CSci 387 Software Design and Development

Requirements Gathering and Engineering – Project Assignment

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1. Goals

- **Main Purpose**: Develop an Event Management System (EMS) for The University of Mississippi's Event Center that allows students, faculty, and external clients to request event spaces according to specific requirements, such as party size, date, and event type.
- **MVP**: The MVP will provide core functionalities, including user registration and login, venue browsing, and display of basic venue information (capacity, features, and pricing).
- **Long-Term Vision**: Future versions will include event booking, payment processing, approval workflows for managers, and advanced features like dynamic pricing, a recommendation engine, and analytics for managers.

2. User Personas

a) Student Persona: Sam (Undergraduate Student)

- **Age**: 20
- **Role**: Student
- **Goal**: Easily find and reserve venues for study sessions or group gatherings.
- **Background**: Alex is a full-time student who occasionally organizes study sessions and would benefit from a platform to quickly reserve university spaces.

b) Manager Persona: James (Event Center Manager)

- **Age**: 40
- **Role**: Venue Manager
- **Goal**: Approve booking requests, prevent scheduling conflicts, and gain insights into booking statistics.
- **Background**: James oversees the event space management at the university. He needs a way to track and control venue reservations, ensuring efficient space utilization and conflict management.

c) Event Worker Persona: Maria (Part-Time Event Worker)

- **Age**: 22
- **Role**: Event Staff
- **Goal**: Access assigned tasks and schedules for upcoming events to stay organized.

- **Background**: Maria works part-time in event setup and breakdown, needing easy access to their assigned tasks for upcoming events to ensure timely and smooth preparations.

3. User Stories

a) Student Stories

- *As a student, I want to browse available event spaces so that I can find venues that meet my requirements.*
- *As a student, I want to reserve a venue for a specific date and time to secure my preferred space.*
- *As a student, I want to cancel or modify my reservation so that I can adjust plans if needed.*

b) Manager Stories

- *As a manager, I want to view all venue reservations to prevent double bookings.*
- *As a manager, I want to approve or deny booking requests to maintain control over space usage.*
- *As a manager, I want to access a dashboard with booking analytics to analyze trends in venue usage and optimize availability.*

c) Event Worker Stories

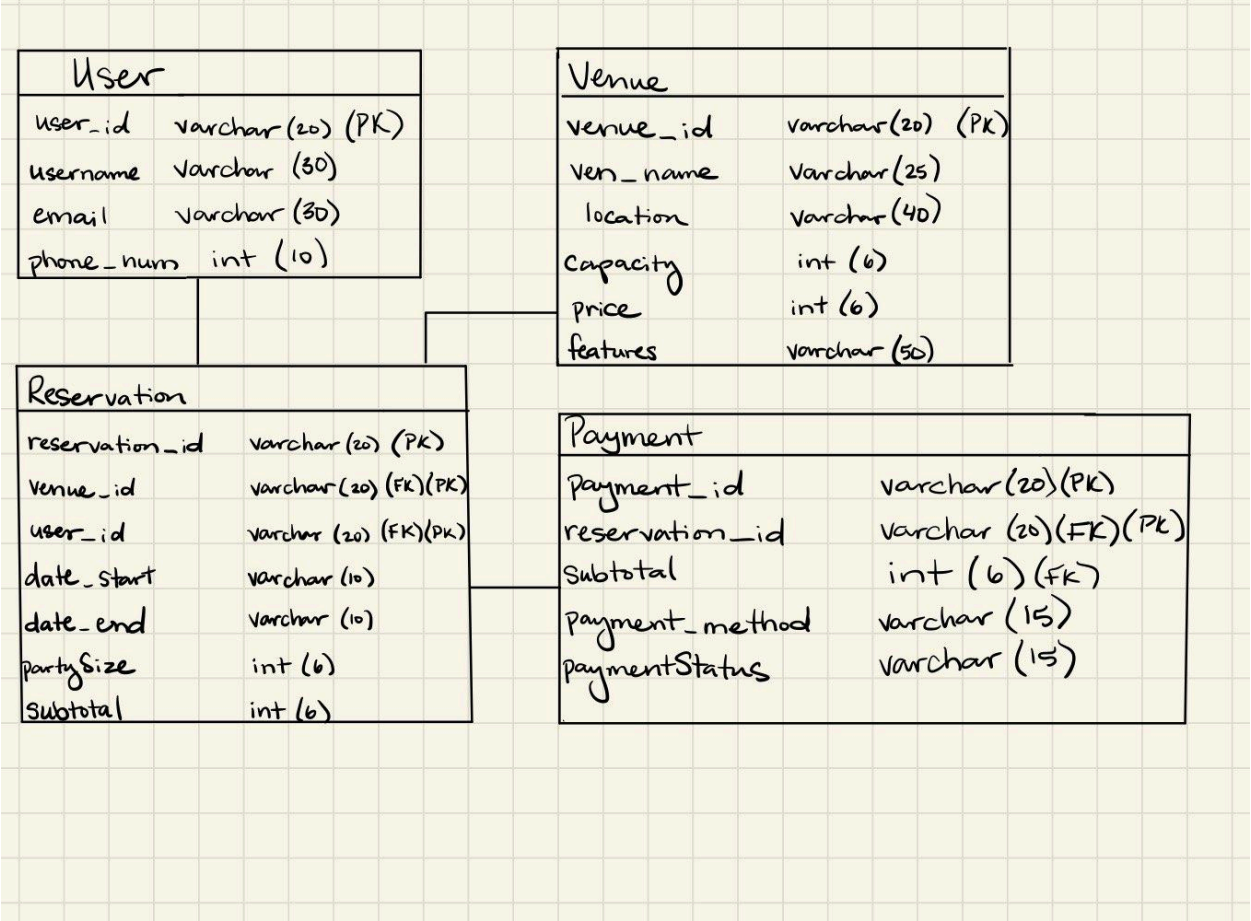
- *As an event worker, I want to view my assigned tasks to understand my responsibilities for upcoming events.*
- *As an event worker, I want to check my schedule to see all events I am scheduled to work.*

4. Sitemap with Page Descriptions

- **Login/Registration Page**: Allows users to register and log in, with role-based access (student, manager, event worker)
- **Dashboard**:
    - For students: Displays available venues and recent bookings.
    - For managers: Shows pending booking requests and analytics.
    - For event workers: Displays a personalized list of upcoming tasks.
- **Venue Page**: Lists venues with details like capacity, features, and costs, and includes options to filter and search based on user requirements.
- **Bookings Page**: Allows students and clients to request venue reservations by specifying event details, such as date and party size.

- **Admin Panel (for Managers)**: Allows managers to view, approve, or deny booking requests and view reports on venue utilization and booking patterns.
- **Task Management Page (for Event Workers)**: Allows event workers to view their assigned tasks and schedules for upcoming events.

5. ERD



6. Non-Functional Requirements

- **Security**: Only authorized users can access the system. Role-based access controls ensure students can only view and book venues, while managers have administrative privileges.
- **Performance**: System should handle up to 500 simultaneous users.
- **Platform Compatibility:** System should be accessible from both desktop and mobile devices as web application.
- **Reliability:** System should be operational with 99% uptime during peak usage hours.
- **Data Privacy:** Personal data, especially payment information, must be encrypted to ensure user privacy.

7. Risks

- **Booking Conflicts**: Risk of double bookings.
    - **Mitigation:** Use a conflict-detection algorithm and provide managers with alerts for overlapping requests.
- **Limited Participation**: Event workers might not use the system effectively if it's not user friendly.
    - **Mitigation:** Ensure a clean and intuitive interface that simplifies task management.
- **Payment Integration Issues:**
    - **Mitigation:** Use a reliable and widely accepted gateway with good documentation and support.

8. Future Iterations

- **Advanced Search and Recommendations**: Implement a recommendation engine to suggest venues based on user preferences.
- **Dynamic Pricing**: Adjust prices based on demand and usage patterns.
- **Additional Services**: Offer options for add-ons, like catering or AV equipment, to enhance the event experience.
- **Analytics Dashboard:** Provide managers with real-time data on venue usage, peak booking times, and revenue generation.