Iachim Cristian & Serbicean Alexandru

1. Project Vision Description

Overview

The Ticketing System is a digital platform designed to simplify event ticket booking for customers while providing event organizers with efficient event management tools. The system enables users to browse events, purchase tickets, and receive notifications, while organizers can create and manage events. Additionally, the system supports QR code-based ticket validation, secure payments, and administrative control for smooth operation.

Objectives

- Provide an easy-to-use interface for customers to book and manage tickets.
- Allow organizers to create, manage, and track events effortlessly.
- Implement a secure payment processing system.
- Use QR code technology for ticket validation and event entry.
- Offer an admin panel for monitoring and system management.

2. Main System Requirements

Functional Requirements

User Registration & Login

- The system shall allow users to register using a valid email and password.
- The system shall allow users to log in using their credentials.
- The system shall lock an account after three failed login attempts and require email verification to unlock.

Event Browsing

- The system shall allow users to view a list of upcoming events.
- The system shall provide search and filter options to find specific events.

Ticket Purchase & Management

- The system shall allow customers to purchase tickets using various payment methods.
- The system shall generate a QR code for each purchased ticket.
- The system shall allow users to cancel their tickets before the event.

Event Creation & Management

- The system shall allow organizers to create and edit event details.
- The system shall enable organizers to set ticket prices and availability.
- The system shall allow organizers to monitor ticket sales and customer participation.

QR Code Validation

- The system shall generate a unique QR code for every ticket.
- The system shall allow event staff to scan QR codes for event entry validation.

Payment Processing

- The system shall integrate secure payment gateways (e.g., PayPal, Stripe).
- The system shall generate payment receipts for successful transactions.

Notifications & Alerts

- The system shall send email and SMS notifications for ticket confirmations and updates.
- The system shall notify users about event cancellations or schedule changes.

Admin Panel

- The system shall provide an admin dashboard for managing users and events.
- The system shall allow admins to handle disputes and process refunds.

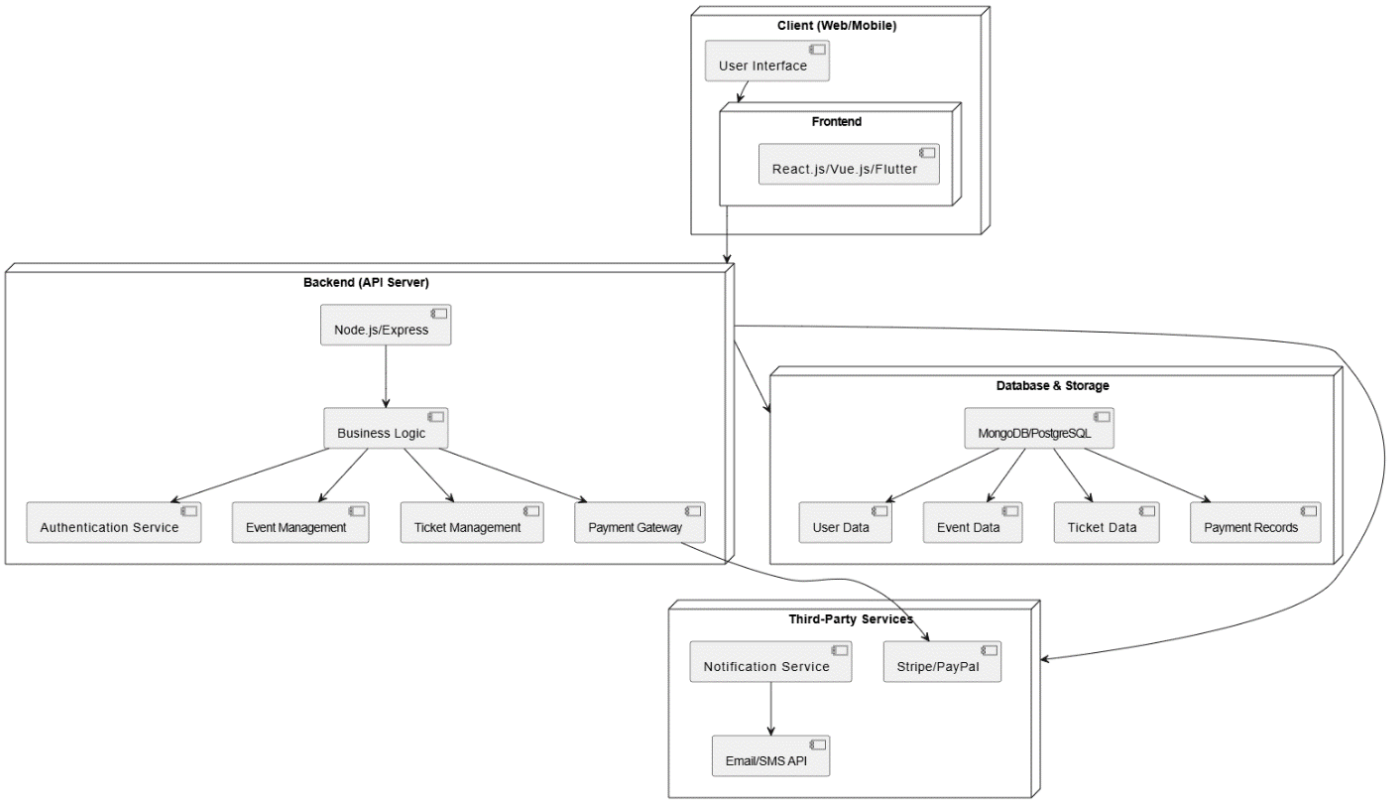
Non-Functional Requirements:

1) **Scalability** - The system should handle a large number of users simultaneously.
2) **Security** - Secure transactions and user data protection.
3) **Usability** - Simple and responsive UI for both web and mobile users.
4) **Performance** - Fast-loading pages and optimized database queries.
5) **Availability** - Ensure high uptime and reliability.

3. High-Level Architecture and Design

The system follows a three-layered architecture:

- Presentation Layer: Includes the web and mobile interface for customers, organizers, and administrators.
- Application Layer: Contains business logic, authentication, event management, and ticket handling.
- Data Layer: Stores user data, event details, ticket records, and payment transactions.



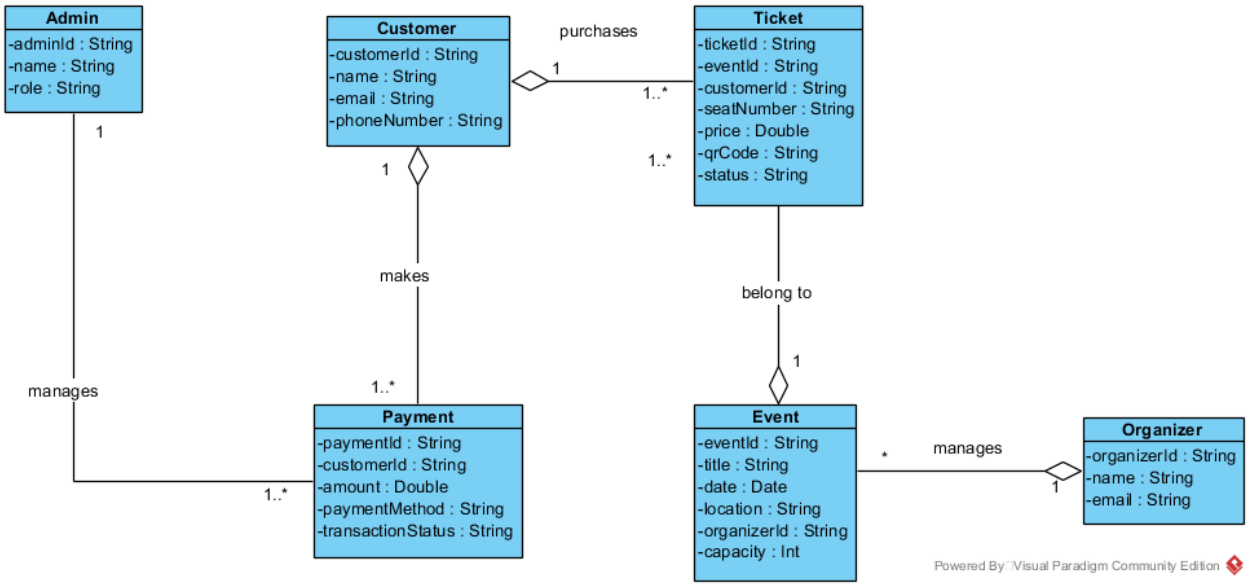
4. Diagrams and Prototype

Use Case Diagram

The Use Case Diagram illustrates the interaction between users, event organizers, and the system's core functionalities.

Domain Model

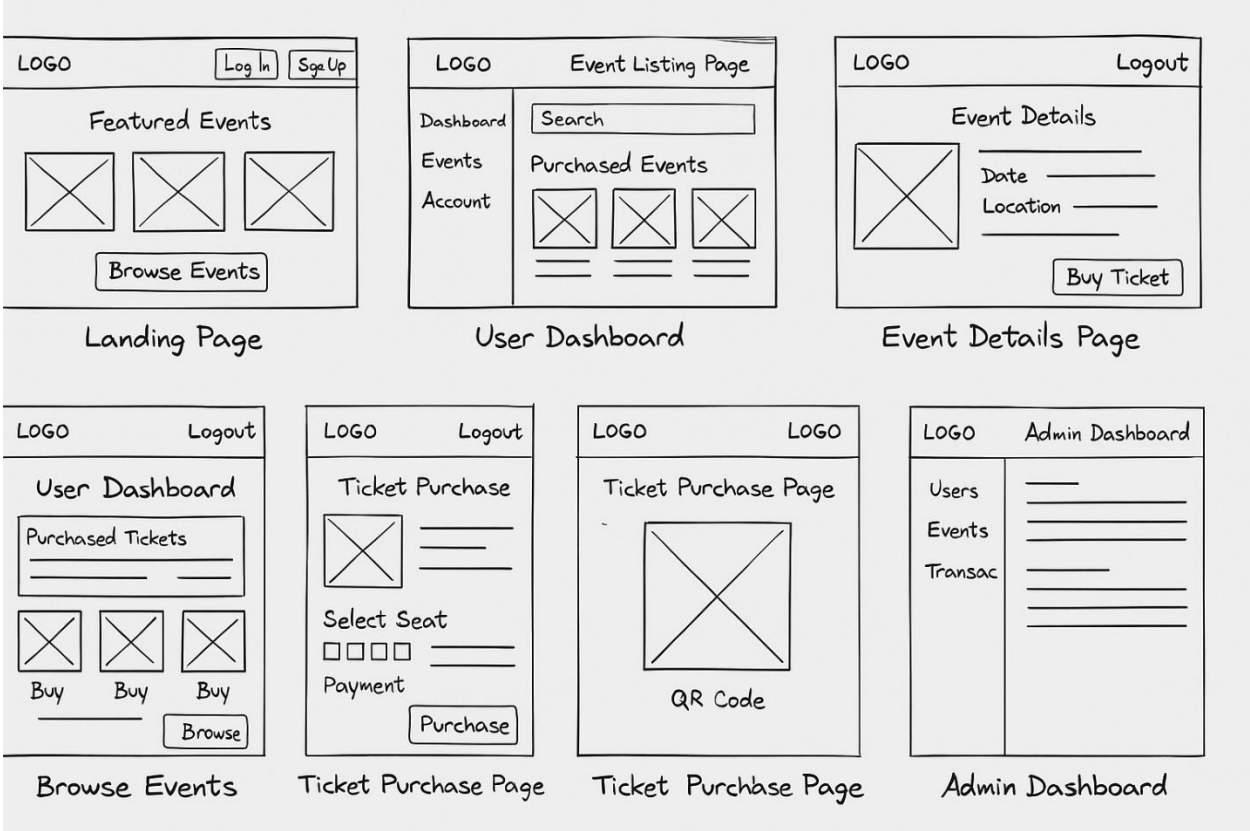
The Domain Model provides an overview of the entities in the system and their relationships.



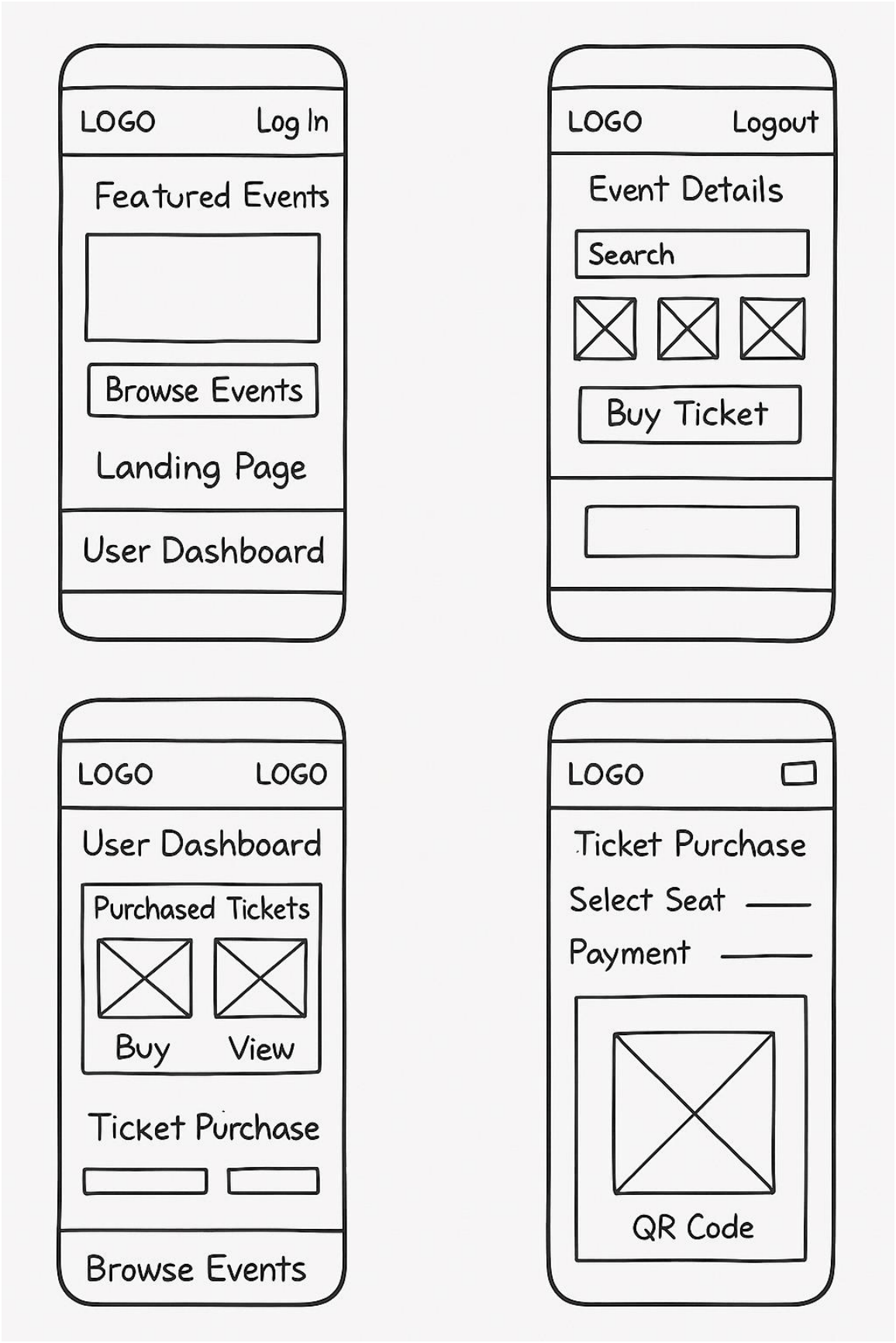
Low-Fidelity Prototype

The Low-Fidelity Prototype presents wireframe sketches of the user interface, showcasing the design layout for both web and mobile versions.

Web Version:



Mobile Version:


LOGO
Log In
Featured Events
Browse Events
Landing Page
User Dashboard
LOGO
Logout
Event Details
Search
Buy Ticket
LOGO
LOGO
User Dashboard
Purchased Tickets
Buy
View
Ticket Purchase
Browse Events
LOGO
Ticket Purchase
Select Seat
Payment
QR Code

5. Conclusion

This Ticketing System proposal outlines a clear vision, essential requirements, and architectural design. The system aims to provide a seamless experience for customers, event organizers, and administrators. Future phases will focus on refining features and implementing user-friendly enhancements to ensure a successful and efficient ticketing solution.