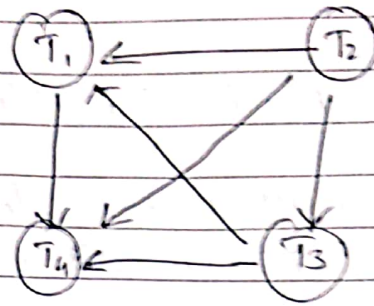


①

$T_1$	$T_2$	$T_3$	$T_4$
	$R(x)$		
$w(x)$		$w(x)$	
	$w(y)$		$R(x)$
	$R(z)$		$R(y)$



No cycle loop; Schedule is conflict serialisable

- ② Read (x): ACID: Atomicity: transaction in happening in its entirety.  
 $x: x - 50$   
~~Write (x)~~  
 Read (y)?  
 $y: y + 50$   
 Write

Consistency: Both the transaction are happening without interference and move from one consistent state to other.

Isolation  $\rightarrow$  Both the transaction are isolation from each other (no interference)

Durability  $\rightarrow$  Both the transaction are getting committed & no rollback is happening (All changes saved)

- Q3)
- | $T_1$            | $T_2$  |
|------------------|--------|
| $R(x)$           |        |
| $R(y)$           |        |
| $w(x)$           | $R(x)$ |
|                  | $R(y)$ |
|                  | $R(x)$ |
|                  | $w(x)$ |
| classmate $w(y)$ |        |
- (i) Write Read conflict happens b/w  $w(x)$  &  $R(x)$  in  $T_2$   
 $\downarrow$   
 $T_1$   
 (ii) Read-write conflict b/w  $R(x)$  in  $T_1$  &  $w(x)$  in  $T_2$   
 $R(y)$  in  $T_1$  &  $w(y)$  in  $T_2$   
 (iii) write b/w  $w(x)$  in  $T_1$  &  $w(x)$  in  $T_2$

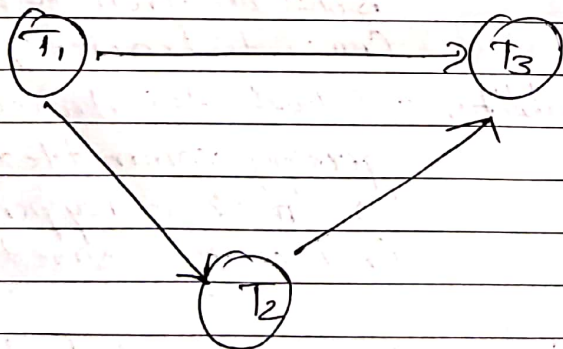
db.posts in one { $\{?$ ,  $\{id:0, post-test:1\}$ }

Matkh (M: MOVIES)

WHERE M: release = 2000

RETURN m.title, m votes

$T_1$	$T_2$	$T_3$
	$R(Y)$	$P: S$ in conflict. serializable
$R(X)$		$R(Z)$ Q If $T_3$ commits before $T_1$ finishes, then $S$ is recoverable
$R(Y)$		
$W(X)$		
	$R(Z)$	
	$W(Y)$	
		$R(X)$
		$W(Z)$



No cycle,  $p$  is true  
&  
Q is false.