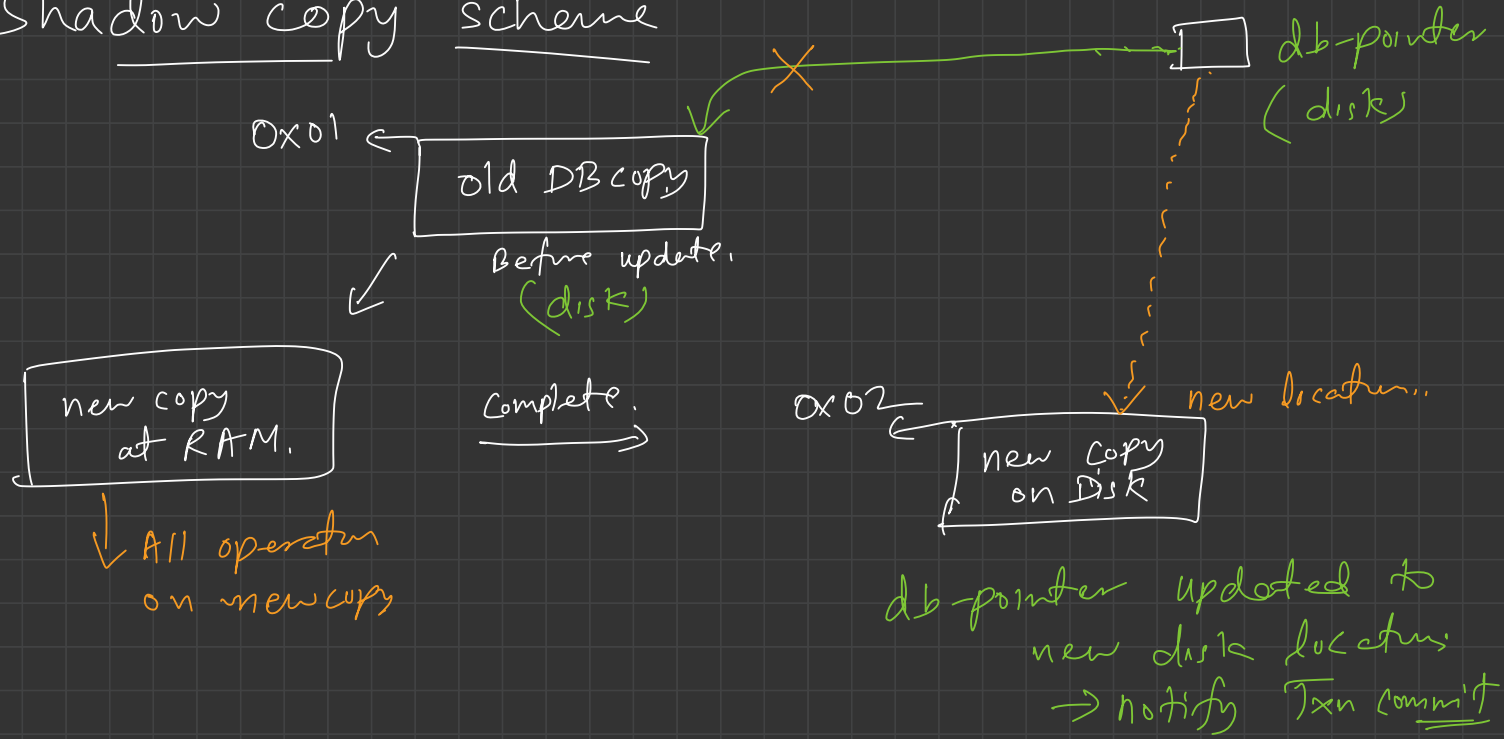



Lec-13

* how to implement Atomicity & Durability?

① Shadow copy scheme



Log Based Recovery :-

①

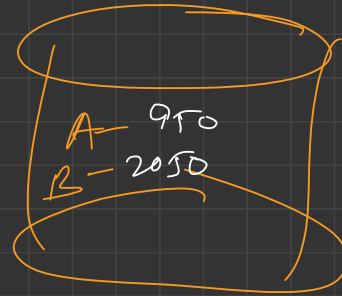
A
₹ 1000

B
₹ 2000

T₀:
read(A)
A := A - 50
write(A)
B := B + 50
write(B)

Logs (stable storage)

<T₀ start>
<T₀, A, 950>
<T₀, B, 2050>
<T₀ commit>



① Deferred DB Modification

② Immediate DB modification

$\langle T_0, \text{start} \rangle$
 $\langle T_0, A, 1000, 950 \rangle$
 $\langle T_0, B, 2000, 2050 \rangle$
 $\langle T_0, \text{commit} \rangle$

old item value
new item value.

→ checkpoints

$C_1 \rightarrow$

$\int \Sigma T_n \rightarrow \text{commit.}$

$C_2 \rightarrow$

$\Sigma T_n \text{ cont.}$

H.W → checkpoints

Google

Commit ✓ ✓