

Advanced Computer Systems

Assignment 2

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1 Serializability and Locking

1.1 Precedence graph

The precedence graphs for schedule 1 and schedule 2 can be seen in Figure 1.

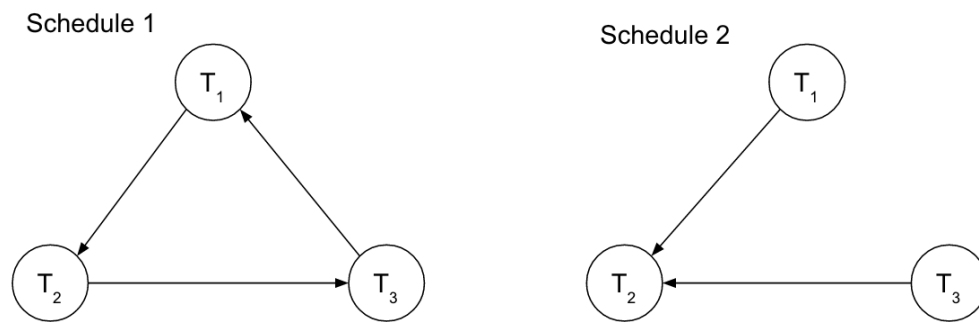


Figure 1: Precedence graph for schedule 1 and schedule 2

As can be seen in the graphs, schedule 1 cannot be synchronized as there is a cycle in the graph. Schedule 2 can be synchronized as it contains no cycle.

1.2 Can the schedules be generated using strict 2PL

2 Optimistic Concurrency Control

2.1 Scenario 1

2.2 Scenario 2

2.3 Scenario 3

3 Programming task