



# OCC & MVCC

## Optimistic concurrency control(OCC)

- OCC Executes a Transaction in 3 Phases(P29-35)
- phase 2 & phase 3 must be in critical section
  - example(P38)
- How to implement the critical section for phase 2 & 3(P40)
- OCC Advantages(P42-44)
- OCC's Problem
  - False Aborts(P49-50)
  - livelock(P51)

## OCC and hardware transactional memory

- Hardware Transactional Memory(P54)
- introduction to RTM(P56)
- Programming with RTM(P59)
- use simple retry? No(P61)
- facts about the implementation of RTM(P63)
- drawback of RTM: limited working set(P64)
- summary of RTM(P67)

## Multi-version Concurrency Control(MVCC)

- Key (high-level) idea and benefit(next lec P16)
- Snapshot Isolation & Implementation(next lec P17-18)
- Snapshot Isolation Example (T1)(next lec P20-23)
- Snapshot isolation (SI) differs from serializability(P24-25)