Event Company Organization

Project description:

What is the domain of the application, describe it?

The domain of the application is event management, encompassing logistics and all aspects related to planning, organizing, and executing events such as concerts, plays, and conferences.

What aspects of the domain are modeled by the database?

- The Event Management database supports event planning, sponsorship management, attendee engagement, and financial transactions. All elements of the database collaborate to create a holistic ecosystem that caters to the diverse needs of event organizers, staff, and attendees across various event types and scales. The system is designed to streamline event operations, enhance external partnerships, and provide attendees with an enjoyable event experience.
- Central to the database are the events it manages. Each **event** is uniquely identified by an EventID and is characterized by attributes such as its name, date and time, and the venue where it will be hosted. Each **venue** is associated with a distinctive VenueID and features attributes such as its name, address, and maximum capacity. This entity accommodates the diversity of event locations, facilitating the hosting of multiple events at a single venue. In each venue, there may be multiple seats, with each **seat** characterized by a number and type that indicate its location within the venue.
- Sponsors serve as crucial contributors to event success, providing financial support (i.e., fund). Each **sponsor** is distinguished by a SponsorID and includes pertinent details such as name, address, email, and phone number. One sponsor must support at least one event, while one event can attract support from multiple sponsors.
- Effective event execution relies on a dedicated team of individuals known as staff. Each event requires one or multiple staff. Each **staff** member is assigned a unique StaffID and is associated with attributes such as their name, address, email, phone number, and their role in the event. Staff members work at one or multiple events and play critical roles in directing performances, managing logistics, and providing assistance to customers, depending on the nature of the event.
- **Customers**, identified by a CustomerID, are associated with attributes such as their name, address, email, and phone number. Customers engage with events by making one or more transactions to buy tickets. Each **ticket** is identified by a unique TicketID and is associated with attributes such as price and type (e.g., VIP or General Admission). Each ticket is linked to a specific event, ensuring that attendees gain access to the correct event based on their ticket purchase. Each **transaction** is uniquely identified by a TransactionID, paid by a specific payment method, and made by exactly one customer. A transaction involves one or multiple tickets.
- In addition, the database also accommodates event-specific details. For instance, a **concert** includes attributes like the performing artists and music genre. A **play** has details such as the director and cast. Meanwhile, **conferences** feature keynote speakers. They are denoted using an ISA relationship with partial overlap constraints. There is a partial constraint since there are events that do not fall into a concert, play, or

conference category, and there is an overlap constraint since events can fall into more than one event category (e.g. A musical can be categorized as a concert and a play)

Database specifications:

What functionality will the database provide?

- The database will provide essential functionality for event management, enabling users to perform various tasks such as event creation, sponsorship management, customer interactions, ticket sales, and financial transaction tracking. Users can create and schedule different types of events, associate sponsors with events, handle staff assignments, record customer information, sell event tickets, and track financial transactions, including payments and discounts for loyal customers. Additionally, the system will support reporting functions to generate daily event booking reports, return summaries, and other operational insights, aiding in decision-making and event analysis. Overall, the database will empower users to efficiently plan, execute, and evaluate events of diverse types while ensuring smooth financial and attendee management.

Description of application platform:

- The chosen database management system for this project is Oracle. In terms of the application technology stack, the primary programming language will be Java, supported by relevant libraries and frameworks to ensure cohesive integration and functionality within the Oracle and Java environment

ER Diagram: