⇒ Design BookMyShow

⇒ popular

⇒ concurrency

| How will you ensure that no seat gets assigned to more than 1 ?

⇒ ORM – Spring Data JPA

↓

Object Relational Mapping

Overview ⇒ Implement classes, schema etc that will be needed for basic features of an appn like BMS.

⇒ Requirement Gathering:-

i) There will be multiple cities.

ii) One city can have multiple theatres.

iii) One theatre can have multiple auditoriums.

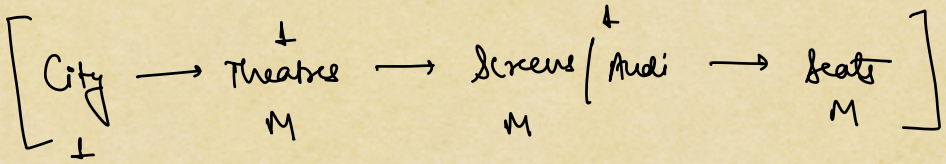
iv) We can run multiple shows in a theatre for the same / different movie.

v) Each auditorium will have some set of features.
eg ⇒ { 3D, IMAX 3D, 4D, 2D, DOLBY }

vi) Each auditorium will have many seats.

vii) Seats can be of multiple types → GOLD, PLATINUM, SILVER

viii) Each type of seat will cost different.



ix) Inside every theatre multiple shows might be running [at one time or throughout the day]

x) Every show has a particular time slot, theatre, screen and movie.

xi) Feature should also be associated at show level.

xii) For a movie we might want to store name, cast, description, poster, trailer, duration, rating, genre, features, grade.

xiii) Payment can be done online only

xiv) We can do multi-part payment.

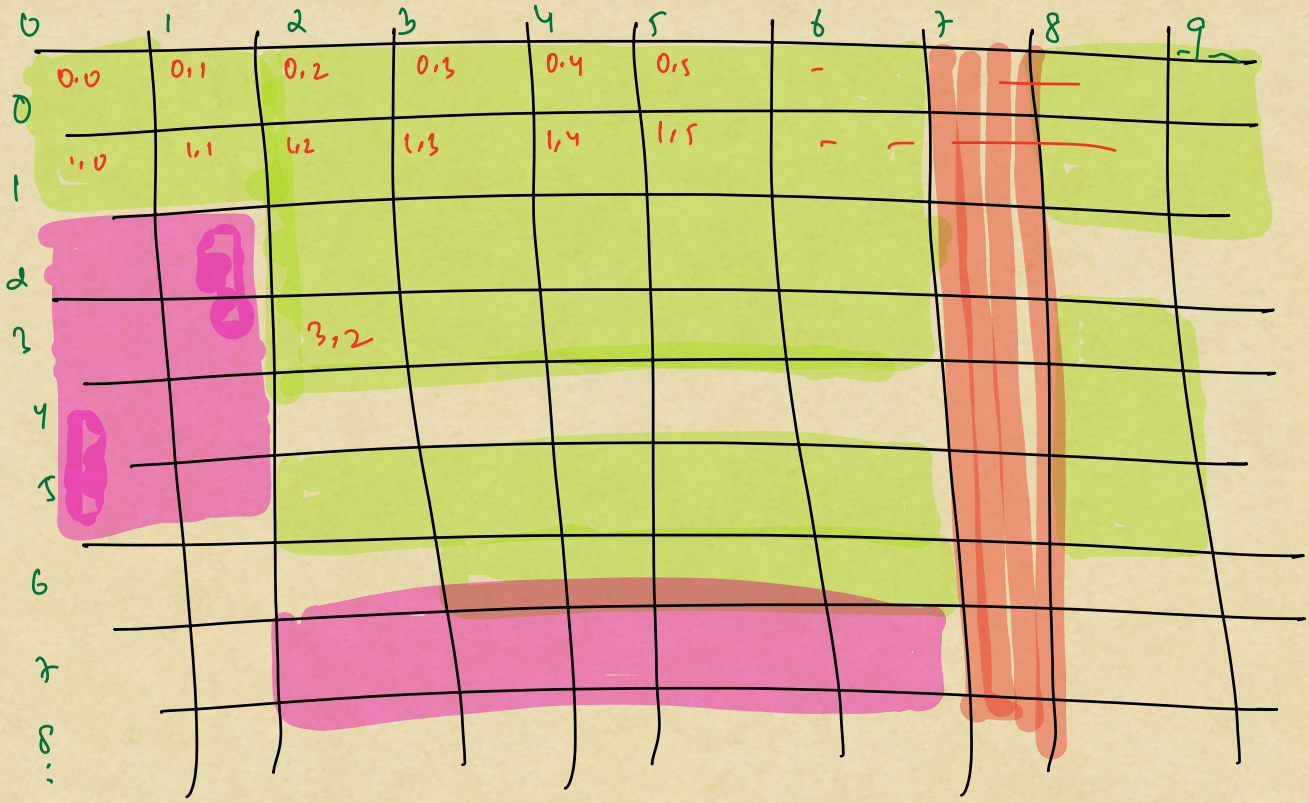
xv) Handling payment will be outsourced.

xvi) Support cancellation and refunds.

xvii) Only 1 user can book a seat for a show

xviii) We reserve the seat upto 10 mins when someone is booking.

TODO → Use Case diagram



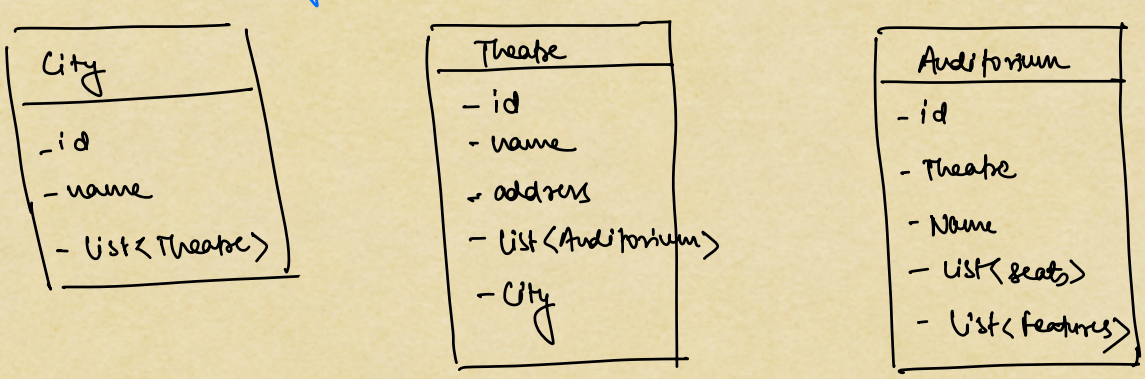
List<Seats> ⇒ { 0,0 , 0,1 , 0,2 , 0,3 , 0,4 ——— }

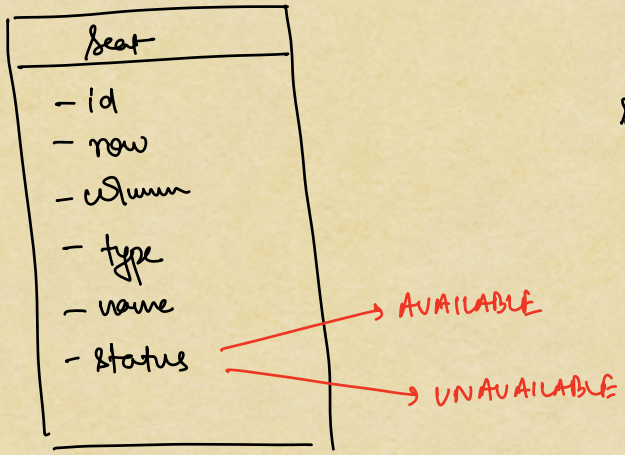
List<Item> ⇒ { 0,7 , 1,7 , 2,7 ——— }

↓ stored in DB

↓
Stairs
Gate
Exit/entry

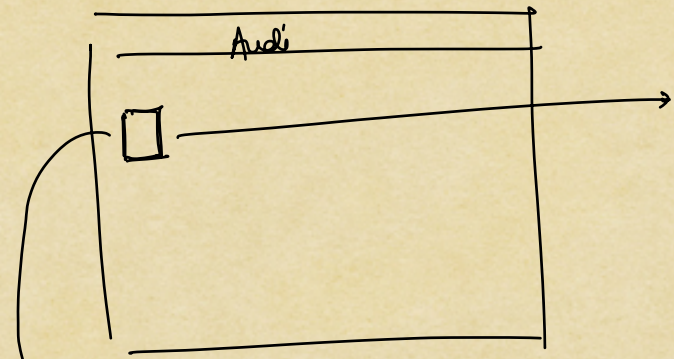
⇒ Class diagram:





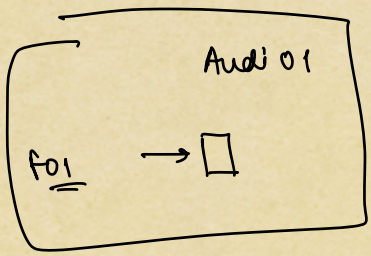
Physical Seat → Seat

Seat per show => ShowSeat



multiple virtual seats, each for 1 show

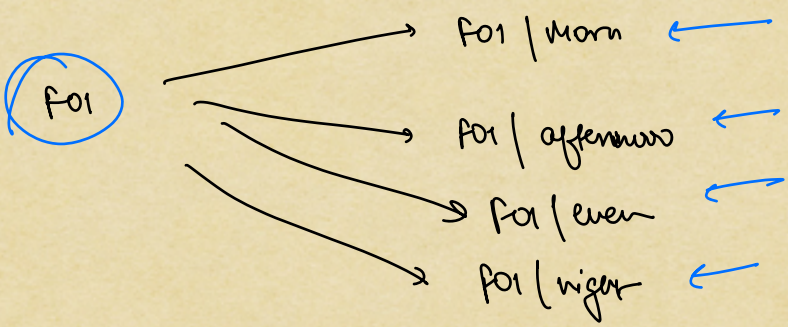
Physical Seat

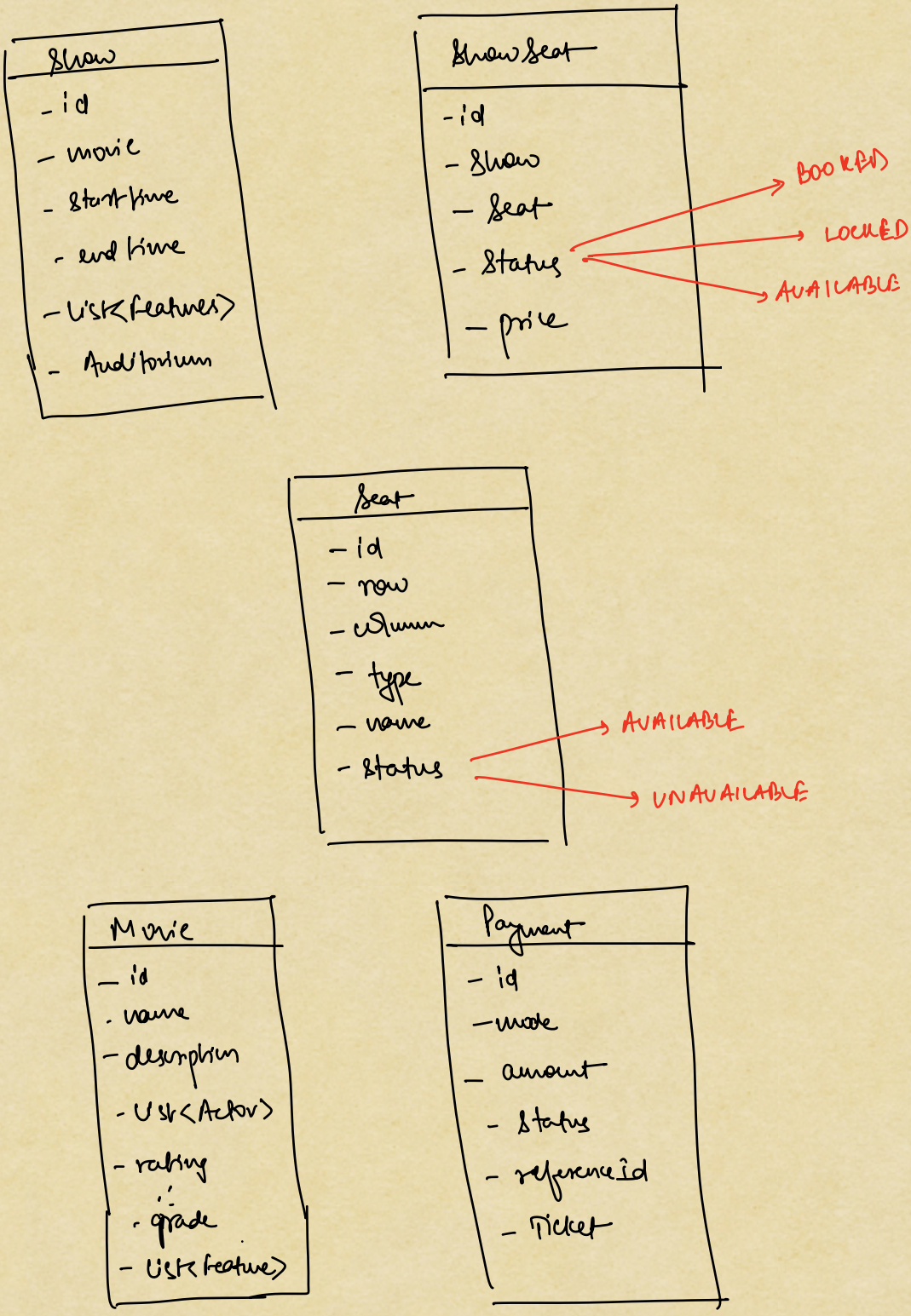


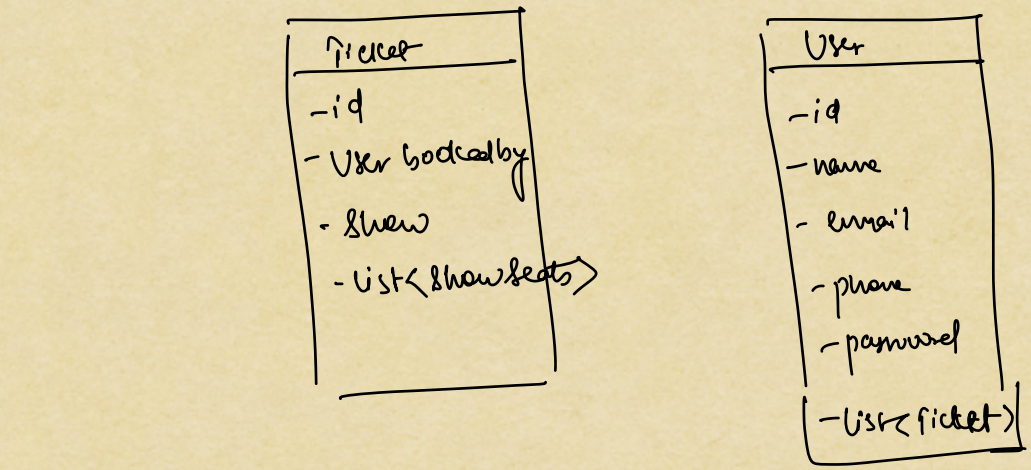
Audi 01 | F01 | 28/04 | 12:00 PM

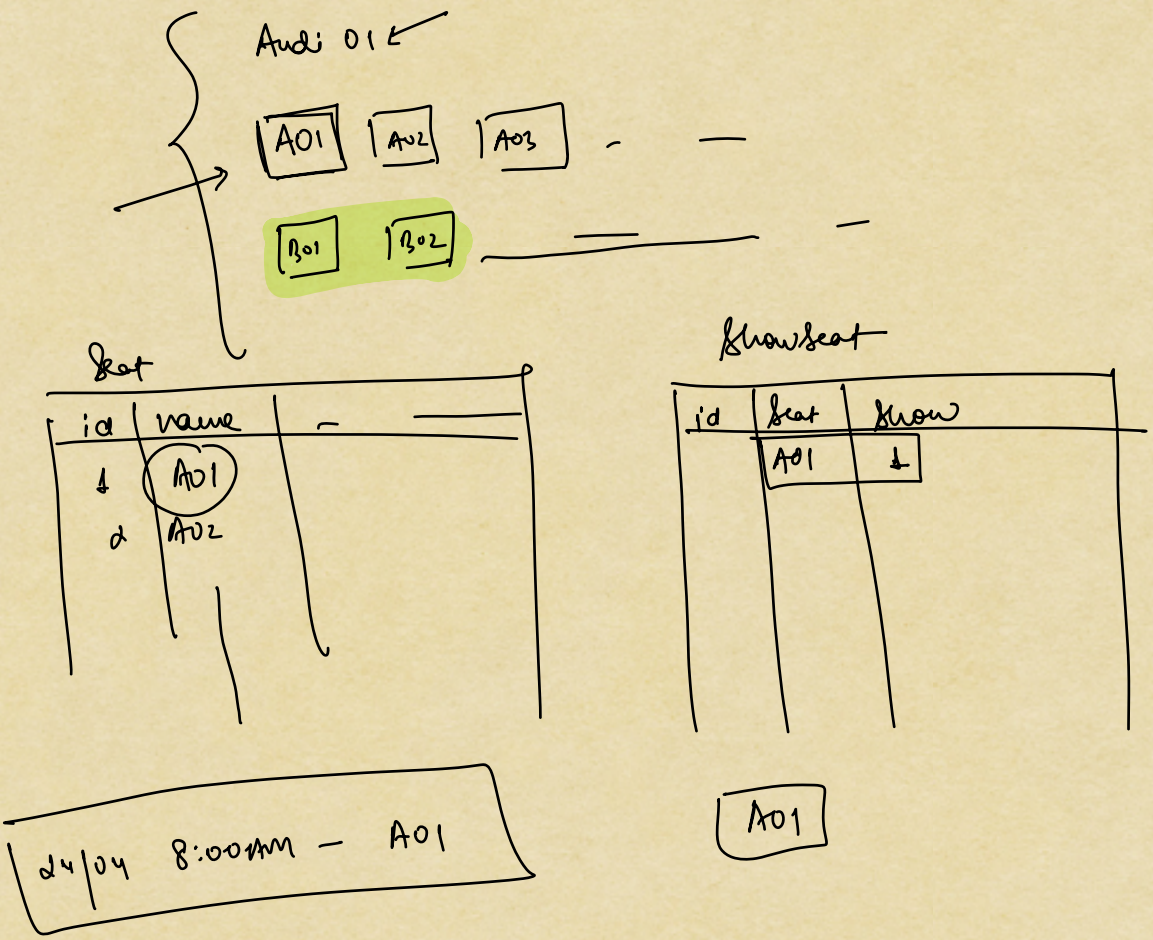
Audi 01 | F01 | 28/04 | 3:00 PM

Audi 01 | F01 | 28/04 | 6:00 PM




Show
- id
- movie
- startTime
- endTime
- List<Features>
- Auditorium
ShowSeat
- id
- Show
- Seat
- Status
- price
BOOKED
LOCKED
AVAILABLE
Seat
- id
- row
- column
- type
- name
- status
AVAILABLE
UNAVAILABLE
Movie
- id
- name
- description
- List<Actor>
- rating
:
- grade
- List<feature>
Payment
- id
- mode
- amount
- status
- referenceId
- Ticket


Ticket
- id
- User bookedby
- Show
- List<ShowSeats>
User
- id
- name
- email
- phone
- password
- List<ticket>


Audi 01
A01
A02
A03
B01
B02
Seat
id
name
1
A01
2
A02
ShowSeat
id
Seat
Show
A01
1
24/04 8:00PM - A01
A01