

CS2005: Database Systems (FALL 2024)

Software Engineering Department

Semester Project

Project groups:

This project should be done within a group of three (3) students. There is no restriction on the selection of group members. Students are allowed to make groups according to their preferences. Cross-section groups are not allowed.

Submission:

All submissions MUST be uploaded on Google Classroom. Solutions sent to the emails will not be graded. To avoid last-minute problems (unavailability of Google Classroom, load shedding, network down, etc.), you are strongly advised to start working on the project from day one. You are required to use Visual Studio 19 or above and SQL Server for the project. Combine all your work in one file named ROLL_NUM_DB_P (e.g., 20i-1234_DB_P.zip). SUBMIT COMPLETE PROJECT. Submit the .zip file in the classroom within a given deadline. Failure to submit according to the above format would result in ZERO marks.

Deadlines

Milestone-1: Submission of ERD and Relational model: **17 Nov 2024 (Sunday)**

Milestone-2: Interfaces of the complete project – **24 Nov 2024 (Sunday)**

Milestone-3: Complete project including Database integrated with the frontend–**1 Dec 2024 (Sunday)**

Plagiarism: ZERO marks will be awarded if any significant part of the project is found plagiarized.

Project Name: "EventVerse" – Event Management System

Overview:

EventVerse is a comprehensive platform designed for managing various types of events such as conferences, workshops, concerts, and corporate gatherings. It connects event organizers, attendees, vendors, and sponsors, focusing on event scheduling, ticketing, user interactions, resource management, payments, and feedback collection. The platform is scalable, user-friendly, and supports a wide range of event types, similar to platforms like Eventbrite.

Key Components and Interfaces:

1. Attendee Interface:

- **Registration and Login:** Secure user registration capturing name, email, contact details, and event preferences.
- **Event Search and Booking:** Search for events with filters such as date, category, location, and ticket type. Book tickets for events and manage bookings.
- **Event Dashboard:** View registered events, access event details, and track upcoming

schedules.

- **Tickets and Check-In:** Download e-tickets and check-in at events using QR codes or digital passes.
- **Feedback and Ratings:** Provide feedback and rate events after attending.
- **Profile Management:** Manage personal information, view past events attended, and update preferences.

2. Organizer Interface:

- **Registration and Event Creation:** Secure registration for organizers with profile setup (organization name, contact info). Create and manage events (title, description, location, dates, ticket types, pricing).
- **Ticketing and Sales Management:** Create and manage ticket categories (e.g., VIP, General Admission), pricing, and availability.
- **Attendee Management:** View attendees, communicate via messages, and handle event-specific queries.
- **Resource and Vendor Management:** Manage vendors (e.g., catering, security) and allocate resources (equipment, staff).
- **Event Analytics:** View ticket sales metrics, attendee feedback, and event engagement data.

3. Admin Interface:

- **User and Organizer Management:** Approve and manage attendee and organizer accounts, oversee user activity, and handle complaints.
- **Event Approval and Category Management:** Approve new events, manage event categories, and handle category tagging.
- **Reports and Platform Analytics:** Generate detailed reports on event activity, ticket sales, user engagement, and platform growth.
- **Feedback Moderation:** Monitor event feedback and ratings for compliance with community guidelines.
- **Complaint Resolution:** Handle disputes and issues raised by users.

4. Vendor and Sponsor Interface:

- **Registration and Profile Management:** Secure registration for vendors and sponsors with profile setup (business type, services offered).
- **Service and Sponsorship Bidding:** Submit bids or proposals to provide services for events or sponsor specific events.
- **Contract and Payment Tracking:** View and manage service agreements with event organizers, track payments and contracts.

Reports to Design:

1. Event Attendance and Engagement Report:

- **Description:** Tracks attendee engagement and event participation.
- **Details:**
 - **Total Attendees:** Count of attendees for each event.
 - **Attendance Rate:** Ratio of registered attendees who actually attended.
 - **Feedback Summary:** Average ratings and common feedback themes.

2. Ticket Sales and Revenue Report:

- **Description:** Provides an overview of ticket sales and revenue generation.
- **Details:**
 - **Total Revenue:** Revenue from ticket sales.
 - **Ticket Category Breakdown:** Sales per ticket category (e.g., VIP, General).
 - **Sales Trends:** Sales patterns over time.

3. Organizer Performance Report:

- **Description:** Evaluates organizer effectiveness and event success.
- **Details:**
 - **Event Ratings:** Average ratings for events organized.
 - **Revenue Generated:** Total revenue from organized events.
 - **Attendee Interaction Metrics:** Number of messages, queries handled.

4. Vendor Performance Report:

- **Description:** Tracks vendor contributions and service quality.
- **Details:**
 - **Contracts Fulfilled:** Number of services provided.
 - **Vendor Ratings:** Feedback from organizers.
 - **Top Services:** Most frequently used services.

5. Platform Growth and Engagement Report:

- **Description:** Analyzes platform usage and growth trends.
- **Details:**
 - **New User Registrations:** Number of new accounts over a timeframe.
 - **Active Users:** Total active users (organizers, attendees).
 - **Event Categories Growth:** Popularity and growth of different event categories.

6. User Demographics and Insights Report:

- **Description:** Provides demographic data of attendees.
- **Details:**
 - **Age and Gender Distribution:** Breakdown of users by demographics.
 - **Location-Based Insights:** Event participation by region.
 - **Event Preferences:** Most preferred event types.

7. Revenue by Event Category Report:

- **Description:** Revenue contribution of different event categories.
- **Details:**
 - **Revenue per Category:** Total revenue grouped by event category.
 - **Top Performing Categories:** Categories with the highest revenue.

8. Abandoned Ticket Sales Report:

- **Description:** Highlights abandoned ticket bookings and reasons.
- **Details:**
 - **Total Abandoned Bookings:** Count of uncompleted bookings.
 - **Potential Revenue Lost:** Estimated revenue from abandoned bookings.
 - **Common Reasons:** Reasons for abandoning (e.g., payment issues).

9. Event Feedback and Sentiment Analysis Report:

- **Description:** Analyzes feedback and sentiment of events.
- **Details:**
 - **Average Event Ratings:** Ratings across all events.
 - **Feedback Sentiment Analysis:** Categorized feedback as positive, neutral, or negative.
 - **Top-Rated Events:** Events with the highest ratings.

10. Sponsor and Partnership Performance Report:

- **Description:** Evaluates sponsor and partnership contributions.
- **Details:**
 - **Sponsor Contributions:** Total funds or services provided.
 - **Partnership Success Rate:** Metrics on successful collaborations.
 - **Sponsor Visibility Metrics:** Visibility data (e.g., ads, mentions).

Search Feature Description for EventVerse:

1. Event Search:

- **Keyword Search:** Search events by name, description, or category.
- **Filters:** Filter by date, location, price range, and ticket availability.
- **Sorting Options:** Sort results by date, popularity, or rating.

2. Advanced Search Options:

- **Category-Based Search:** Narrow down to specific event types (e.g., concerts, conferences).
- **Organizer Search:** Find events by specific organizers.
- **Ticket Availability Search:** Check for events with available tickets.

3. Admin Panel Search:

- **User Lookup:** Search attendees, organizers, or vendors by name, email, or ID.
- **Event Management Search:** Search events by title, category, or date.

Core Functionalities to Implement:

- User Registration, Authentication, and Profile Management.
- Event Creation, Listing, and Management by Organizers.
- Ticketing and Sales Management.
- Attendee and Event Interaction Features.
- Messaging and Communication Tools.
- Vendor and Sponsor Bidding System.
- Search Functionality for Events and Users.
- Payment Processing and Revenue Tracking.

Data Population Requirements:

- Populate 50-100 records per table for users, events, ticket sales, feedback, vendors, etc.
- Include diverse data to reflect different event categories, ticket types, user demographics, and participation trends.