Topic: Concert E-ticket system

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Following the lockdowns from Covid, most of the entertainment industry has migrated to online services, especially for payment services. This is true for purchasing concert tickets. Concert halls can list the available tickets on the website, and customers can purchase their tickets online. The e-delivery of tickets allows fast and convenient delivery of goods for customers, and companies can take advantage of the easily accessible data to plan how to improve their services.

The Customer contains the customer ID, first name, last name, their email, their phone number, and their date of birth. The Customer ID is unique to each account, and is created when the customer creates an account on the website. Each ticket has a ticket ID which is unique to each customer (when bought) which links to the ticket class, section number and seat number. The process of the ticket being bought will be registered under billing/booking. When the customer buys tickets, the billing ID and booking ID would be unique to identify the payment and order in reference. The information of the booking would be saved for each booking. Each customer can have multiple bookings. As there are multiple shows, each category would be registered with the data on the shows. Ticket restrictions will be stored so it can be verified before the customer buys tickets.

Entities:

1. Customer:

Customer ID	First name	Last name	Email	Phone number	Date of Birth

2. Ticket Type:

Ticket ID	Ticket number	Ticket Class	Section Number	Seat Number	Show name	Specific show time & date

3. Billing/Booking:

Billing ID	Booking ID	Bill Date	Status (Processed or waitlisted)	Service Fee	Tax $	Total $	Payment Type

4. Show Information:

Show ID	Show Title	Artist/Performers	Location	All show times & dates	Description of show	Available ticket classes

5. Ticket restrictions:

Restriction ID	Ticket ID	Reason for restriction

6. Ticket Distribution:

Distribution receipt	Ticket ID	Customer name	Customer phone number	Customer email	Show info

Relationships:

Ticket type/Billing:
Once ticket confirmed, billing entity is created to process the bill.

Customer/Billing:
Each billing will be attached to a customer.

Ticket Type/Show Information:
Each show has multiple tickets types available, Show Info will use Ticket Type to display each available class.

Ticket Restrictions/Ticket Type:
Each Ticket Type entity has a Ticket Restriction, the Ticket Restriction Entity will check for them.

Billing/Ticket Restrictions:
Booking checks with Restrictions at the time of booking.