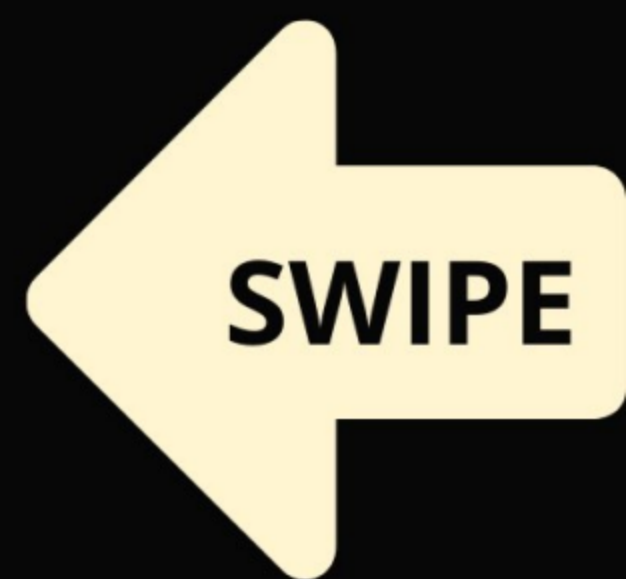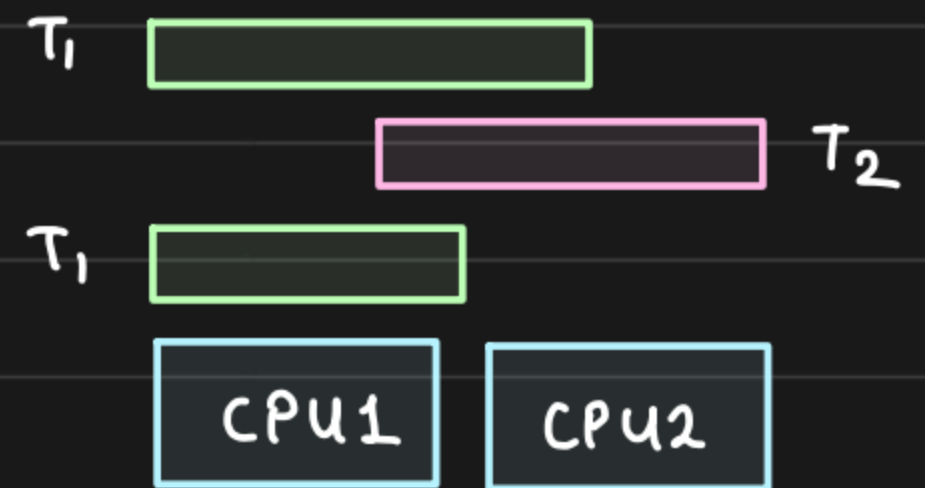# Database Isolation Levels

SWIPE

BY

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Isolation levels

Relational databases provides ACID guarantees
and I in ACID is 'Isolation' and Isolation levels helps us tune them.

Isolation levels dictate how much
one transaction knows about the other

We look at each one of them and
understand with examples

T_1 ▭
T_2 ▭
T_1 ▭
CPU1 CPU2

Repeatable Reads

Consistent Reads within same transaction
even if other transaction committed 1st transaction
would not see the changes (if value already read)

Read Committed

Reads within the same transaction always reads fresh value
con: Multiple reads within same transaction are inconsistent

Read Uncommitted

Reads even uncommitted values from other txns
"dirty read"

Serializable

depends on engine

Every read is a locking read

and while one txn read, others will have to wait.

* Storage engines can alter the implementation

    so read documentation before you alter