



IT644 - Web Services & SOA Group Project

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Project Proposal Document

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1. Project Title and Short Description:-

Project Title: 'EventHub - Event Management System'

Short Description:

- EventHub is a modern, all-in-one event management system designed to simplify event creation, promotion, ticketing, attendee engagement, and analytics. It provides both web (admin-focused) and mobile (client-focused) applications that help organizers efficiently manage all aspects of events while giving attendees an easy discovery and booking experience.

2. Application Type:-

- **Admin Side:** Web-based platform for event organizers and agencies to create, customize, and monitor events.
- **Client Side:** Mobile application (iOS and Android) to help users discover events, purchase tickets, receive updates, and check in.
- **Hybrid Approach:** A shared API-driven backend ensures seamless integration between web and mobile applications.

3. Motivation / Problem Statement:-

Event organizers face several challenges in efficiently managing events:

- **Event Creation Complexity:** Building event pages, setting up ticketing, promotions, and analytics often requires using multiple disjointed tools.
- **Low Event Visibility:** Without centralized discovery platforms, achieving visibility across channels is costly and time-consuming.

- **Attendee Engagement Issues:** Tracking interest, sending reminders, and managing check-ins manually consumes significant effort.
- **On-Site Management Difficulties:** Handling payments, issuing tickets, and marking attendance in real-time is often cumbersome.
- **Fragmented Data Processes:** Information is scattered across spreadsheets, websites, and third-party tools, leading to inefficiencies in tracking registrations, sales, and performance.
- **Lack of Real-Time Communication:** Limited direct channels for updates and reminders reduce attendee engagement and satisfaction.

EventHub solves these issues by providing a **unified platform** that allows organizers to:

- Create and promote events from one place.
- Sell and manage tickets with flexible pricing options.
- Track event performance through advanced analytics dashboards.
- Engage attendees with reminders, notifications, and follow-up tools.

This platform unifies all workflows—listing creation, ticketing, promotions, attendee management, analytics, and communication — into a streamlined, user-friendly experience.

3. Target Users and Use Cases:-

Target Users:

1. **Individual Organizers** – hosting workshops, classes, parties, or small events.
2. **Event Agencies** – managing multiple events, ticketing, and promotions.
3. **Corporates** – arranging conferences, exhibitions, and webinars.
4. **Communities & Non-Profits** – running fundraisers, awareness programs, and festivals.
5. **Attendees** – individuals who want to discover, attend, and track events easily.

Use Cases:

- **For Organizers:**

- Create customized events with images, categories, and descriptions.
- Define ticket types (free, paid, early bird, discounts).
- Track organizer's revenue, and ticket sales.
- Use mobile check-in on event day.

- **For Attendees:**

- Discover upcoming events nearby through search and categories.
- Register or buy tickets with secure online payment options.
- Get booking reminders and updates.
- Store and show tickets digitally at the venue.
- Share events with friends and community via social media.

5. Scope and High - Level Features:-

1. User Management:

- User registration & login (Attendees, Organizers, Admin).
- Social login (Google, Facebook).
- Profile management (update info, photo, contact, preferences).

2. Homepage:

- Search bar for events (by city, category, date).
- Featured & trending events section.
- Event categories (Concerts, Conferences, Sports, Festivals, Workshops, etc.).
- Personalized recommendations based on user history/location.

3. Event Listings:

- Event cards with name, date, venue, price, and thumbnail.
- Filters: category, price, location, date.
- Sorting: popularity, upcoming, free/paid.
- Badges: Free, Sold Out, Limited Seats, Trending.

4. Event Details Page:

- Event banner & cover image.
- Event description, agenda, speakers/performers.
- Ticket pricing & booking button.
- Event location with Google Maps integration.
- Share options (social media, email, WhatsApp).
- Organizer profile section (name, popularity, website, past events).

5. Event Creation & Management (Organizer):

- Create/update/delete events.
- Event details include:
 - Event name, Organizer name, Event location (venue/online link only, no vendor booking inside system)
 - Ticket price & categories (free, paid, early bird, VIP)
 - Start & end date, Time zone selection, Event date & time
 - Event description
 - Organizer's website/social links
 - Event banner/image
 - Track ticket sales, revenue, and attendees.

6. Ticket Booking & Payment:

- Attendees can buy tickets securely (UPI, Cards, Wallets).
- Multiple ticket categories (free, early bird, VIP).
- Secure checkout process.
- Booking confirmation & downloadable ticket/receipt
- Email/SMS confirmation with receipt.
- Optional cancellation/refund policy.

7. Dashboards:

- Attendee Dashboard: booked events, past events, saved events, ticket downloads.
- Organizer Dashboard: create/manage events, view ticket sales, analytics.
- Admin Panel: manage users/events, approve events, analytics.

8. Notifications & Reminders:

- Event reminders & ticket confirmation for attendees.
- New booking notifications for organizers.

- System updates/alerts from admin.

9. Analytics & Reports:

- Organizer analytics: ticket sales, revenue insights, attendee count.
- Admin analytics: total events, active users, revenue, popular categories.
- Export reports (Excel/CSV).

10. Reviews & Ratings:

- Attendees can rate/review events after attending.
- Display average ratings on event details page.

11. Other Features:

- Wishlist/Favorites (attendees can save events).
- Dark mode toggle.
- SEO optimization for event pages.

6. Technology Stack:-

Frontend:

- **Web (Admin):** React.js, Bootstrap/Tailwind CSS, responsive design.
- **Mobile (Attendee):** React Native for cross-platform support.

Backend:

- Node.js with Express.js framework.
- RESTful APIs to connect mobile & web clients.

Database:

- MongoDB for structured event & user data.
- Redis for caching and session management.

Integrations:

- **Payments:** Razorpay / PayPal.
- **Email/SMS:** Twilio, SMTP.
- **Notifications:** Firebase Cloud Messaging (FCM).

Hosting & Deployment:

- AWS / Azure / GCP for cloud hosting.
- GitHub Actions.

7. Roles & Responsibilities:-

Roles	Responsibilities	Members
Team Lead / Project Manager (PM)	Define roadmap, manage milestones, coordinate with stakeholders and accountable for the overall project success.	Rajvi
Product Owner (PO)	The Product Owner owns the value stream and prioritises features.	Rajvi
Solution Architect (SA)	The Solution Architect (SA) ensures sound, scalable design.	Tisha

Scrum Master (SM)	The Scrum Master (SM) ensures Agile process integrity.	Tisha, Ritik
Business Analyst (BA)	Gather requirements, map use cases, finalize features.	Yashvi
UI/UX Designer	Design wireframes, mockups, and user journey.	Yashvi, Preksha, Tisha
Frontend Developers	Build responsive web interface & mobile app.	Rajvi, Tisha, Ritik, Yashvi
Backend Developers	Build APIs, handle ticketing logic, payment integration.	Parth, Kaival, Preksha, Dhruv
QA Engineers	Manual & automated testing, bug tracking.	Parth, Dhruv, Ritik
DevOps Engineer	DevOps + Security Roles are essential for modern continuous delivery and production - readiness.	Parth, Dhruv, Kaival
Technical Writer (TW)	Technical Writer (TW) is responsible for all documentation related activities.	Yashvi

8. Timeline with Milestones:-

Timeline	Milestone Description
Week 1 – 2 (Aug 26 - Sept 07)	Requirement gathering, scope definition, UI/UX wireframes
Week 3 – 4 (Sept 07 - Sept 20)	Web admin panel foundation: Event creation module
Week 5 (Sept 20 - Sept 27)	Ticketing & payment gateway integration
Week 6 (Sep 27 – Oct 3)	Mobile app MVP: Event discovery & ticket purchase
Week 7 (Oct 4 – Oct 11)	Attendee management & check-in module
Week 8 (Oct 12 – Oct 19)	Analytics dashboard & reporting features
Week 9 – 10 (Oct 20 – Nov 3)	Full system integration, bug fixes, QA testing
Week 10 – 11 (Nov 4 – Nov 18)	Final adjustments, documentation, production launch