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Assignment no: 2

Lock & Unlock Instruction.

T_1 : Lock-S(A)
read(A)
lock-X(B)
read(B)
if A = 0 then
B := B + 1
Write(B)
Unlock(A)
Unlock(B)

T_2 : lock-S(B)
read(B)
~~lock-X(B)~~
lock-X(A)
read(A)
if B = 0
then A := A + 1
Write(A)
Unlock(B)
Unlock(A)

Date:

Yes, the execution of these transactions can result in ~~dete~~ deadlock.

For Example:

T_1	T_2
lock-S(A)	
	~~lock~~ lock-S(B)
	read(B)
read(A)	
lock-X(B)	
	lock-X(A)

The transactions are now deadlock.

A no. 2

Beginning of log

<T_0, start>
<T_0, B, 2000, 2050>
<T_1, start>
<checkpoint {T_0, T_1}>
<T_1, C, 700, 600>
<T_1 commit>
<T_2 start>
<T_2, A, 500, 400>
<T_0, B, 2000>
<-- System Crash -->

Here is T_0 and T_2 are incomplete at crash.
undo list: T_0 and T_2 & T_0 and T_2 will be rollbacked
Redo list: T_1 & T_1 will be committed

<T_0, B, 2000>
<T_0 abort>
<T_2, A, 500>
<T_2 abbort>