters.
- Description: minimum 20 characters.
- Price: positive number.
- At least one photo is required.

Acceptance Criteria

- Listings are created and updated correctly.
- Owners can manage basic details (title, description, location, size, photos, and capacity).

3.3.2 Room Layout Editing

- Owners can design and manage the seating layout of their rooms.
- Required details: Add/remove seating elements (chairs, desks, tables).
- Define properties for each seat (name, notes, availability of computer, number of chairs for group desks).

Validation Rules

- Each seating element must have at least a unique identifier (e.g., seat name/number).
- Layout must be saved in a valid format (e.g., JSON).

Acceptance Criteria

- Seating layouts can be created, modified, and saved.
- When a user views the room, they can click on a seat to see its details (name, price, notes).
- Layout information is persisted and retrieved correctly during bookings.

3.3.3 Calendar Management

- Owners can show availability via a calendar.
- Prevent double bookings.

Acceptance Criteria

- Availability reflects correctly in the booking system.

3.3.4 Booking Requests

- Owners can accept or decline event booking requests.
- Owners receive notifications for new requests.

Acceptance Criteria

- Booking status (pending, accepted, declined) is updated in real time.
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3.4 Event Renting (Organizers)

3.4.1 Browse Rooms

- Organizers can browse and filter available rooms by location, size, price, rating, view booking sessions.

Acceptance Criteria

- Search results match applied filters.

3.4.2 View Room Calendar

- Organizers can view real-time availability of rooms.

Acceptance Criteria

- Room's booked/unavailable dates are correctly displayed.

3.4.3 Request Event Booking

- Organizers can request to host an event by entering event details (title, description, date, time, Public or Private, type).

Validation Rules

- Event date must not overlap with booked dates.
- Event title: 5–100 characters.
- Description: min 20 characters.
- Price: positive number.

Acceptance Criteria

- Organizers can submit events for approval.

3.4.4 Event Payment

- Organizers can pay rental fees for approved events via integrated payment system.

Acceptance Criteria

- Payment confirmation is sent to both organizer and owner.

3.4.5 Ticketing Setup (Basic)

- Organizers can set up ticketing for events without detailed seating layouts.
- Required details:
 - Set a general ticket price for the whole event or studio.
 - Generate and share ticketing links and QR codes.
 - Organizers receive ticketing payments.

Validation Rules

- Ticket price must be a positive number.

Acceptance Criteria

- Ticketing link works and allows attendees to purchase tickets.
- Payment is processed and received successfully by organizers.

3.4.6 Ticketing Setup (Seat-based)

- Organizers can configure ticketing based on the seating layout defined in Room Editing.
- Required details:
 - Assign pricing per seat or per group of seats.
 - Share ticketing links and QR codes linked to the seating layout.
 - Organizers receive ticketing payments for each booked seat.

Validation Rules

- Each seat/group must have a positive ticket price if assigned.
- Pricing must correspond to existing seating elements in the layout.

Acceptance Criteria

- Ticketing link works and displays the seating layout to attendees.
- Attendees can view seat details (name, price, notes) and book specific seats.
- Payment is processed and received successfully by organizers for selected seats.

3.4.7 Post-Event Rating (For Organizers)

- Organizers can rate the room after event completion.

Acceptance Criteria

- Reviews are created and displayed correctly.
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3.5 Ticketing (Attendees)

3.5.1 Event Access

- Attendees can view events via shared links or QR codes.
- Attendees can browse and filter available events by location, type, date , price, rating.

Acceptance Criteria

- Event details load correctly.
- Search results match applied filters.

3.5.2 Seat Selection

- Attendees can choose specific seats from the seating layout.

Validation Rules

- Seat cannot be double booked.

Acceptance Criteria

- Selected seats are locked and confirmed after payment.

3.5.3 Ticket Purchase

- Attendees can pay for tickets securely via integrated payment gateways.

Acceptance Criteria

- The user receives a digital ticket with event and seat details.

3.5.4 Post-Event Rating (For Attendees)

- Attendees can rate the event and the room after attending.

Acceptance Criteria

- Reviews are created and displayed correctly.
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3.6 Notifications & Communication

3.6.1 Notifications

- The system sends notifications for booking requests, approvals, payments, ticket purchases, and reminders.

Acceptance Criteria

- Users receive email and in-app notifications timely.
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3.7 User Profile Management

3.7.1 Profile Creation

- The system shall allow all users to create a personal profile.
- Ticket buyers can create a basic account without full verification.

Acceptance Criteria:

- User can register with email/phone and password.
- Ticket buyers can purchase tickets without submitting ID verification.

3.7.2 Profile Editing

- The system shall allow users to edit their profile details including:
 - Profile picture
 - Full name
 - Gender
 - Phone number
 - Short bio/description

Acceptance Criteria:

- Changes are updated instantly in the user's profile.
- Profile information is visible in the user's public profile (except phone number which is private).

3.7.3 Identity Verification

- The system shall require venue owners and event organizers to verify their identity before publishing venues or events.
- Verification shall include:
 - Uploading a valid ID card
 - Uploading a live photo of the user holding the ID

Acceptance Criteria:

- Unverified users cannot publish venues or create events.
- Verified badge appears on successfully verified accounts.

3.7.4 Profile Showcase

- The system shall provide a public profile page that displays:
 - Listed venues of the user
 - Created events (past and upcoming)

Acceptance Criteria:

- Other users can view the organizer's profile with venue and event history.
- Profile acts as a portfolio for organizers.

3.7.5 Private Bookings Section

- The system shall provide users with a private section showing events they booked tickets for, if the event date has not passed.

Acceptance Criteria:

- Users see upcoming events they have tickets for.
 - Past events automatically disappear from the “upcoming bookings” list.
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4. Phased Functional Requirements Roadmap

- **Phase 1**
 - **3.1.1 User Registration**
 - **3.1.2 User Login**
 - **3.3.1 Room Listing and Editing**
 - **3.3.4 Booking Requests**
 - **3.4.1 Browse Rooms**
 - **3.4.3 Request Event Booking**
 - **3.4.4 Event Payment**
 - **3.6.1 Notifications**
- **Phase 2**
 - **3.1.3 Reset Password**
 - **3.4.6 Ticketing Setup (Seat-based)**
 - **3.5.1 Event Access**
 - **3.5.3 Ticket Purchase**
- **Phase 3**
 - **3.3.2 Room Layout Editing**
 - **3.4.6 Ticketing Setup (Seat-based)**
 - **3.5.2 Seat Selection**

- **Phase 4**
 - **3.2.1 Room Submission Review**
 - **3.2.2 Event Submission Review**
 - **3.2.3 Admins Management**
 - **3.3.3 Calendar Management**
 - **3.4.2 View Room Calendar**

 - **Phase 5**
 - **3.7.1 Profile Creation**
 - **3.7.2 Profile Editing**
 - **3.7.3 Identity Verification**
 - **3.7.4 Profile Showcase**
 - **3.4.7 Post-Event Rating (For Organizers)**
 - **3.5.4 Post-Event Rating (For Attendees)**
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4. Non-Functional Requirements

- **NFR1 (Usability):**
 - The system shall provide an intuitive and responsive user interface.
 - Responsive design for web and mobile

- **NFR2 (Security):**
 - All sensitive data (payments, user credentials) shall be encrypted.
 - Secure user authentication and authorization.
 - GDPR compliance for handling user data.
 - Audit logs for admin and financial activities.

- **NFR3 (Performance):**
 - The system shall support at least 500 concurrent users without performance degradation.

- **NFR4 (Availability/Reliability):**
 - The system shall maintain 99.5% uptime.
 - Regular backups of data.
 - **NFR5 (Scalability):**
 - The system shall scale to support multiple cities and thousands of venues.
 - The system should be scalable to support future growth and additional features.
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6. Appendices

6.1 Glossary

- **Venue Owner:** A user who lists and manages spaces (rooms, halls, studios).
- **Event Organizer:** A user who books venues, creates events, and sells tickets.
- **Attendee:** A user who purchases tickets and attends events.
- **Admin:** A system administrator responsible for reviewing and approving content.
- **Studio:** A venue type where ticketing is not applicable (flat rental only).
- **QR Code:** A quick response code used to access event pages or tickets.

6.3 Acronyms

- **SRS:** Software Requirements Specification
- **FR:** Functional Requirement
- **NFR:** Non-Functional Requirement
- **UI:** User Interface
- **GDPR:** General Data Protection Regulation

6.2 Future Considerations

- Mobile application support (iOS/Android).
- AI-based event recommendations for attendees.
- Integration with third-party marketing tools (e.g., social media ads).
- Multi-language support for international users.