

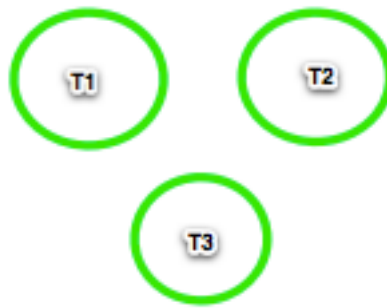
CS386 Homework 8

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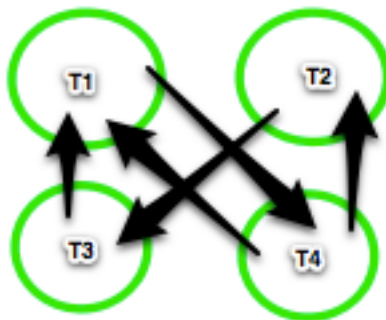
1

a.



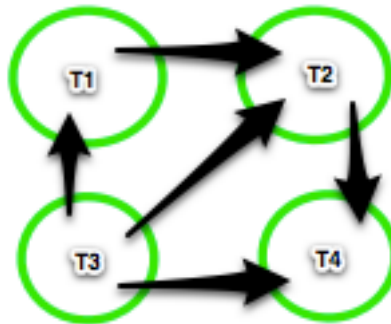
There are no precedences in this graph
There are no cycles
Therefore it is serializable.

b.



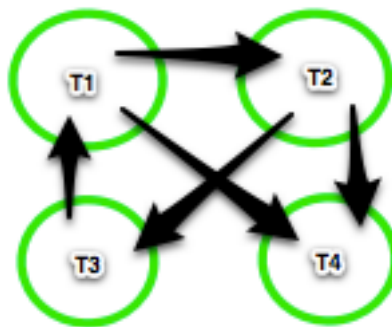
There is a cycle between T1 and T4. So it is not serializable.

c.



There are no cycles in all of these edges. So it is serializable.

d.



There is a cycle that goes from T1 to T2 to T3 and back. So it is not serializable.

2

T1 and T2 don't matter because of the checkpoint.

a.

R1 T3 update A from 4 to 6
R2 T3 update D from 0 to 12
R3 T3 update C from 0 to 9
R4 Commit T3

b.

U1 T4 update D 2 to 14
U2 Abort T5
U3 T5 update A 6 to 3
U4 T4 update D 12 to 2
U5 T5 update B 9 to 11
U6 T4 update C 10 to 5

c.

$$A = 6$$

$$B = 9$$

$$C = 10$$

$$D = 12$$

3