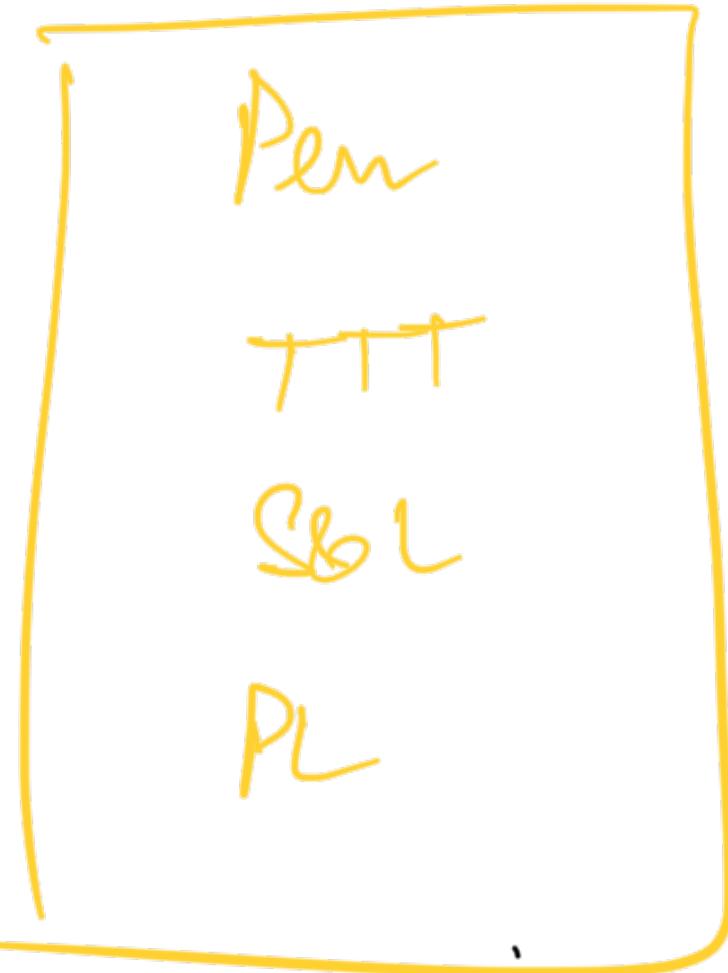


UML Case Study



→ Movie Booking App

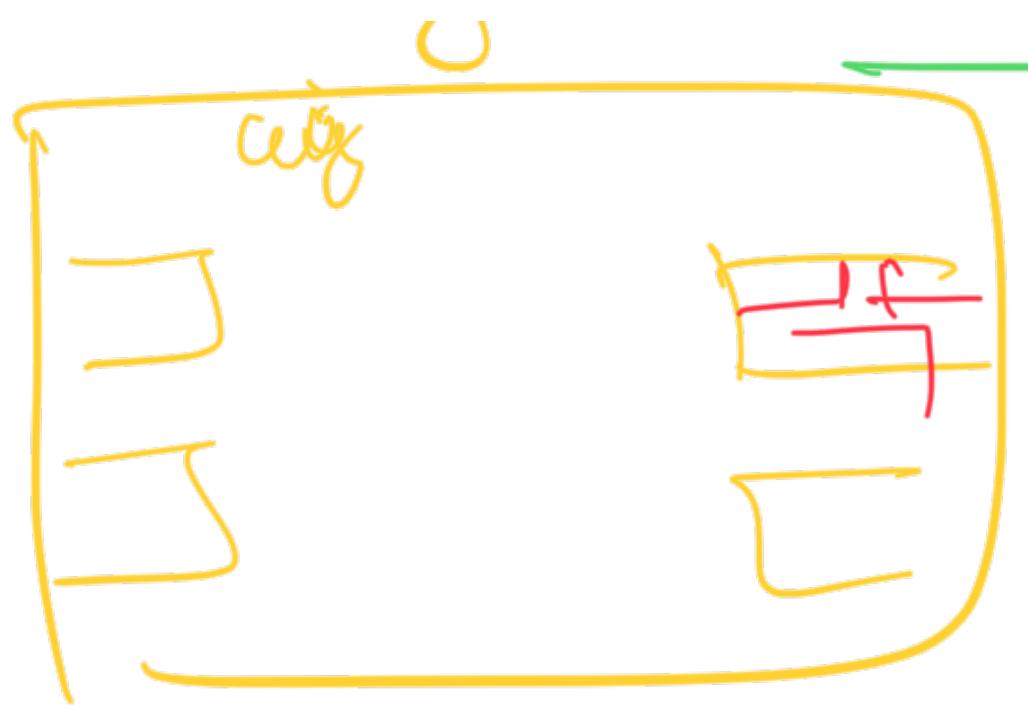
→ Cinemas in particular city

→ Running movie in a particular city

→ Book the tickets for the same

② Gathering Requirements

- Book My Show is available in different cities
- There will be multiple movies running in cities at same time
- Every city can have a lot of cinema
- Every cinema can have multiple auditions



→ Diff / Same movies might
be playing at diff audi
At Same time

→ Every auditorium has multiple

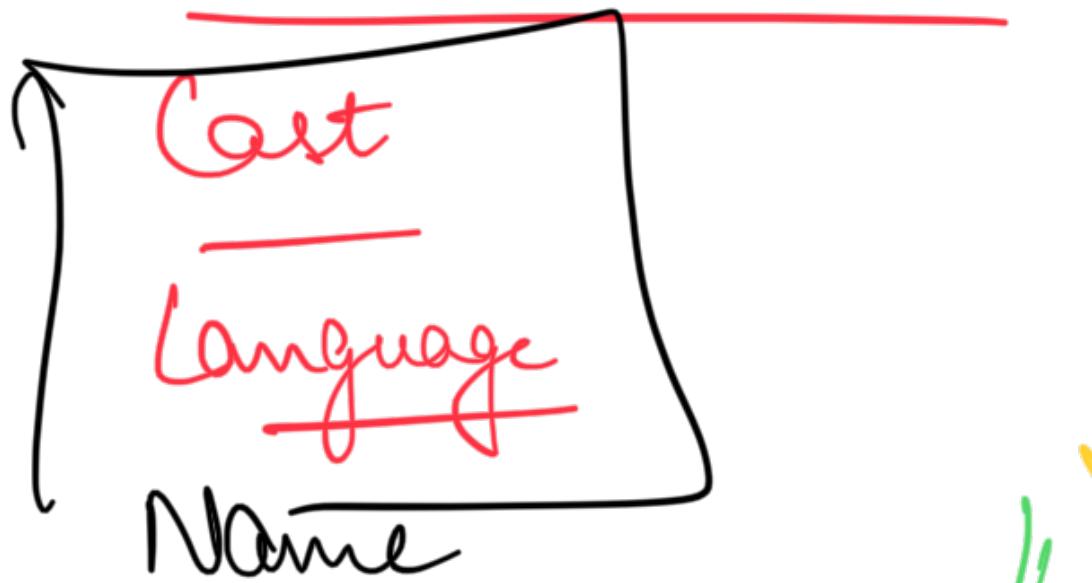


→ Seats are of diff event types

→ SILVER
→ GOLD
→ PLATINUM

→ Some auditorium will be equipped for 3D

→ Every movie → Type (3D, 2D)



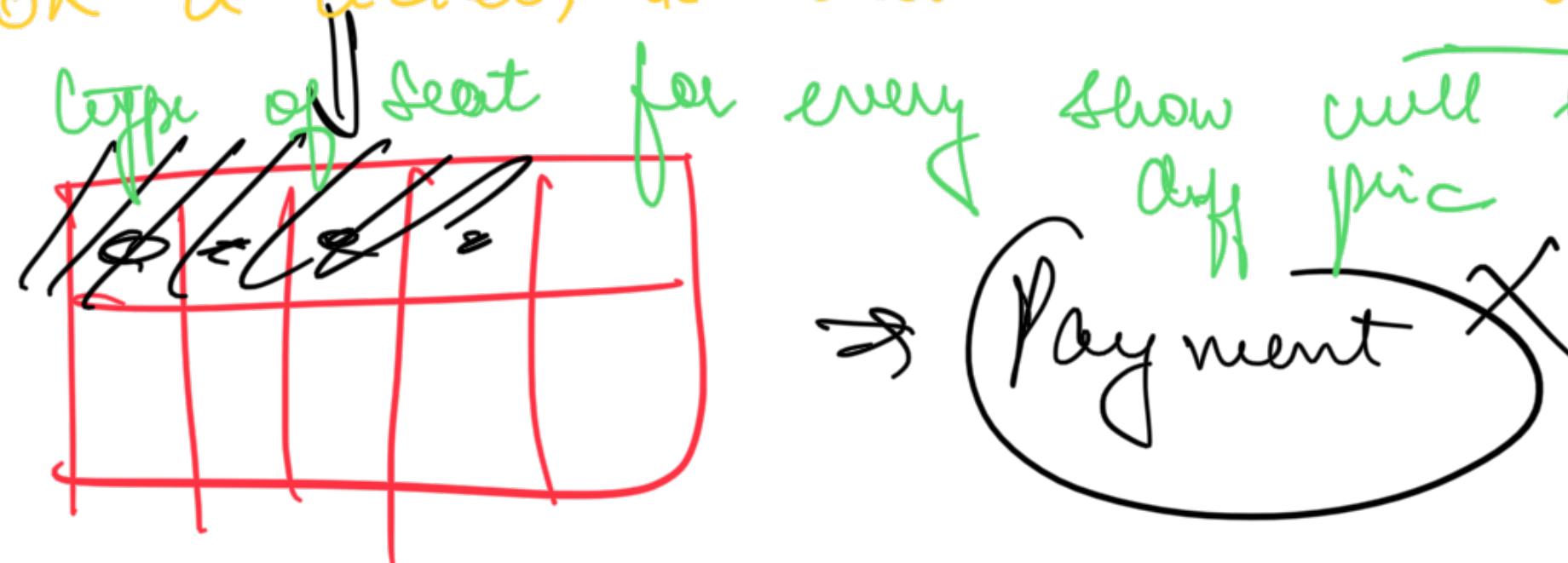
→ Users can book ticket for one show at a time.

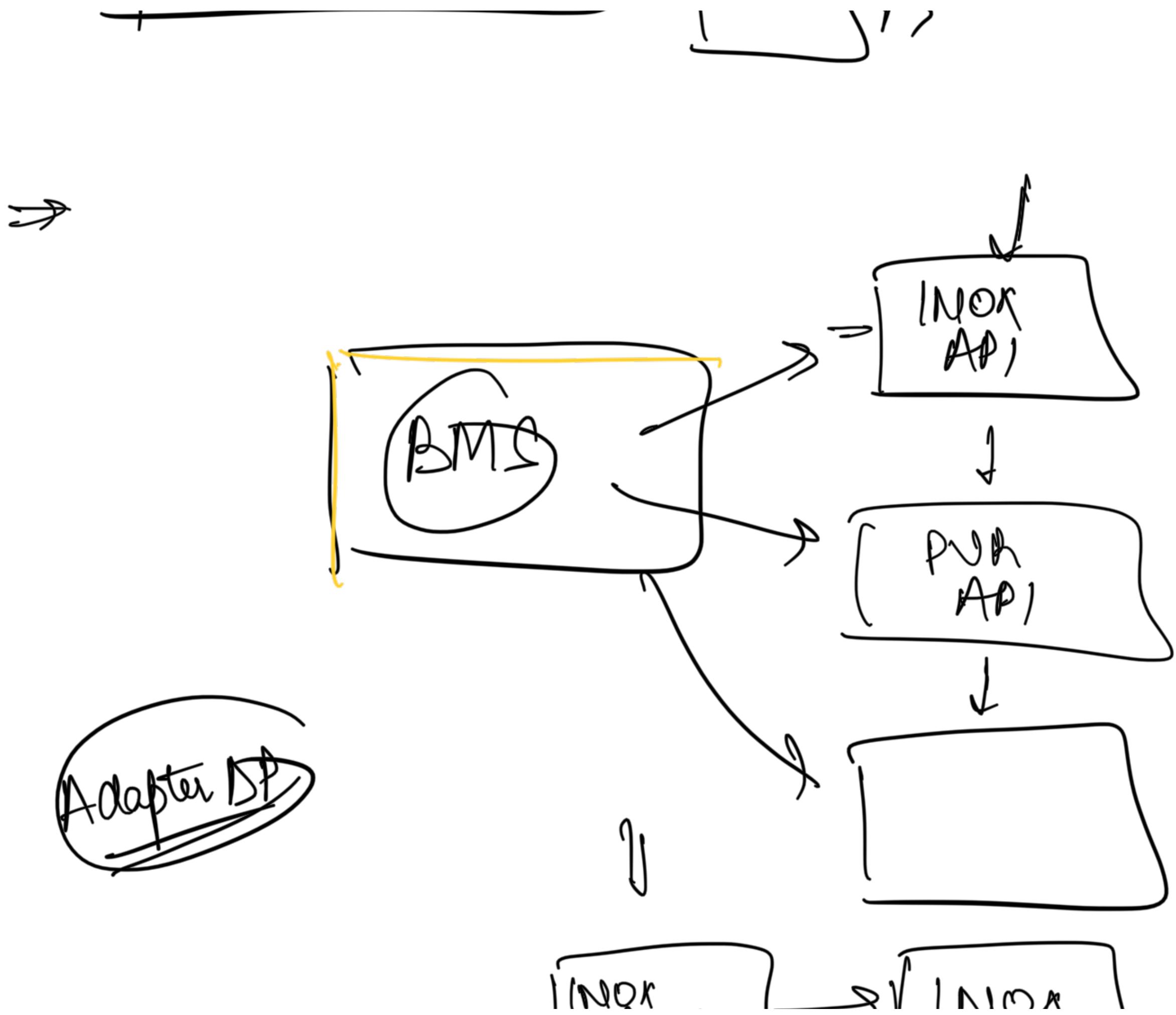
→ Users can pay via DCI CC/UPI - make payment

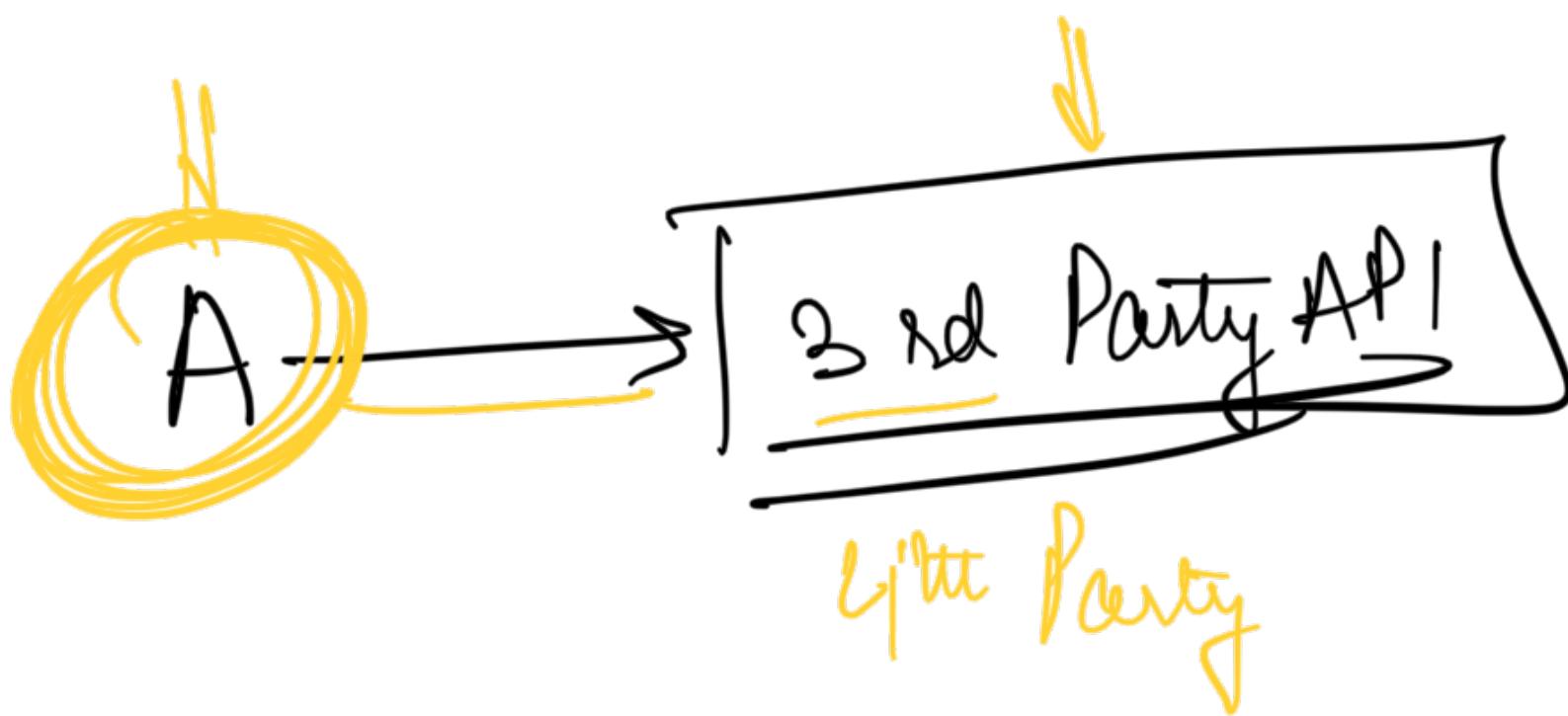
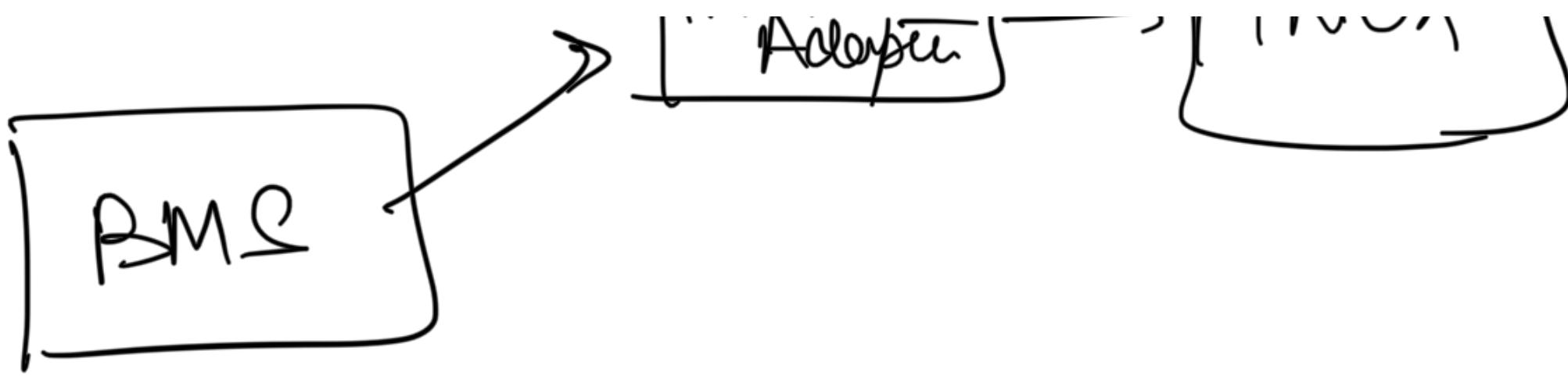
→ In one booking, multiple seats can be booked

→ You can book tickets upto 1 hr before a show.

- We do need to store the status of every seat for a particular show.
- To book a ticket, a user needs to be authenticated.
- Every type of seat for every show will have diff price







PhonePe

PhonePe
Dev

Bank API
Interface

PhonePe
Dev

Abstract
API Adapter

Real Bank
API

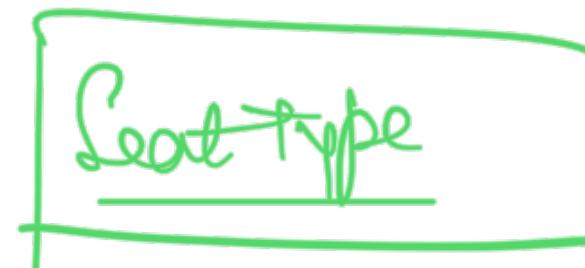
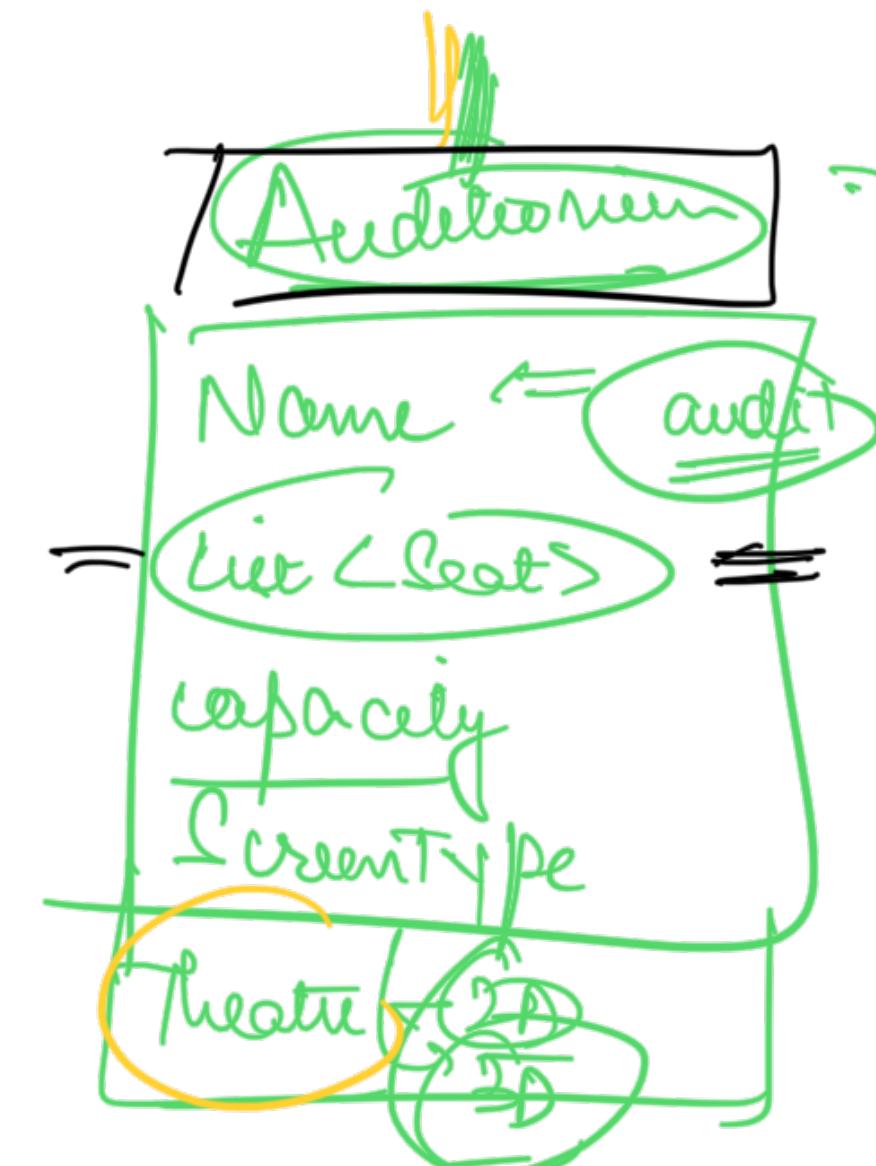
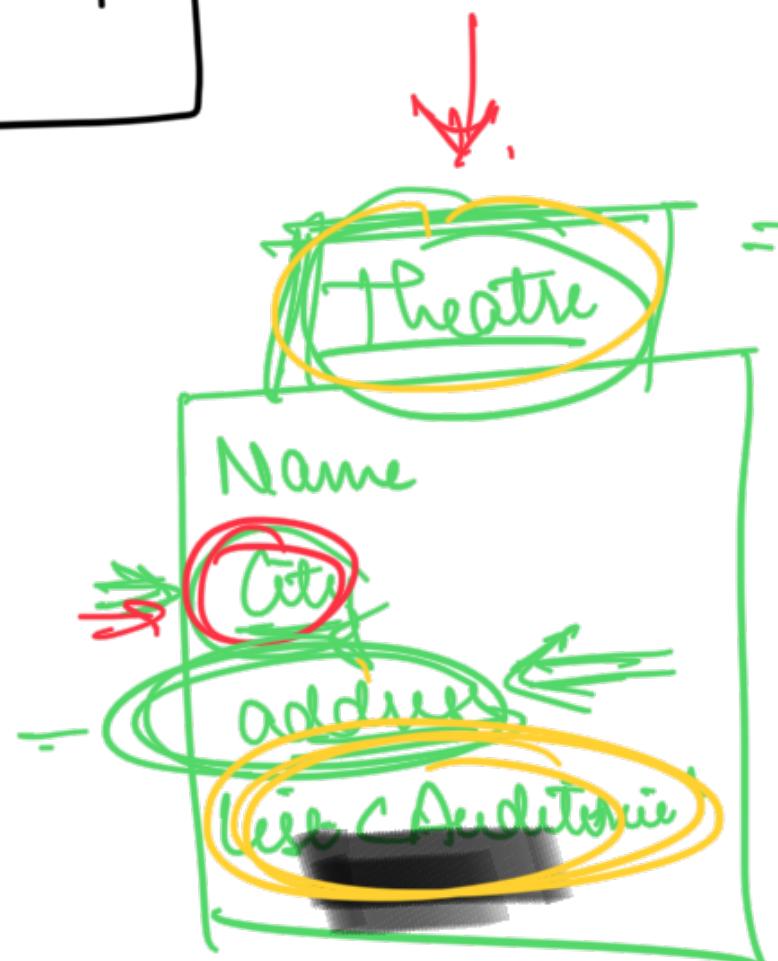
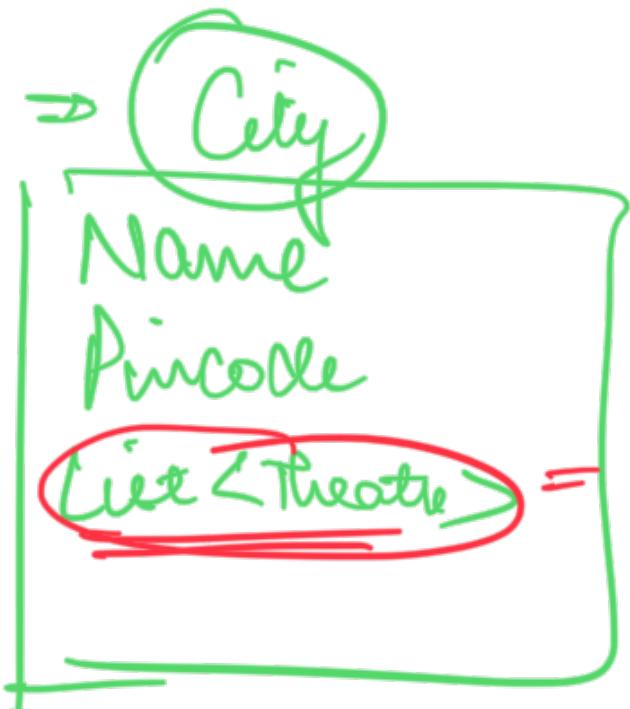
Check Balance ()
make Transaction()

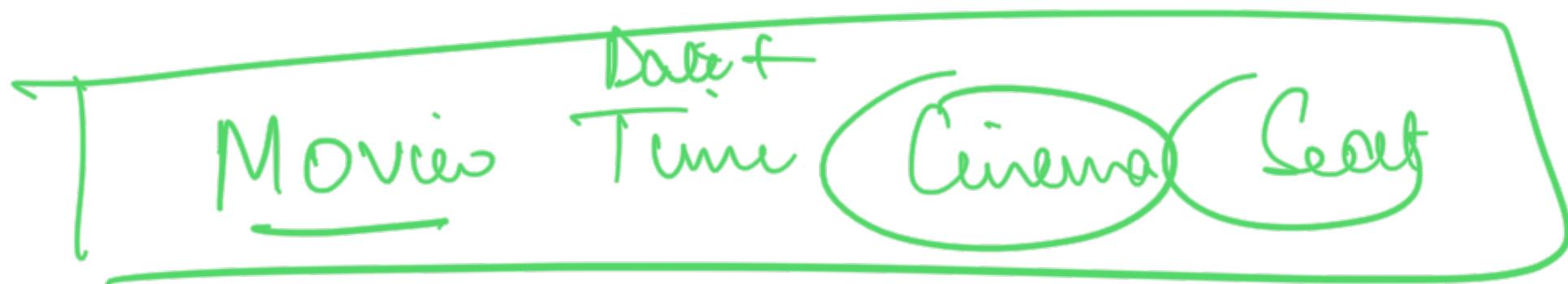
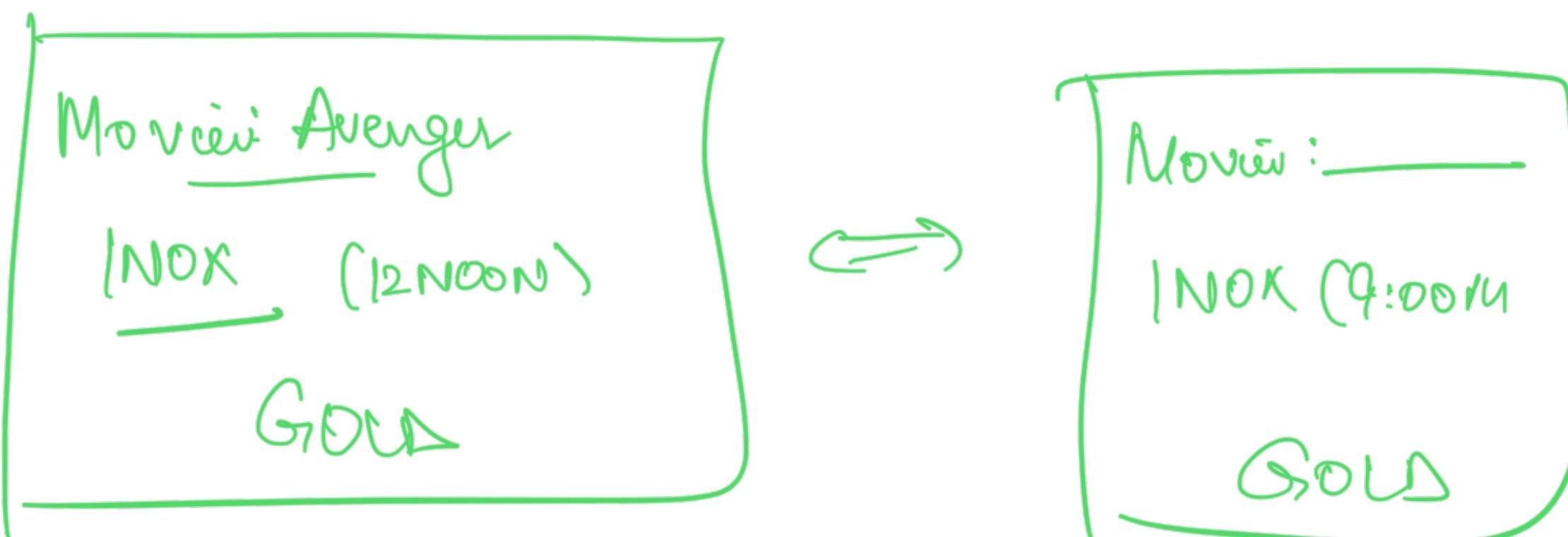
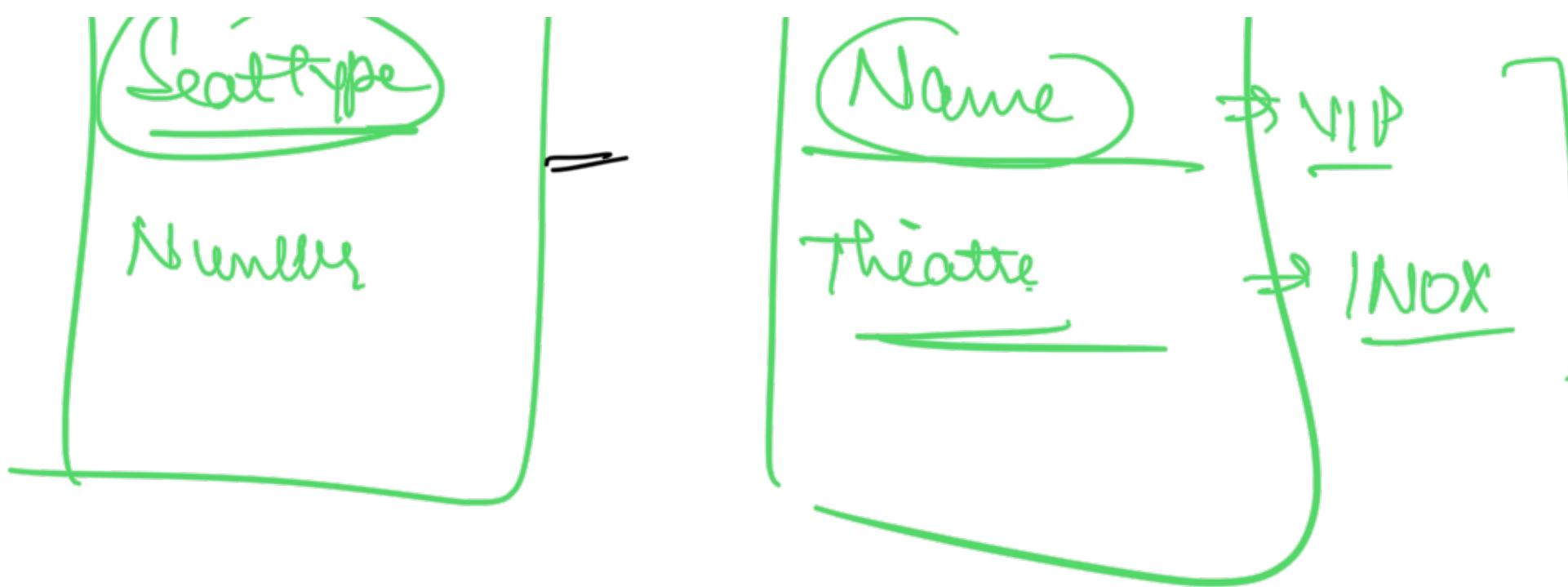
Class Diagram



→ Nouns

→ Visualization





Phic

Type A	VIP	King
Type B	Gold	Queen
Type C	Silver	

Select ^ from A B . Show-
where show_id = { }
Seat

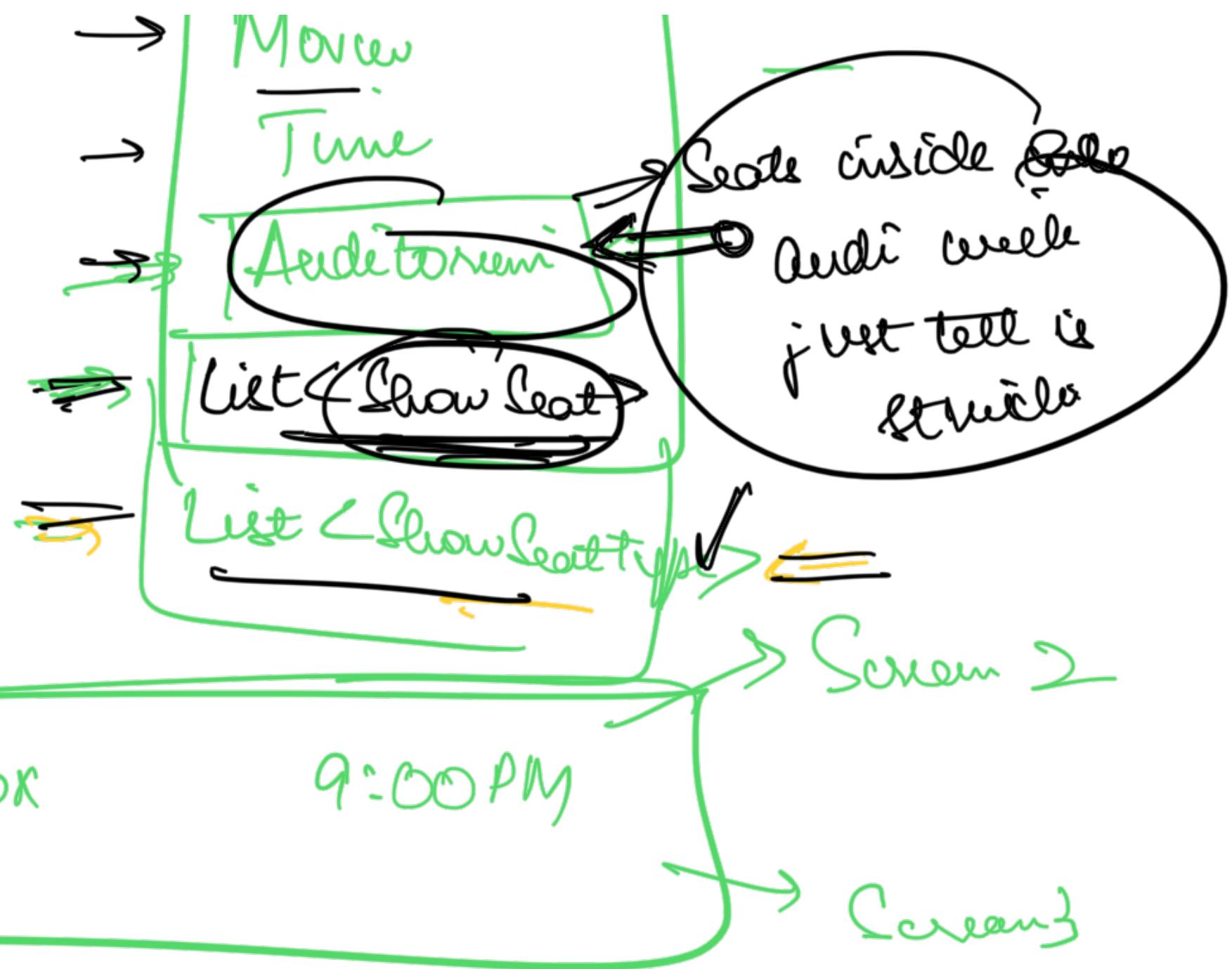


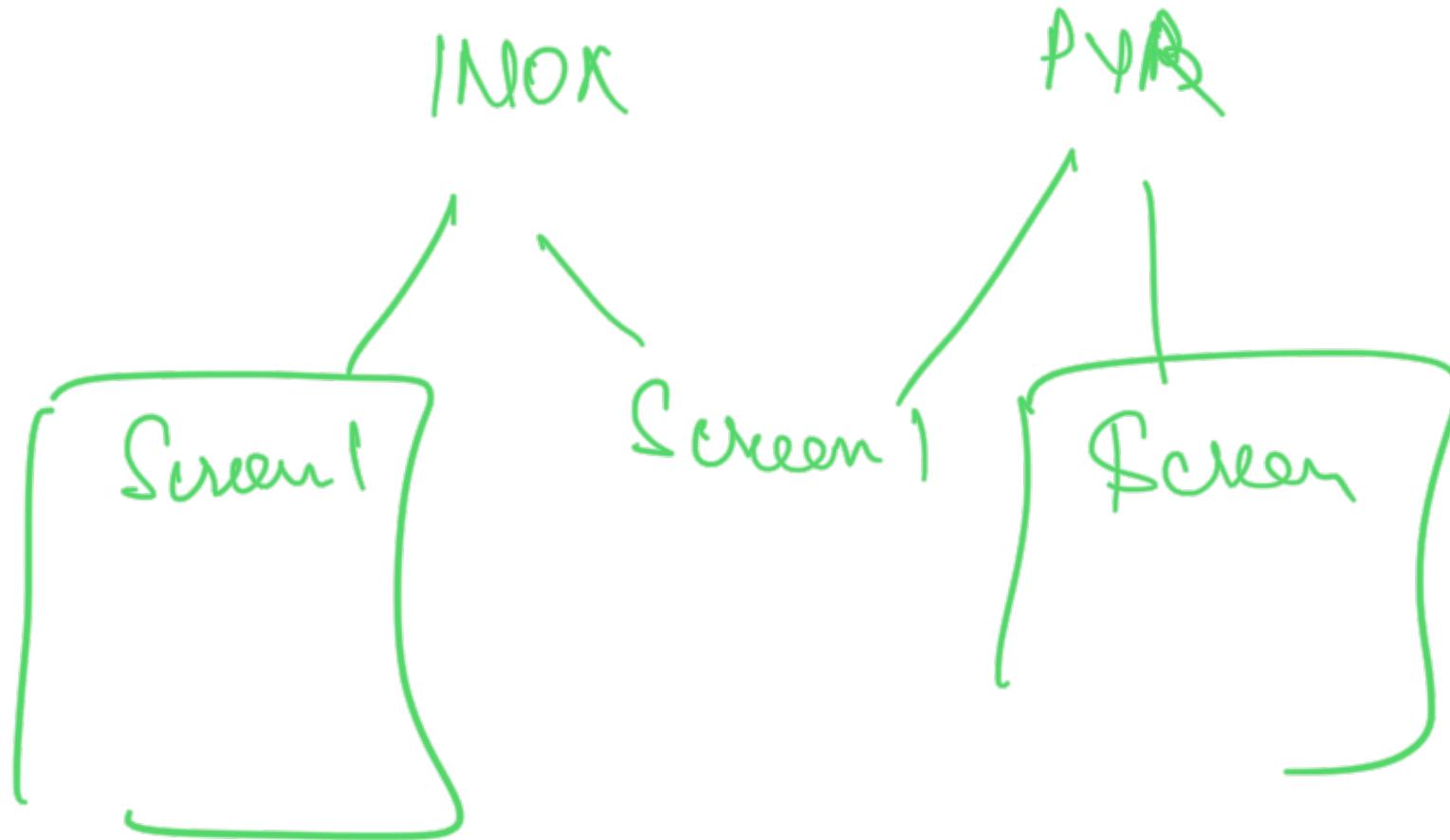
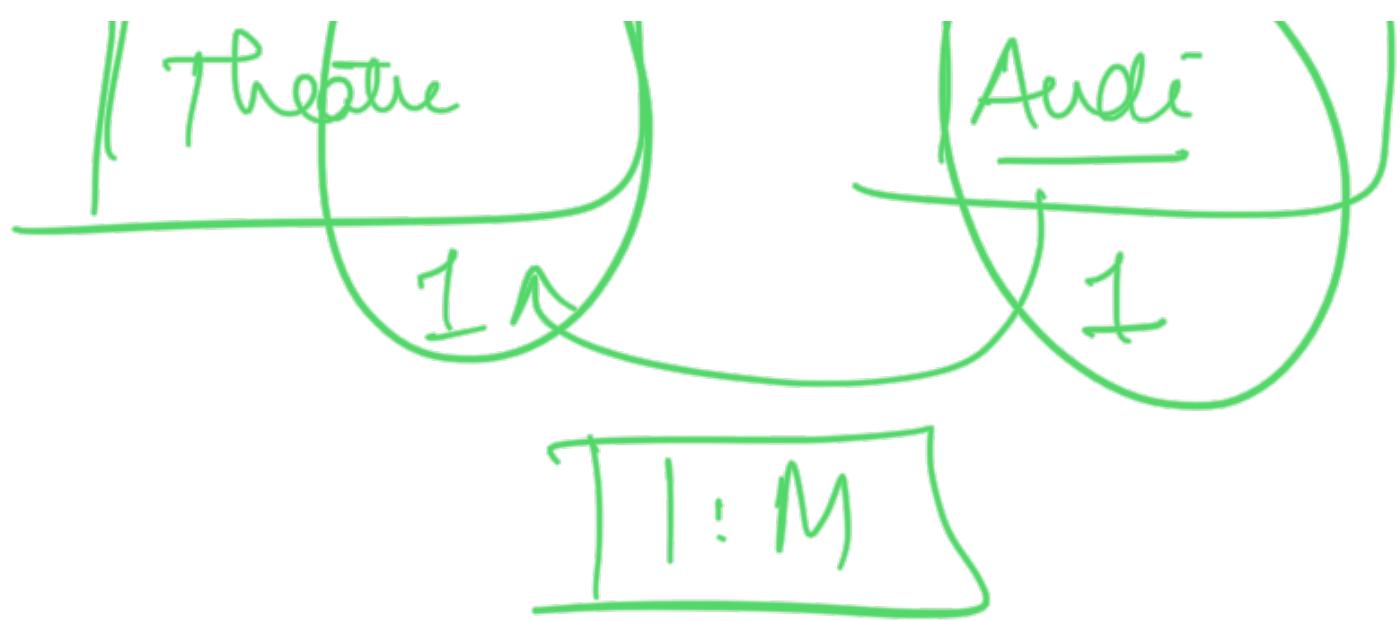
~~Choosing~~

title

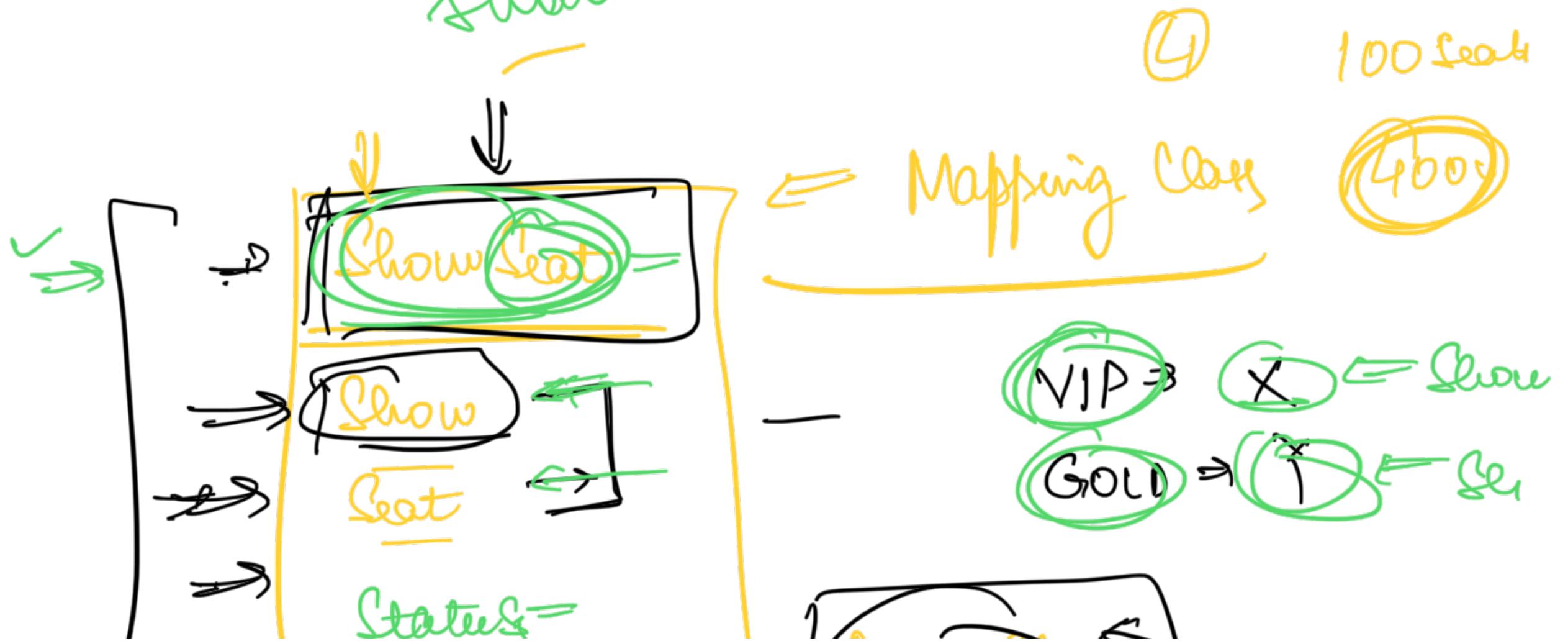
Cast

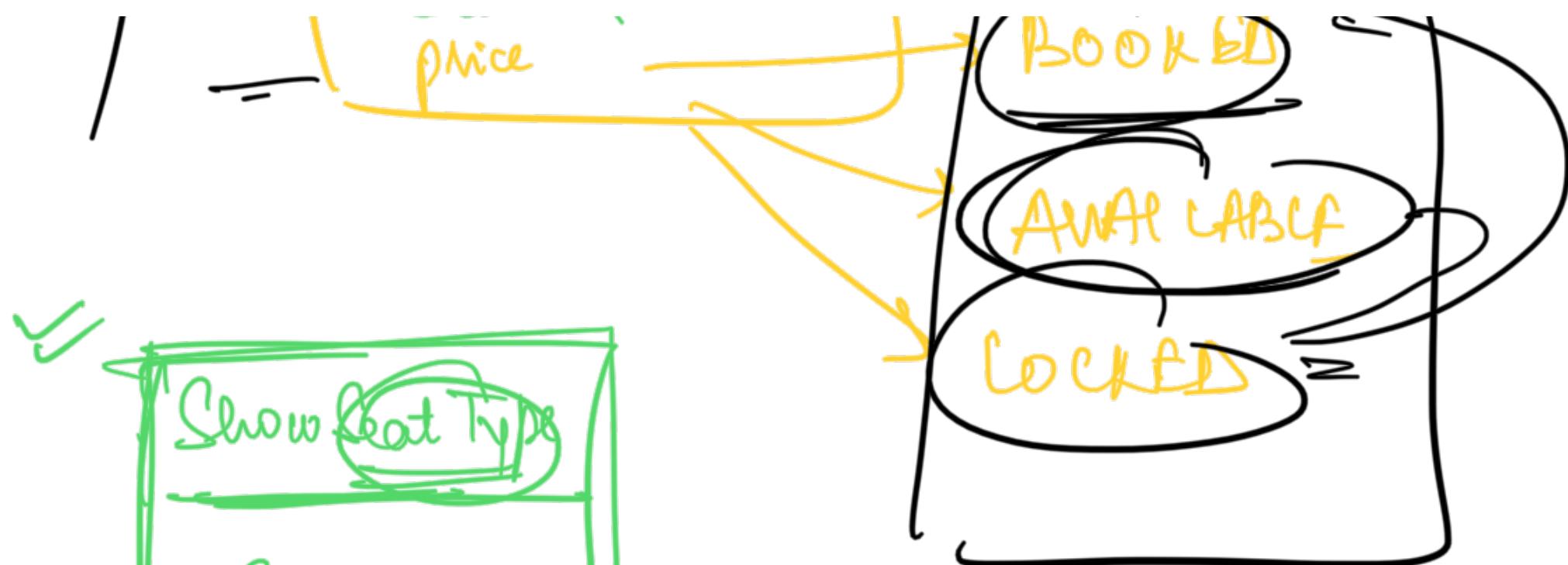
language



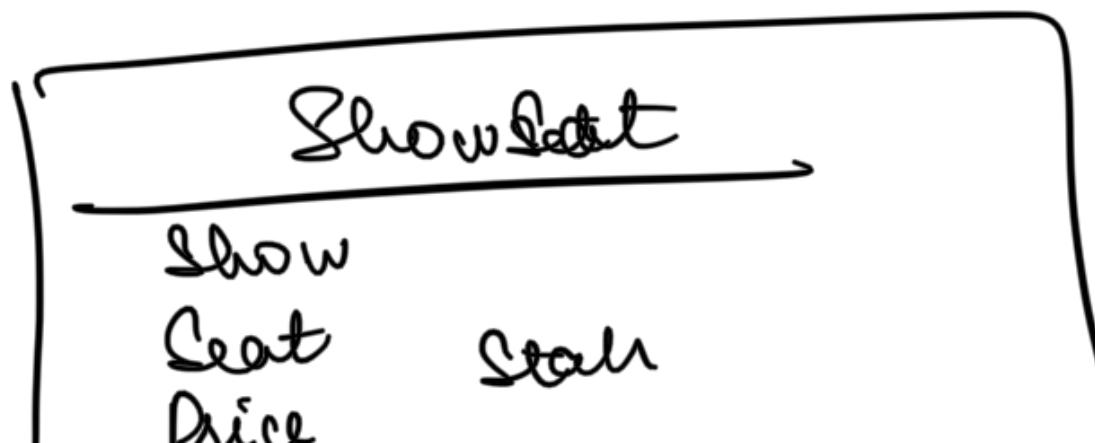


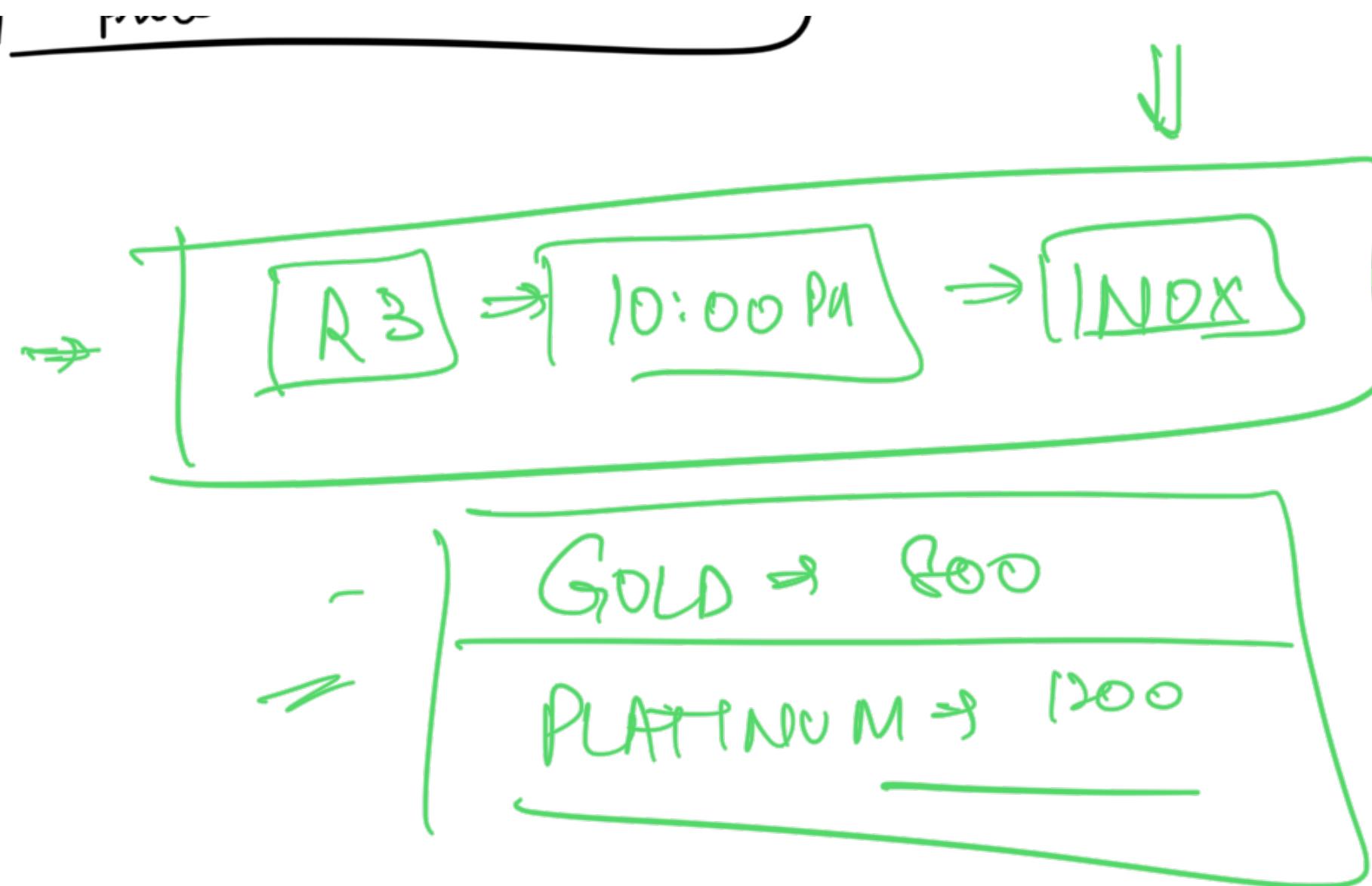
Price is true for a Seat for a particular show





$$\begin{array}{r}
 10000 \\
 400B \times 10000 \\
 \hline
 4000 LB \\
 \Rightarrow 4MB
 \end{array}$$





Select * from Show-Seats

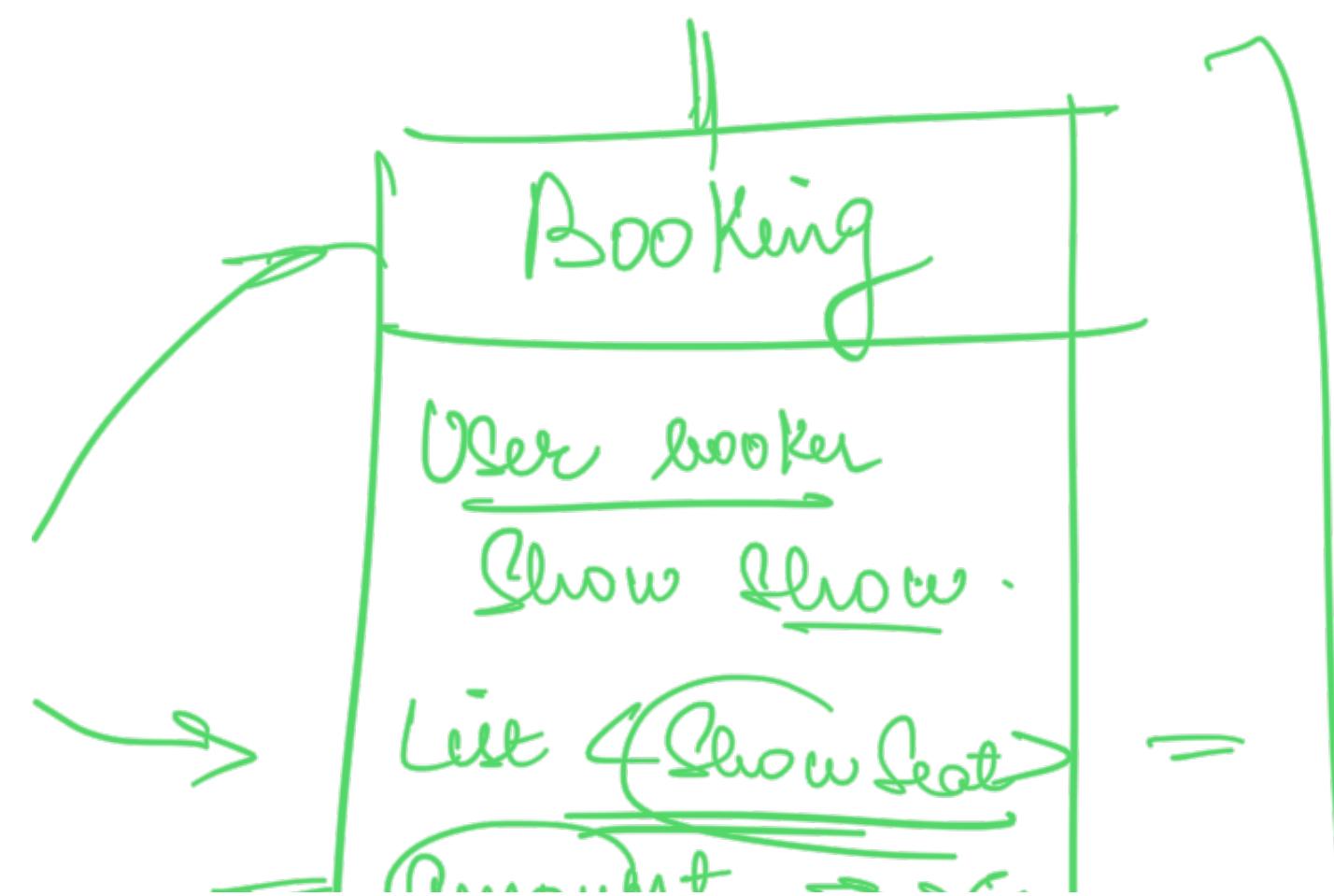
Where (Show_id) = {}
 AND Status == AVAILABLE

Select * from ShowSeatType
 where (Show_id) = {}



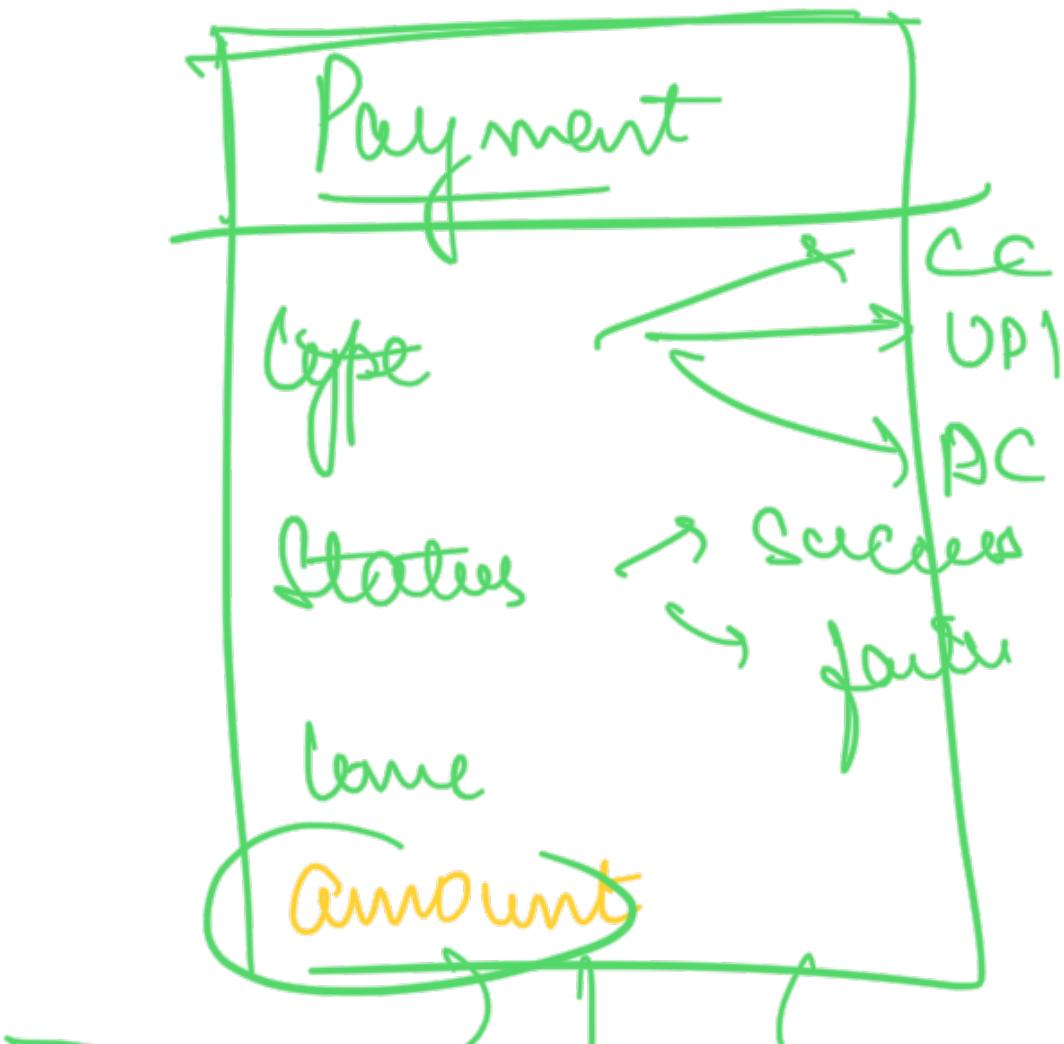
Show_id	Seat_id	Status
1	123	AVAILABLE

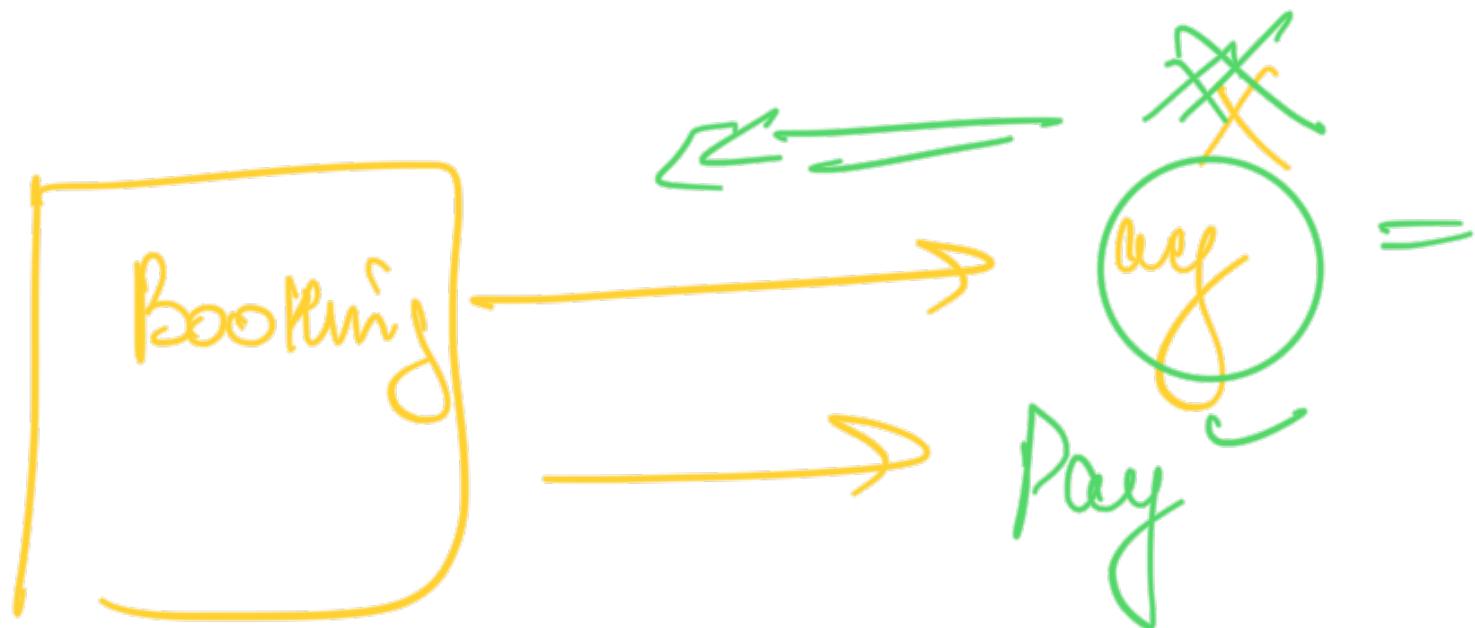
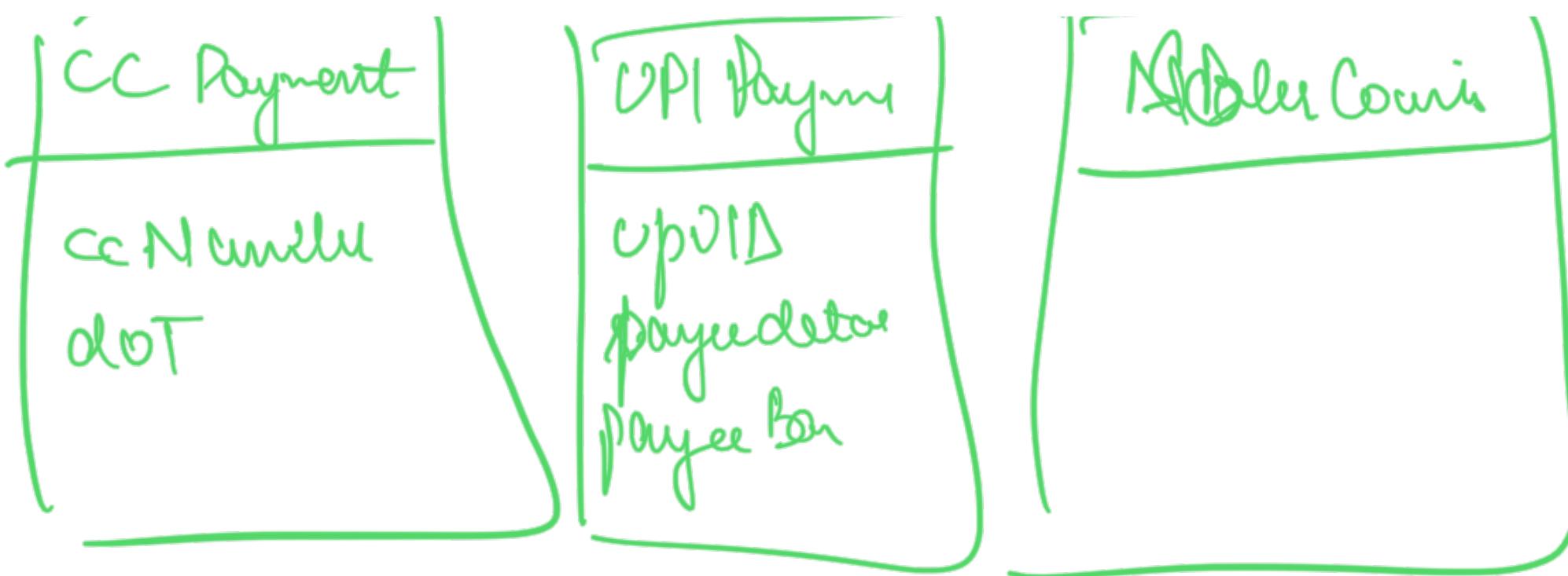
Show_id	Seat_type	Price
1	VIP	123

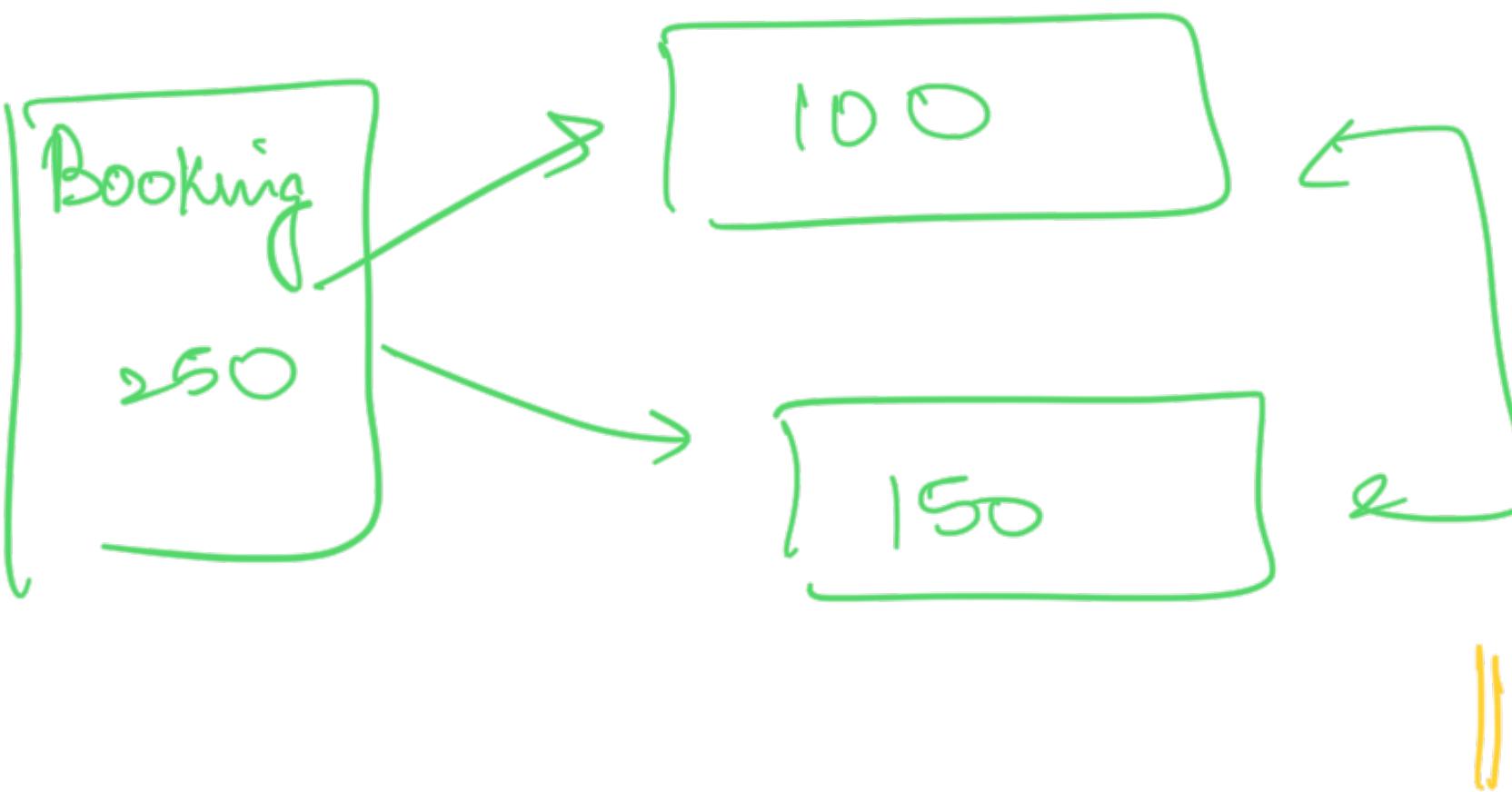


SQL query to find
how many bookings for
a show

`SELECT ^ from booking
where show_id = $)
-- n m...`







1st Iteration

→ City
→ Theatre

2nd Iteration

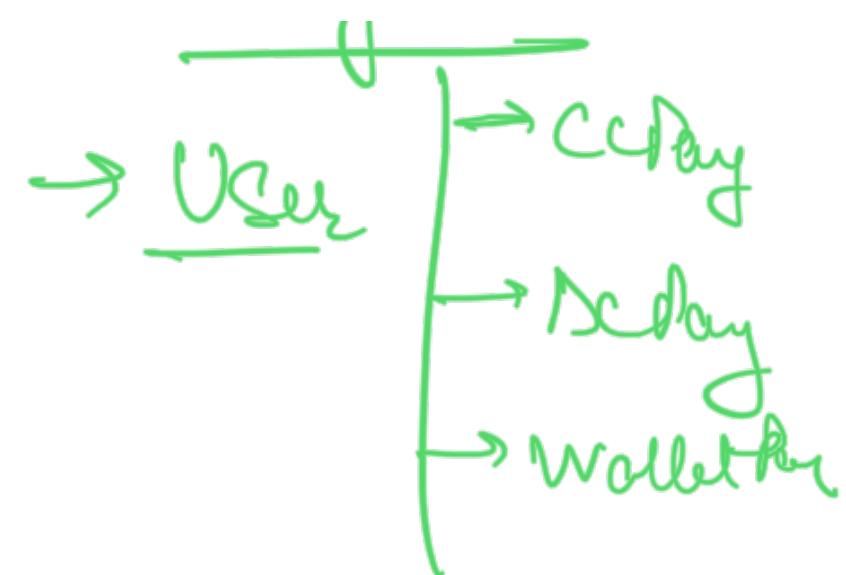
→ Movie
→ Show

3rd Iteration

→ Booking
→ Payment

→ Audi
→ Seat
→ Seat Type

→ Show Seat
→ ShowSeatType



Case of concurrency issue in booking a seat

A~~ssg~~^m

- ① Find cardinalities of all set^{*} amongst
above classes

City - Theatre

1:1
1:m
m:1
m:m

Theatre - Audi

Audi → Seat

Movie - Show

Audi - Show

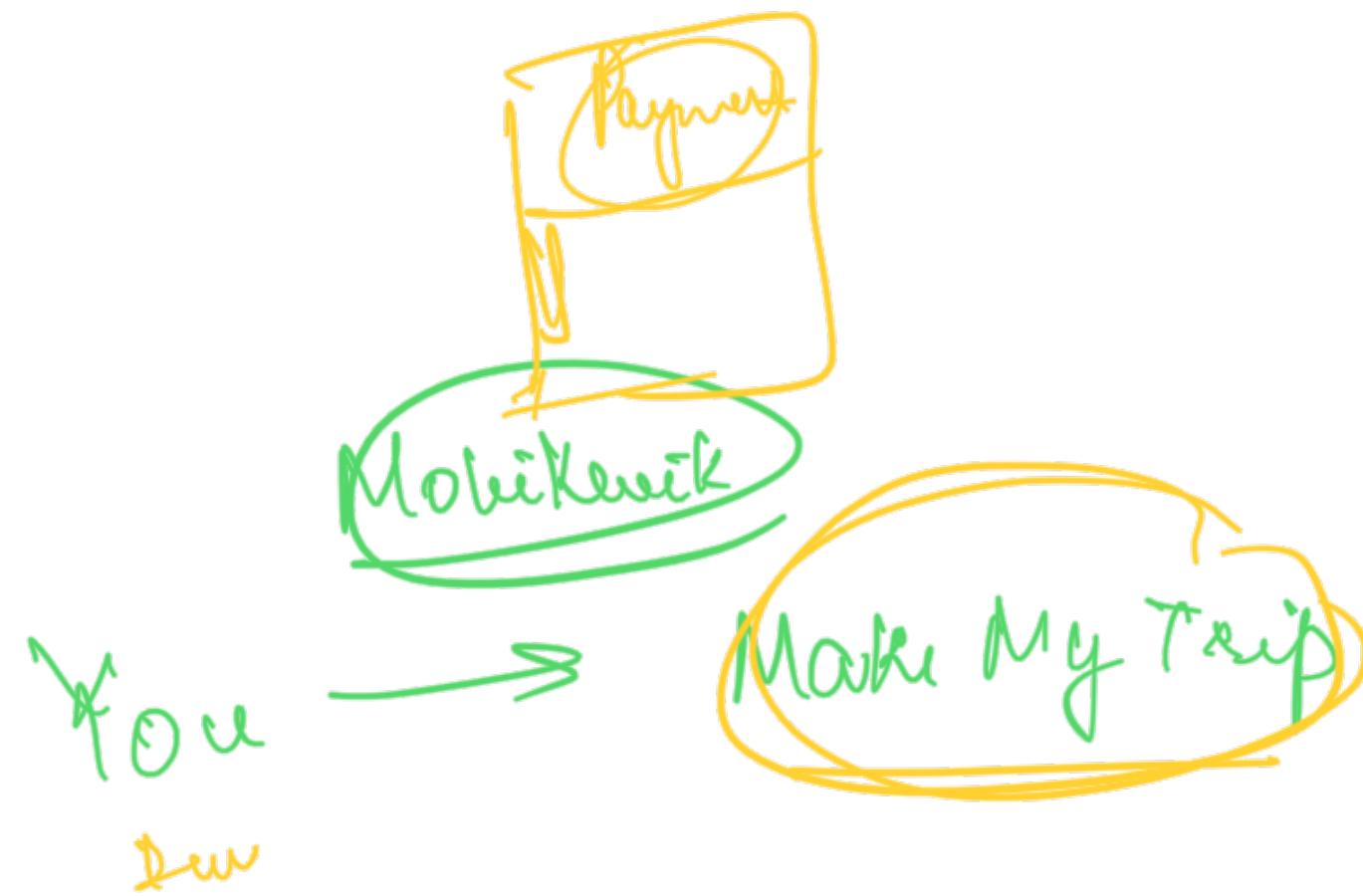
Booking - Payment

② Implement the Schema design based on
above class diagram.



Dynamic Pricing

→ Implement ~~Rs~~ Aeroplane Booking App⁴



Bank Reference ID OTR

MobiKwik

UberEats



PayTM

using

~~status = $\exists \times \forall$~~

if (Status != failure)

PaymentStatus = true
process

\$10000 per person

Status = failure

failure - due to be

amount

details = {
 \exists

