

# LLD - Concurrency & BookMyShow

- ① REST controllers in Spring
- ② Booking flow in BMS
- ③ Concurrency + Issues
- ④ Tackle such issues

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Concurrency

## Threads & processes



## Context switching

(C) - POST  
R - GET  
✓ - PUT vs PATCH  
D - DELETE

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{ a {a, 1}  
b  
c }

{ a: 1  
b: 2 → (c: 3)

booking

resource  
|

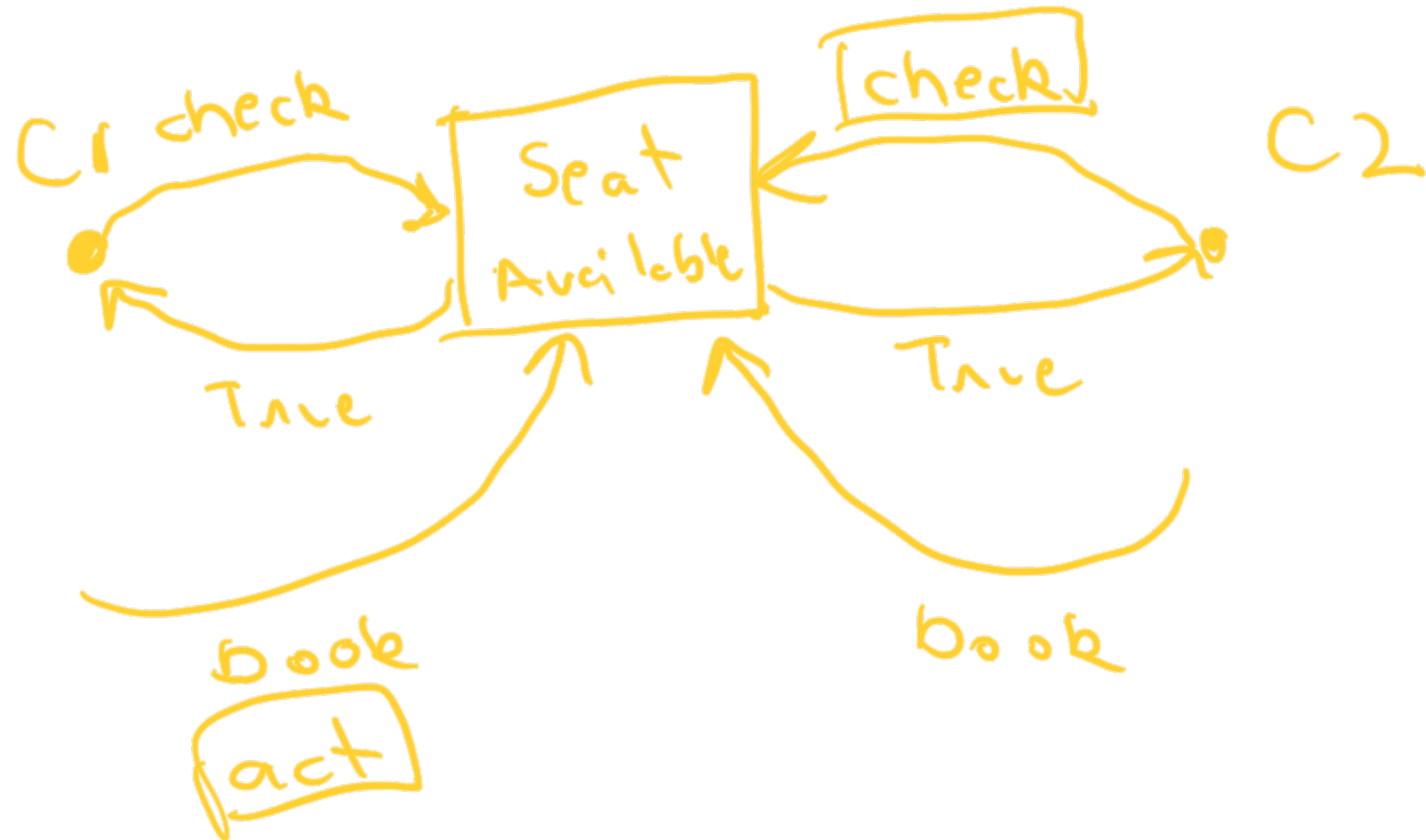
} resourceID { a: 1  
b: 2  
c: 200  
}

GET - /api/v1/booking/:booking  
||

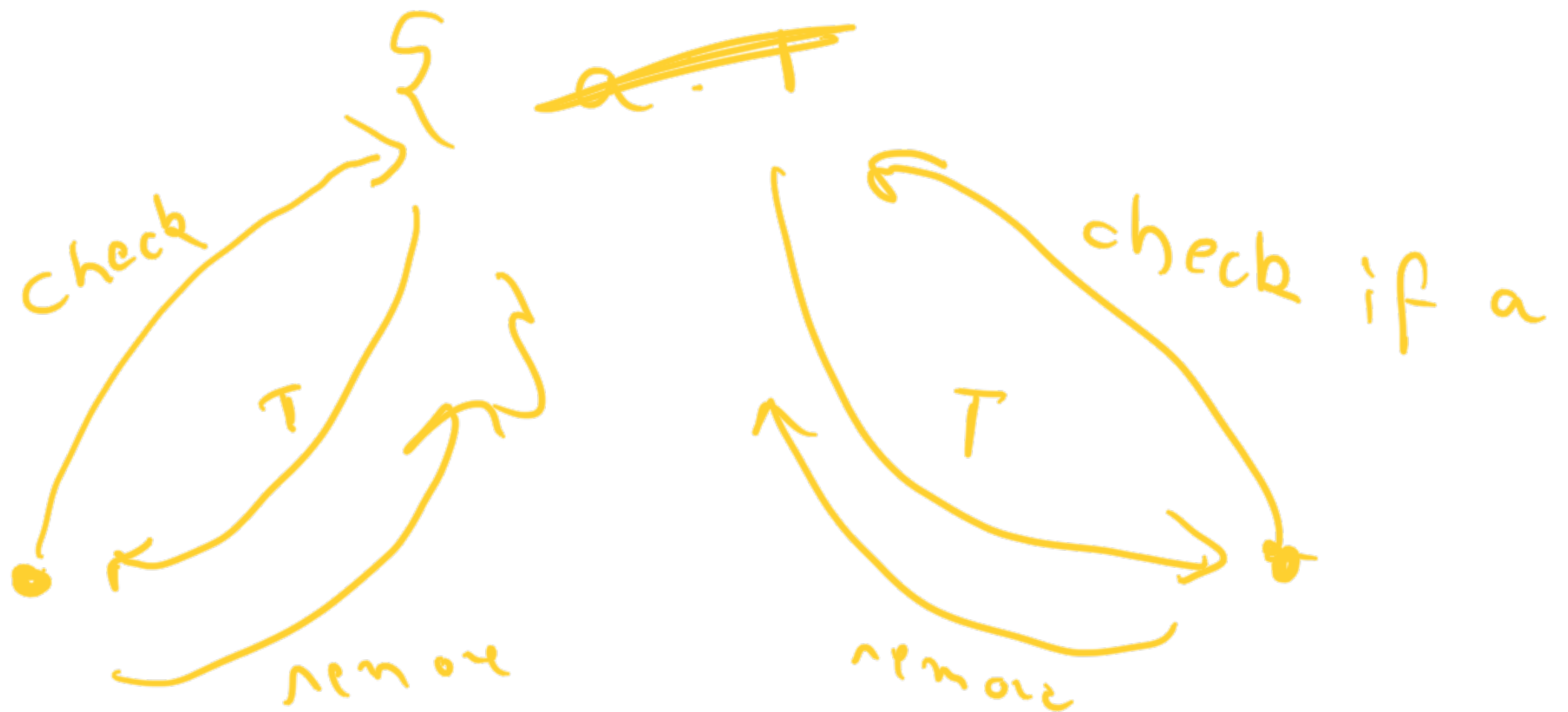
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# Race conditions

- ① whenever multiple actors try to access the same shared resource



check - then - act



concurrency issues

race condition

5:56 - 6:02 | 10:31

• Check if A < B  
• B < A

Critical Section

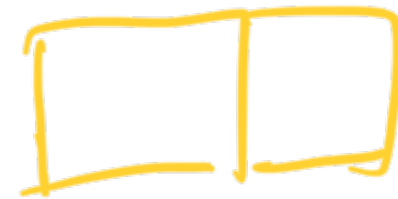
... the code

Critical Section is the piece of code  
when executed by multiple threads  
caul concurrency issues.

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Fix race conditions

↳ making your critical  
section atomic





## Synchronisation

↳ if one piece of code is being accessed by multiple threads make sure that one locks the resource.