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BÀI TẬP CÁ NHÂN
HỆ QUẢN TRỊ CƠ SỞ DỮ LIỆU

Bài 5.1.1

T1	T2	T3
Lock(B)		
R1(B)		
	Lock(A)	
	R2(A)	
		Wait(T2)
	W2(A)	
	Unlock(A)	
W1(B)		
Unlock(B)		
		Lock(A)
		R3(A)
		Lock(B)
		R3(B)
Lock(C)		
R1(C)		
	Wait(T1)	
		W3(A)
		Unlock(A)
W1(C)		
Unlock(C)		
	Lock(C)	
	W2(C)	

Bài 5.1.2

T1	T2	T3
RLock(B)		
R1(B)		
	RLock(A)	
	R2(A)	
		RLock(A)
		R3(A)
	Wait(T3)	
WLock(B)	*Deadlock*	
W1(B)		
Unlock(B)		
		RLock(B)
		R3(B)
RLock(C)		
R1(C)		
		Wait(T2)
		Deadlock
Wlock(C)		
W1(C)		
Unlock(C)		

Bị deadlock do T2 đợi T3, và T3 đợi T2

5.2

S: $T1 < T3 < T2$

T1	T2	T3	A	B	C
TS=10	TS=17	TS=15	RTS = 0	RTS = 0	RTS = 0
			WTS = 0	WTS = 0	WTS = 0
R1(B)				RTS = 10	
	R2(A)		RTS = 17		
		R3(A)	RTS = 17		
	W2(A)		WTS = 17		
W1(B)				WTS = 10	
		R3(B)		RTS = 15	
R1(C)					RTS = 10
	W2(C)				WTS = 17
		W3(A)	abort(T3)		
W1(C)					abort(T1)

Reschedule:

T1	T2	T3	A	B	C
TS=10	TS=17	TS=15	RTS = 0	RTS = 0	RTS = 0
			WTS = 0	WTS = 0	WTS = 0
R1(B)				RTS = 10	
		R3(A)	RTS = 15		
		W3(A)	WTS = 15		
	R2(A)		RTS = 17		
	W2(A)		WTS = 17		
W1(B)				WTS = 10	
		R3(B)		RTS = 15	
R1(C)					RTS = 10
W1(C)					WTS = 10
	W2(C)				WTS = 17

5.4

S: $T1 < T3 < T2$

[illegible]