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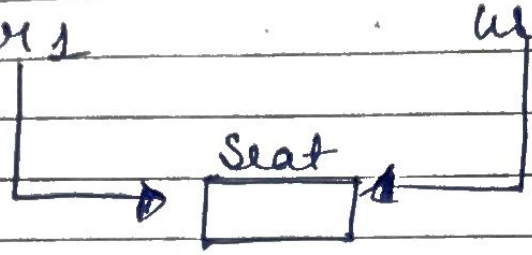
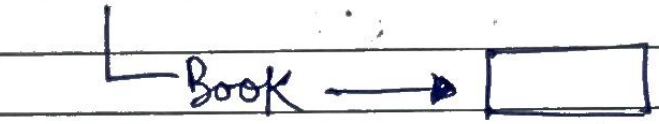
Concurrency Handling in Booking

- 

NO two users should book same seat

- 

Even if payment is due or failed, the seat should be in booked state for 10 minutes

for Concurrency Control we have 2 types of locks

Optimistic	Pesimistic
→ In optimistic, no locks placed when data is read.	In Pessimistic, locks are placed when data is read, prevent other transactions from modifying it until the lock is released.
→ Before write operation, it checks if another transaction has modified the data since it was last read.	

Mechanism

optimistic

1. Read
2. Edit
3. Validate
4. ~~Rea~~ Commit and Rollback

Pessimistic

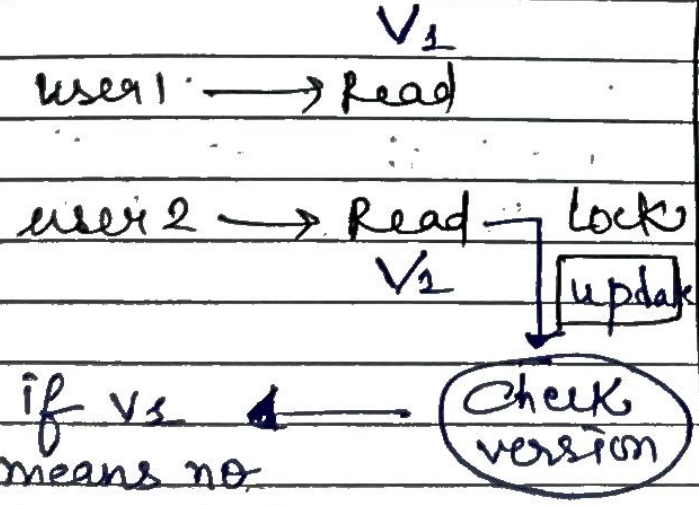
1. Read and Lock
2. Edit
3. Commit and Rollback

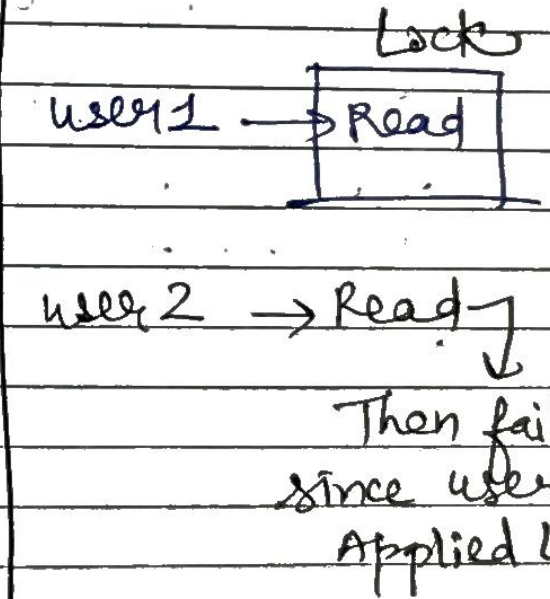
Advantages

1. Reduce locking overhead.
2. Suitable for system with low likelihood of conflicts

1. Prevent other from accessing locked data.
2. Simpler

Ex.





- While update use lock & change the version

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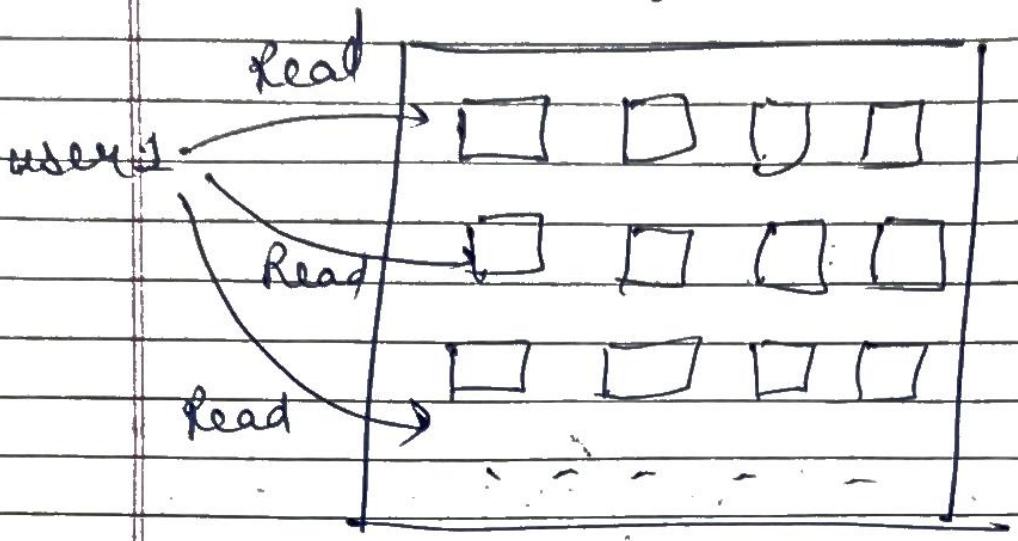
Best Concurrency Control for Booking System



In pessimistic while user 1 in Reading it is locking the seats and this prevent other users to book seats.

So for Booking systems optimistic control method is most suitable since it applies the lock on the time of updation only.