

- Highest isolation is "serialisable"
  - ↳ Strongest consistency
  - ↳ Slowest  $\Rightarrow$  each tx has to wait for the other to be over
- Lower isolation allows more transactions to run simultaneously but trade-off with lower consistency causing:
  - Dirty reads
  - Non-repeatable reads
  - Phantom reads

## Dirty read

- Occurs when a transaction sees data that wasn't committed
  - Could occur when a transaction sees data that was rolled back
- = "Read Committed" Isolation ensures transactions only see data that was committed!
- "Race Conditiony"

## Non-repeatable read

- When transactions read the same data twice but different results  
↳ "Non-idempotent"

- "Repeatable" Isolation reduces "non-repeatable reads"

## Phantom Read

- When a transaction re-runs a query and another transaction alters the rows with that search criteria

↳ When a row is added or deleted by another Tx between an identical query run