Event Lifecycle Management

Introduction:

The project involved building a robust Content Management System (CMS) and an accompanying mobile application designed to streamline event operations for both single-event and multi-event setups. The goal was to create a unified platform where attendees, exhibitors, and speakers can interact seamlessly, while also giving event organizers powerful tools for management and engagement.

Client Details:

Name: Confidential | **Industry:** Software | **Location:** Canada

Technologies:

Ruby on Rails, HAML, Bootstrap, jQuery, MYSQL, Sidekiq, AffiniPay API, PayPal, Faye, AWS S3, SQS, ECR, ECS, SES

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Project Description:

The system was developed to cover the **entire event lifecycle**, from registration and payments to attendee engagement and post-event tracking.

- **Registration & Payments**:
  Attendee, exhibitor, and speaker registration workflows were built with secure payment processing via **AffiniPay** and **PayPal**, along with integrations to third-party APIs such as **Cvent** and **YourMemberships**, ensuring flexibility and scalability for different client needs. This gave organizers the **flexibility to support diverse regional payment preferences**, making the platform accessible to a wider audience.

- **Single Sign-On (SSO) & Customizable Login**:
  Implemented **SSO-based authentication** to allow users to register and log in through **Microsoft, Google, and other identity providers**. The authentication flow was made **customizable per organization**, enabling each client to configure login rules and identity providers according to their internal policies.

- **Customizable Emailing System**:
  Built a **powerful email automation module** that allowed organizers to:
    - Create and send targeted campaigns to **attendees, speakers, and exhibitors** based on specific conditions (e.g., registration status, session interests, attendee type).
    - **Schedule emails** for later delivery, ensuring timely communication.
    - Track **delivery, open rates, and engagement metrics** for each email group, giving organizers valuable insights into their outreach.

- **Engagement Modules**:
  Designed and implemented features like lead retrieval, polling, games, and QR code scanning to maximize networking and participation at events.
    - The **video streaming service** ensured smooth playback with **adaptive bitrate streaming**, optimizing quality across different devices and bandwidth conditions.
    - Supported **live sessions, on-demand playback, and content uploads**, enhancing the digital event experience.

- **Event Social Media Wall (Photo & Video Gallery with Gamification)**:
  A **social-media-like feed** was created for each event, enabling attendees to **upload photos and videos, like, comment, and share content**. Gamification elements such as **points, leaderboards, and badges** encouraged interaction, creating a vibrant digital community around the event.

- **CE Certificate Generation**:

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Enabled attendees to automatically track their session credits and instantly download personalized **Continuing Education (CE) certificates**, reducing manual intervention.

● **Gamified Rewards System**:
Developed a **points-based rewards module** where attendees earned points for event activities (poll participation, photo/video uploads, networking, etc.). These points could then be **redeemed for products, discounts, or exclusive perks** within the platform, further motivating attendees to stay engaged throughout the event.
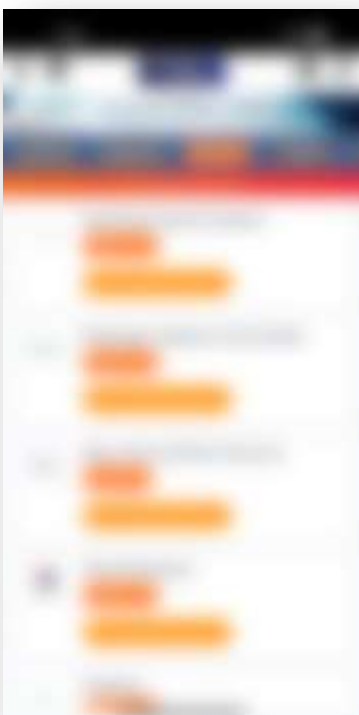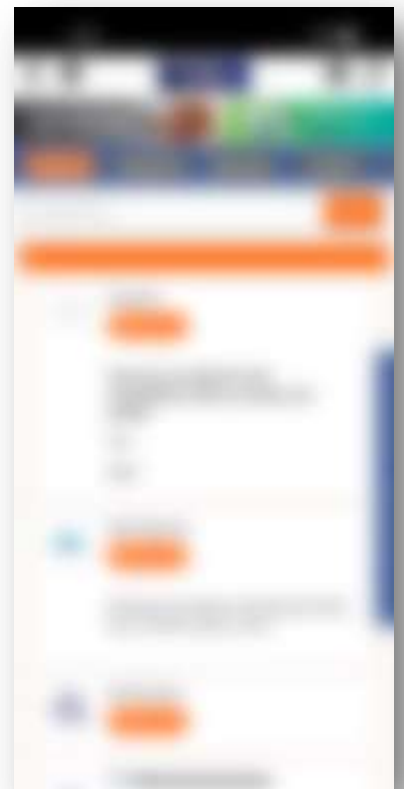
Architecture Diagram:

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Payment Flow

Application Architecture
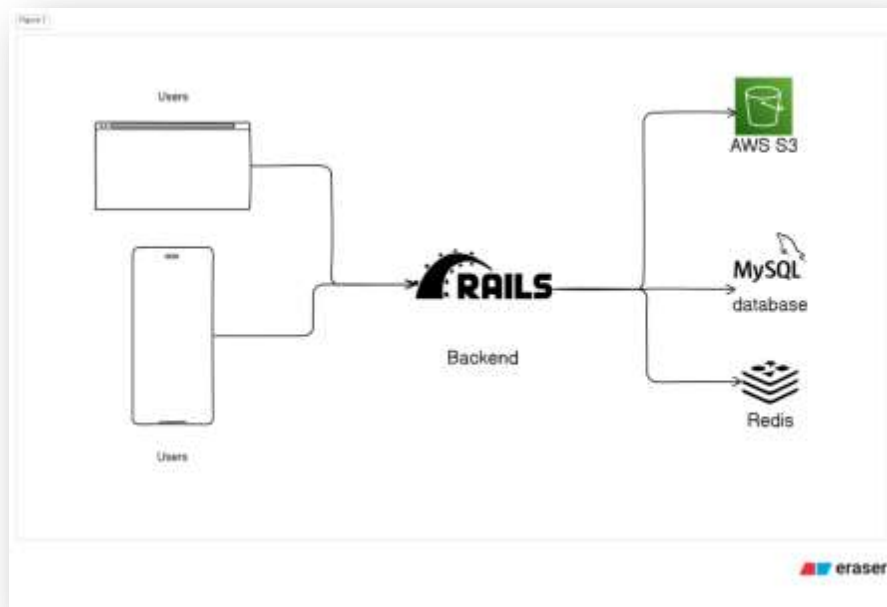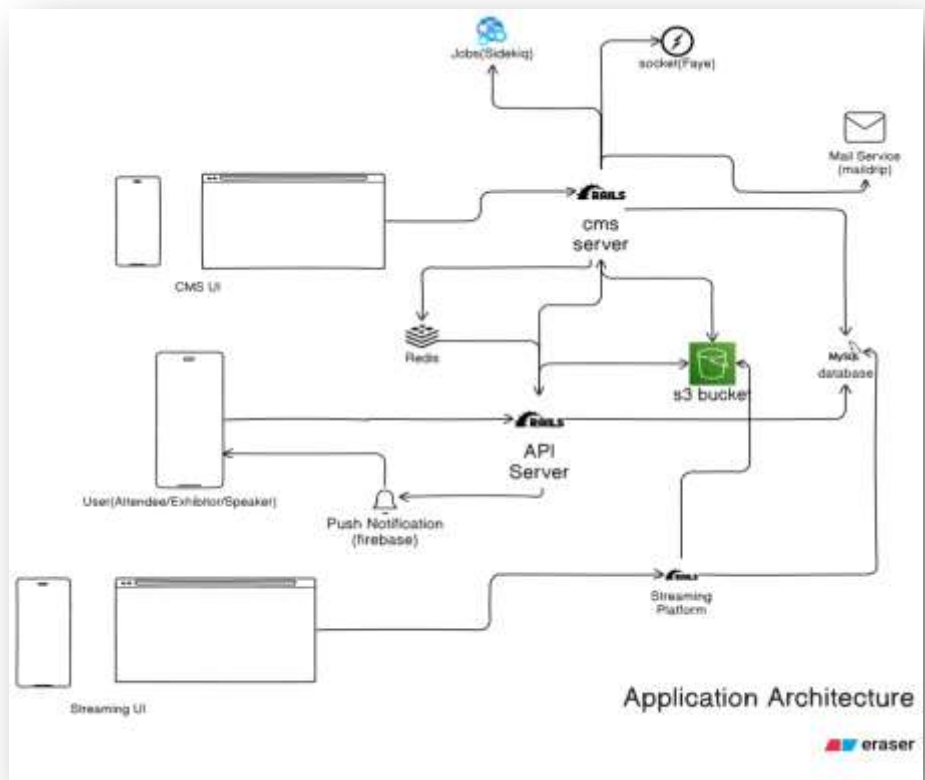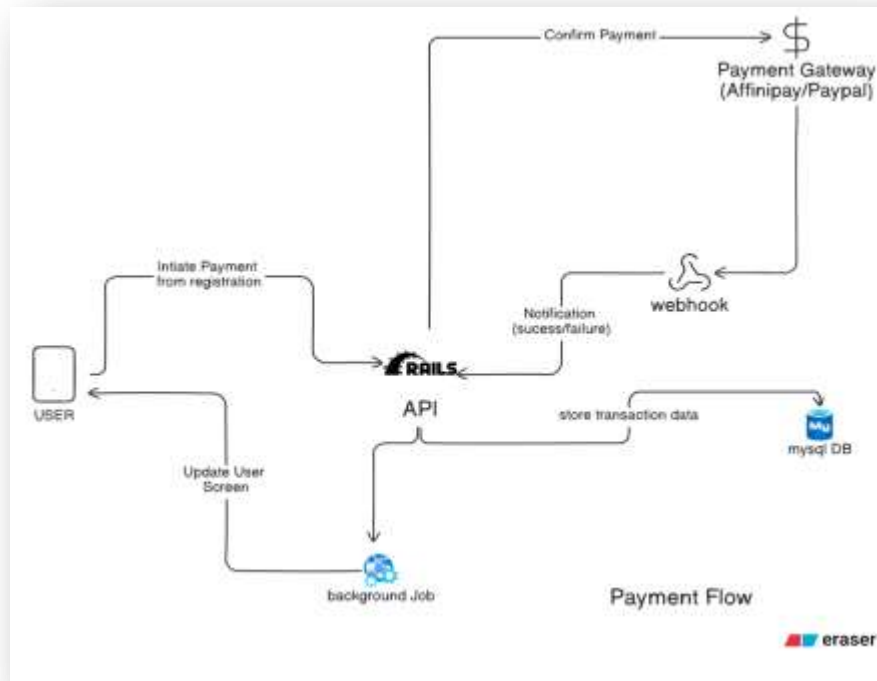
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Screenshots:

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Mobile Screenshots

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