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Unit Code: FIT9132 Introduction to databases - S1 2023

Applied Class No: A03

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.

- Explain why you came to this conclusion.

Time 7: T3 waits for T2

Time 9: T2 waits for T3

T2 and T3 wait for each other, which causes a deadlock.

(b)

TRL ID	TRX NUM	PREV PTR	NEXT PTR	OPERATION	TABLE	ROW ID	ATTRIBUTE	BEFORE VALUE	AFTER VALUE
101	601	Null	112	START	**** Start Transaction				
112	601	101	123	UPDATE	PART	A	PART_QOH	567	566
123	601	112	134	UPDATE	PART	B	PART_QOH	98	97
134	601	123	145	UPDATE	PART	C	PART_QOH	549	548
145	601	134	147	UPDATE	PRODUCT	ABC	PROD_QOH	1205	1206
147	601	145	Null	COMMIT	**** End of Transaction				

.... add extra rows as needed