INDAD - Individual Assignment 3

Problem 1

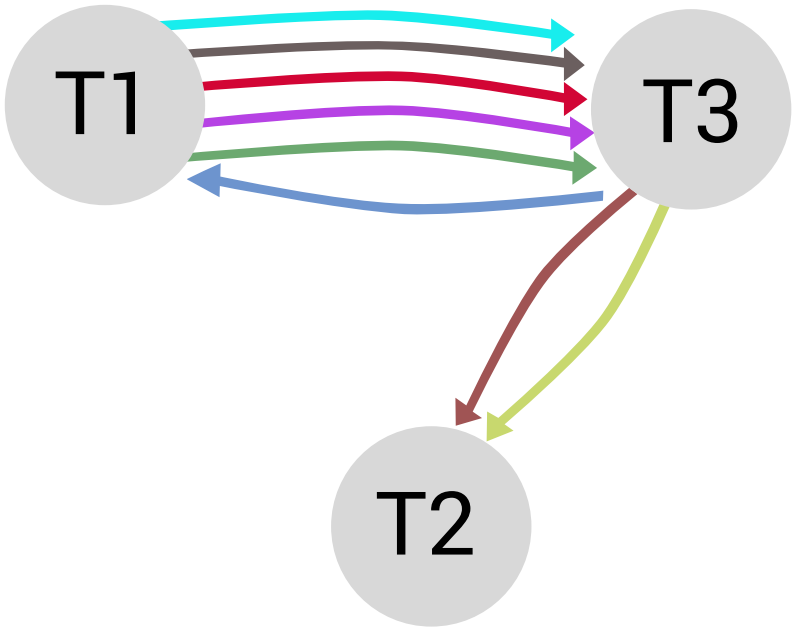
1

- a) Yes
- b) Yes
- c) Yes
- d) Yes
- e) No

2

No

3



4

No, for a schedule to be conflict serializable, it has to be serializable. Also, for a schedule to be conflict serializable, its dependency graph must be acyclic. As described in the answer to question 3, the dependency graph for this schedule includes a cycle.

5

No

Problem 2

1

From top to bottom:

- `IS(D)`
- `S(M)`

2

From top to bottom:

- `SIX(D)`
- `SIX(M7 - M21)`
- `X(M10 : 10)`

3

From top to bottom:

- `IX(D)`
- `IX(P)`

- `IX(P1 - P600)`
- `X(P1 : 1, P2 : 1, P3 : 1, P4 : 1, ... P600 : 1 )`

4

From top to bottom:

- `SIX(D)`
- `X(M)`

We don't know yet which records should be written to, so instead of locking all records in all pages, we simply lock the table.

5

- `SIX(D)`
- `S(P), X(M)`

6

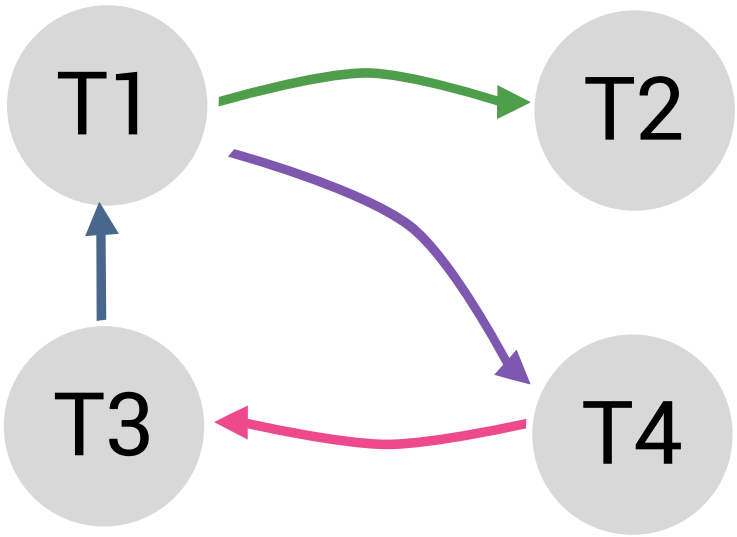
- `IX(D)`
- `X(M, P)`

Though, let it be known that the tables themselves will not be dropped.

Question 3

Time	t_1	t_2	t_3	t_4	t_5	t_6	t_7	t_8	t_9
T_1	S(D)		S(A)			X(C)		S(B)	
T_2				S(A)	X(B)				
T_3							S(C)		
T_4		S(C)							X(C)
LM	g	g	g	g	g	b	b	b	b

2



3

Yes. There exists a cycle between T_1, T_4 and T_3.