

Name: _____

In the wound-wait protocol what timestamp is used for a restarted transaction?

Consider a modified wound-wait protocol where a restarted transaction's timestamp is equal to the wounding transaction's timestamp plus one.

- a) Is the protocol free of deadlock?
- b) Is the protocol free of starvation?
- c) Is the protocol free of livelock?
- d) Explain any potential benefits/problems with this protocol.

Name: _____

What problem(s), if any, is there with the following schedule? The letter is the operation read/write, the left number is the transaction number, and the right number is the sequence number.

S: $r_{1,1}: (X)$; $w_{1,2}: (X)$; $r_{1,3}: (Y)$; $w_{2,2}: (Y)$; $w_{1,4}: (X)$; $r_{2,1}: (X)$;

For the transactions from the previous question, list 3 conflict serializable schedules, or state why it is not possible to create three.

What are the trade-offs between accessing data written by uncommitted transactions and data written by committed transactions?

Name: _____

In the wait-die protocol what timestamp is used for a restarted transaction?

Consider a modified wait-die protocol where a restarted transaction's timestamp is equal to the wounding transaction's timestamp plus one.

- a) Is the protocol free of deadlock?
- b) Is the protocol free of starvation?
- c) Is the protocol free of livelock?
- d) Explain any potential benefits/problems with this protocol.

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What problem(s), if any, is there with the following schedule? The letter is the operation read/write, the left number is the transaction number, and the right number is the sequence number.

S: $r_{1,1}: (X)$; $w_{1,2}: (Y)$; $r_{1,3}: (Y)$; $w_{2,2}: (Y)$; $w_{1,4}: (X)$; $r_{2,1}: (X)$;

For the transactions from the previous question, list 3 conflict serializable schedules, or state why it is not possible to create three.

What are the trade-offs between accessing data read by uncommitted transactions and data read by committed transactions?