Design HLD for Book my show kind of application
- book tickets for any event/movie (includes payment module)
- user should be able to book the event

Cities -> Event -> Venue -> SubVenue -> TimeSlots -> Seat

Public APIs

1) ShowCities(Country)
2) ShowEvents(City)
3) ShowVenue(City,Event)
4) ShowTimeSlots(City,Event,Venue)
5) ShowSeats(City,Event,Venue,Time)
6) Login(Email, PhoneNo, password)
7) BlockSeats(City,Event,Venue,Time,List<Seat>) -> Lock
8) ShowTicket(User)
9) GetOffers(User,City,Event)

Internal API:
1) Login and Verification(User/Event) -> Pre processed
2) Payment(Amount) -> Boolean
3) TimeoutPeriod(City,Event,Venue,Time,List<Seat>)
4) UnblockSeats(City,Event,Venue,Time,List<Seat>) -> Unlock

Relational Databases:
1) User (Id, Name, PhoneNo, EmailId (NULL))
2) Cities (Id, Name)
3) Events (Id, Name)
4) Venue (Id, Name, Address, Location)
5) SubVenues (Id, Name, Venue.Id)
6) TimeSlots (Id, Name,Date,StartTime, EndTime, Subvenues.Id, Venue.Id)
7) Seat (Id, Name)
8) CitiesEvents(Id, City.Id, Event.Id)
9) EventsVenue(ID, Event.Id, Venue.Id)
10) VenueTimeslot (ID, Venue.ID, Timeslot.ID)
11) TimeSlotSeat(ID, Timeslot.ID , Seat.ID) -> Pre booking information
12) Ticket (Id, User, TimeSlotsSeat.ID, Transaction) -> Post Booking
13) Offers (Id, OfferType, Detail, MaxDiscount, PercentDiscount)

Relationships:
Cities->Events
Events->Venue
Venue->TimeSlot
TimeSlot->Seat
User -> Seat
Users -> Tickets

Non-relational Databases:
1) Movie Ratings
2) Movie Reviews
3) Cast
4) Trailers
5) Movie Info => Cast/RunTIme

User {
        String UserID,
        String name,
        String phoneNo,
        String Email,
        List<Tickets>
}

Cities {
        String cityId,
        String cityName,
        List<Events> events
}

Events {
        String Id,
        String name,
        List<Venue> venues;
        List<Reviews> reviews;
        Information;
}

Venue {
        String Id,
        String name,
        List<SubVenues> venueSubVenues;
        Address address,
        Location location

```
}

SubVenues {
        String id,
        String name,
        Venue venue;
        List<TimeSlots> timeslots;
}

TimeSlots {
        String Id,
        String name,
        DateTime date;
        DateTime startTime,
        DateTime endTime,

        Subvenue subVenue;
        List<Seats> seat;
}

Seat {
        String Id;
        String name;
        ReadWrite lock;
        User user;
        Boolean free;  => locked or unlocked
}

Tickets {
        List<Ticket> tickets;
        User user;
}

Ticket {
        City city;
        Event event;
        Venue venue;
        Timeslot timeslot;
        List<Seats> seats;
}

Offers {
        String id,
        String details;
```

}