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Unit Code: FIT3171
Applied Class No: A01

Comments for your marker:

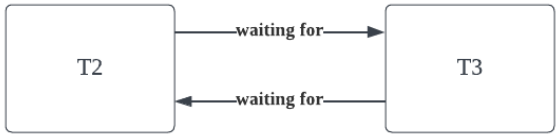
(a)

TIME	TRANS	ACTION	A	B	C	D
0	**T1**	**UPDATE A**	X(T1)			
1	**T1**	**UPDATE B**		X(T1)		
2	**T2**	**READ C**			S(T2)	
3	**T2**	**READ D**				S(T2)
4	**T3**	**UPDATE A**	T3 wait T1			
5	**T2**	**UPDATE C**			X(T2)	
6	**T1**	**ROLLBACK**	X(T3)			
7	**T3**	**UPDATE C**			T3 wait T2	
8	**T2**	**UPDATE B**		X(T2)		
9	**T2**	**UPDATE A**	T2 wait T3			

- Does a deadlock exist in this transaction sequence?

  Yes, a deadlock exists in this transaction sequence.

- Explain why you came to this conclusion.



At time 7, we could observe that T3 is waiting for T2. At time 9, we could also observe that T2 is waiting for T3. When there are two transactions waiting for each other, this occurrence is known as a deadlock. Hence, from the transaction sequence above, there exists a deadlock.

(b)

TRL ID	TRX NUM	PREV PTR	NEXT PTR	OPERATION	TABLE	ROW ID	ATTRIBUTE	BEFORE VALUE	AFTER VALUE
101	601	Null	102	START	**** Start Transaction				
102	601	102	103	UPDATE	PRODUCT	ABC	PROD_QOH	1205	1206
103	601	103	104	UPDATE	PART	A	PART_QOH	567	566
104	601	104	105	UPDATE	PART	B	PART_QOH	98	97
105	601	105	106	UPDATE	PART	C	PART_QOH	549	548
106	601	106	Null	COMMIT	**** End of Transaction				

…. add extra rows as needed