**Movie Theater and Ticket Booking System**

**Entities and Attributes**

**1. Movies**

* MovieID (Primary Key)
* Title
* Genre
* Language
* Duration (in minutes)
* ReleaseDate
* Rating (e.g., PG, PG-13, R)

**2. Theaters**

* TheaterID (Primary Key)
* Name
* Location
* TotalScreens

**3. Screens**

* ScreenID (Primary Key)
* TheaterID (Foreign Key)
* ScreenNumber
* SeatingCapacity

**4. Seats**

* SeatID (Primary Key)
* ScreenID (Foreign Key)
* SeatNumber
* SeatType (Regular, VIP, Recliner, etc.)
* IsOccupied (Boolean)

**5. Showtimes**

* ShowtimeID (Primary Key)
* MovieID (Foreign Key)
* ScreenID (Foreign Key)
* ShowDate
* ShowTime

**6. Tickets**

* TicketID (Primary Key)
* ShowtimeID (Foreign Key)
* SeatID (Foreign Key)
* CustomerID (Foreign Key)
* Price
* BookingDate
* PaymentStatus (Paid, Unpaid)

**7. Customers**

* CustomerID (Primary Key)
* FirstName
* LastName
* Email
* PhoneNumber
* Address

**8. Staff**

* StaffID (Primary Key)
* FirstName
* LastName
* Role (Manager, Cleaner, Technician, etc.)
* PhoneNumber
* Email
* TheaterID (Foreign Key)

**9. Concessions**

* ConcessionID (Primary Key)
* ItemName
* Price
* StockQuantity
* TheaterID (Foreign Key)

**10. Orders**

* OrderID (Primary Key)
* CustomerID (Foreign Key)
* ConcessionID (Foreign Key)
* Quantity
* TotalPrice
* OrderDate

**11. Reviews**

* ReviewID (Primary Key)
* CustomerID (Foreign Key)
* MovieID (Foreign Key)
* ReviewText
* Rating (1-5 Stars)
* ReviewDate

**12. Promotions**

* PromotionID (Primary Key)
* Title
* DiscountPercentage
* StartDate
* EndDate

**Database Relationships**

1. **Theaters to Screens**: One-to-Many (A theater has multiple screens).
2. **Screens to Seats**: One-to-Many (A screen has multiple seats).
3. **Movies to Showtimes**: One-to-Many (A movie can have multiple showtimes).
4. **Screens to Showtimes**: One-to-Many (A screen can have multiple showtimes).
5. **Showtimes to Tickets**: One-to-Many (A showtime can have multiple tickets).
6. **Customers to Tickets**: One-to-Many (A customer can book multiple tickets).
7. **Theaters to Staff**: One-to-Many (A theater employs multiple staff members).
8. **Theaters to Concessions**: One-to-Many (A theater can have multiple concession items).
9. **Customers to Orders**: One-to-Many (A customer can place multiple concession orders).
10. **Customers to Reviews**: One-to-Many (A customer can review multiple movies).
11. **Movies to Reviews**: One-to-Many (A movie can have multiple reviews).

**Database Features**

1. **Movie Listings**: Display available movies, genres, ratings, and showtimes.
2. **Seat Booking**: Allow customers to select and book specific seats.
3. **Payment Management**: Track ticket payments (paid/unpaid).
4. **Theater Management**: Manage screens, staff, and concession inventory for each theater.
5. **Concession Orders**: Enable customers to order snacks and drinks before/during the movie.
6. **Showtime Scheduling**: Efficiently manage showtimes for each screen.
7. **Reviews and Ratings**: Allow customers to leave reviews and ratings for movies.
8. **Promotions**: Display and apply promotions/discounts to tickets or concessions.

**ERD DAIGRAM:**

