CS3700 - Introduction to Database Systems

Assignment 1 - Database Design

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GrabYourTicket

1 Description of the Database

GrabYourTicket is a mobile application that allows users to create accounts by providing personal information such as their name, sex, birthdate, and location (including city and state). Each account is assigned a userID. Users can connect with friends on the app by using their friends' userID.

The primary function of GrabYourTicket is to showcase movies and their details. Each film is given a movieID and includes information such as its name, runtime, genre, production company (studio), available languages, premiere date, rating, and age restriction. The app also indicates if a movie has any sequels. Additionally, it stores data about the individuals involved in the film, including their roles (such as actors, director, or crew member).

GrabYourTicket enables users to secure seats for specific movie screenings based on language preference, showtime, and format. Common formats include IMAX, 3D, and standard 2D. Each screening is assigned a showID. A show is played at an Audi in a venue. A venue may house multiple Audis, each identified by a AudiNo within that venue. Every Audi has a set seating capacity. Venues are also given venueID. Users can select seats based on price and category, with options including silver, gold, or platinum.

The app also offers movie rentals for home streaming and allows users to create wishlists of films they're interested in.

A secondary feature of GrabYourTicket is its live event listings. These events are detailed with information such as the event name, genre, duration, date and time, and a GigsID. The app also provides information about the event or movie collaborators and their roles (such as artist, comedian, or musician). Users can purchase tickets for these live events, with each ticket having ticketID, price, and viewing category (silver, gold, or platinum).

2 Entity-Relationship Diagram

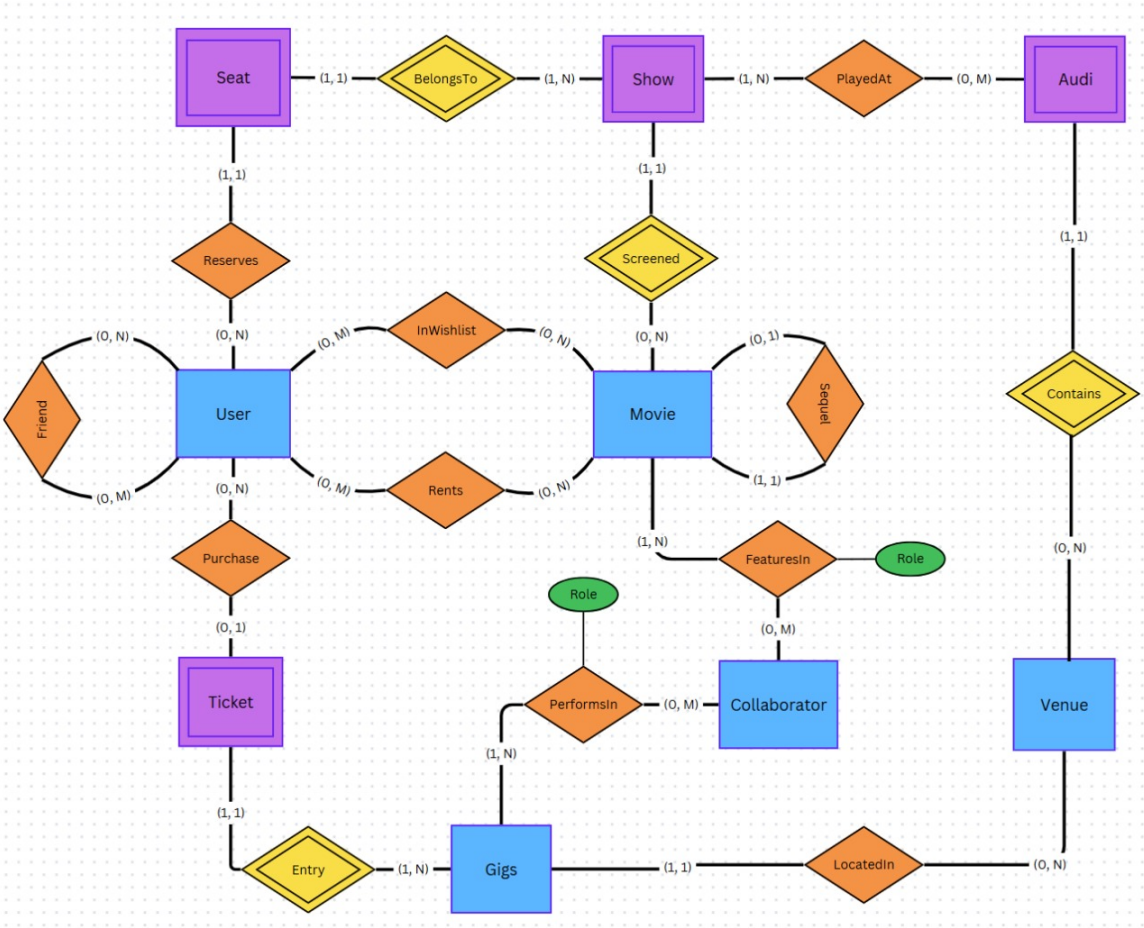
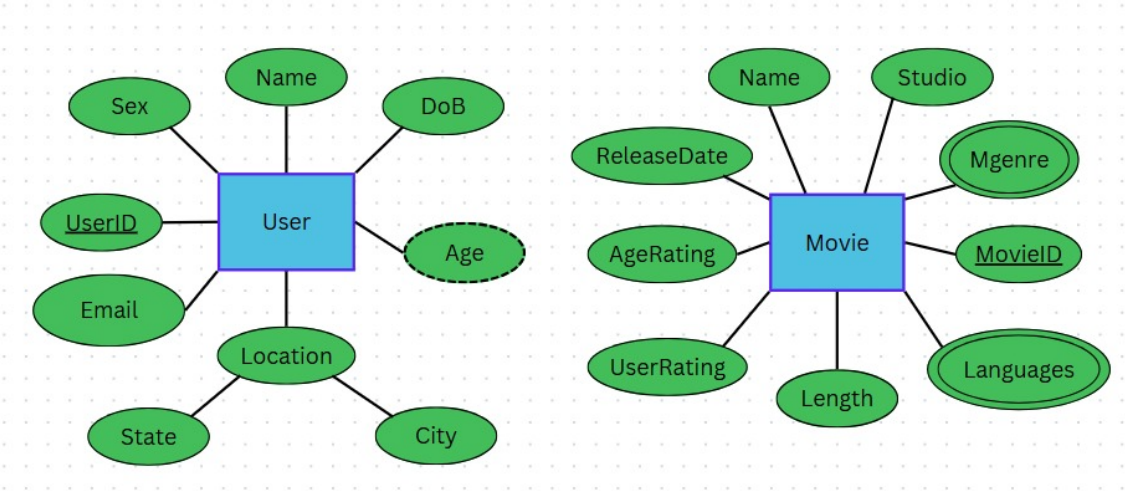
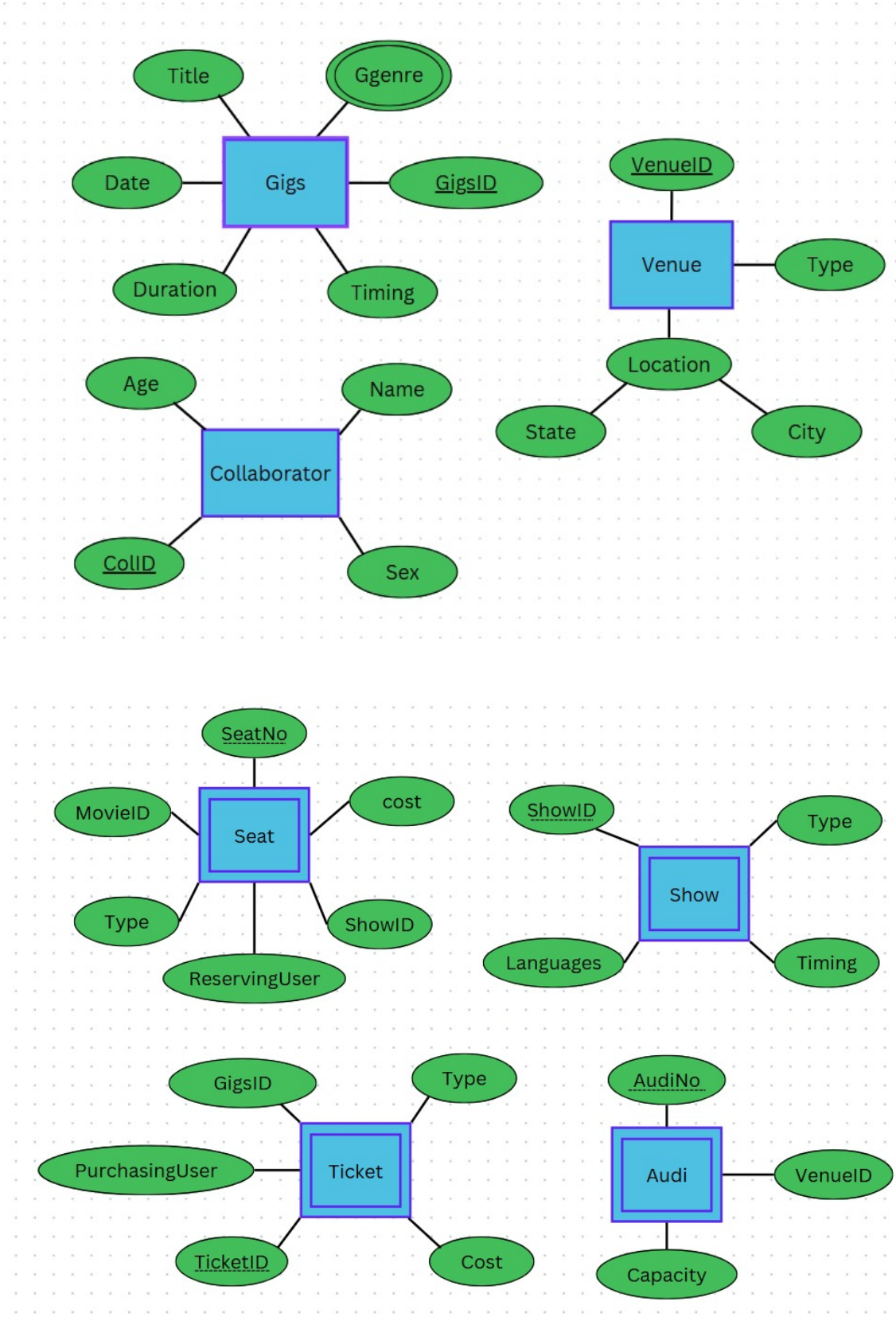


Figure 1: ER Diagram for GrabYourTicket

3 Brief Description of the Entities



1. **User:-** Represents individuals who create accounts on the GrabYourTicket app. Each user has a unique userID and provides personal information such as name, sex, birthdate, and location (city and state)
2. **Movie:-** Represents films available on the platform. Each movie has a unique movieID and includes details like name, runtime, genre, production company, available languages, premiere date, rating, and age restriction.
3. **Collaborator:-** Represents individuals involved in movies or live events, such as actors, directors, crew members, artists, comedians, or musicians.
4. **Show:-** Represents specific movie screenings with a unique showID. It includes information about the language, showtime, and format (e.g., IMAX, 3D, standard 2D).
5. **Venue:-** Represents locations where movies are screened or live events are held. Each venue has a unique venueID and may contain multiple screens.
6. **Audi:-** Represents individual auditoriums within a venue, identified by AudiNo. Each screen/Audi has a specific seating capacity.
7. **Seat:-** Represents individual seats available for booking. Seats are categorized by price and type (silver, gold, or platinum).
8. **Gigs:-** Represents live events listed on the platform. Each live show has a unique GigsID and includes details such as event name, genre, duration, and date/time.
9. **Ticket:-** Represents tickets for live events. Each ticket has a unique ticketID, price, and viewing category (silver, gold, or platinum).


Title
Ggenre
Date
Gigs
GigsID
Duration
Timing
VenueID
Venue
Type
Location
State
City
Age
Name
Collaborator
ColID
Sex
SeatNo
MovieID
Seat
cost
Type
ShowID
ReservingUser
ShowID
Type
Show
Languages
Timing
GigsID
Type
PurchasingUser
Ticket
TicketID
Cost
AudiNo
Audi
VenueID
Capacity

4 Relational Schema Diagram