

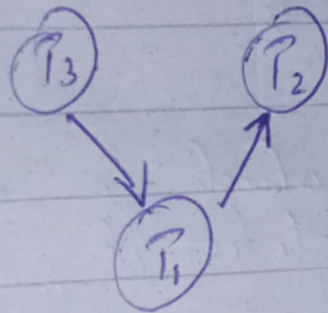
DB BONUS ASSIGNMENT

Bilal Ahmed Khan ; 20K0183

Sec: B;

QUESTION NO 01

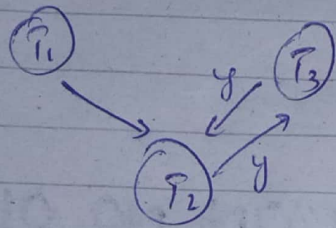
Schedule S_1



- T_1 reads x which neither modified by T_3 or T_2
- T_3 reads x before T_1 modifies it
- T_2 reads y & writes y after T_3

Hence we can conclude that the schedule is reliable.

Schedule S_2 :



→ T_2 reads 'y' which read and modified by T_3

→ T_3 reads 'y' which is modified before T_2 modifies it.

T_3 is interfering with the schedule of T_2 thus we can conclude that the schedule S_2 is not reliable.

QUESTION NO.02

⇒ $T_1 \rightarrow r_1(x), w_1(x), r_1(y), w_1(y)$

⇒ $T_2 \rightarrow r_2(x), w_2(x)$

Total $(n_1 + n_2)! / (n_1! n_2!)$

Transactions:-

$r_1(x), w_1(x), r_1(y), w_1(y), r_2(x), w_2(x)$ serial serializable

$r_1(x), w_1(x), r_2(x), w_2(x), r_1(y), w_1(y)$ conflict serializable

$r_1(x), w_1(x), r_1(y), r_2(x), w_1(y), r_2(x)$ conflict serializable

$r_1(x), w_1(x), r_2(x), r_1(y), w_2(x), w_1(y)$ conflict serializable

$r_1(x), w_1(x), r_1(y), r_2(x), w_2(x), w_1(y)$ conflict serializable

$r_1(x), w_1(x), r_2(x), r_1(y), w_1(y), w_2(x)$ conflict serializable

$r_2(x), w_2(x), r_1(x), w_1(x), r_1(y), w_1(y)$ serial serializable

$r_2(x), r_1(x), w_2(x), w_1(x), r_1(y), w_1(y)$ not conflict serializable

$r_1(x), r_2(x), w_1(x), r_1(y), w_1(y), w_2(y)$ not conflict serializable

$r_2(x), r_1(x), w_1(x), w_2(x), r_1(y), w_1(y)$ not conflict serializable

$r_1(x), r_2(x), w_1(x), r_1(y), w_2(x), w_1(y)$ not conflict serializable

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$r_1(x), r_2(x), w_1(x), r_1(y), w_2(x), w_2(y)$ not conflict serializable