

Transaction Processing

Exercise 9

Assignment 1: Which new requirements must commit fulfill considering distributed transaction? On that point, explain the basic assumptions of the existing commit!

Assignment 2: Explain the basic concept of the 2PC-protocol!

1. Show the process of the 2PC-protocol based on an example .
2. Which problems can occur during the process?
3. How can these problems be solved?

Assignment 3: Which difference between the 2PC- and 3PC-protocol exist?

1. Show the difference in the process of both protocols!
2. Do the innovations have effects on the states of teh protocols?
3. How does the error treatment of the 3PC-protocol works (Compare with the 2PC-protocol)?

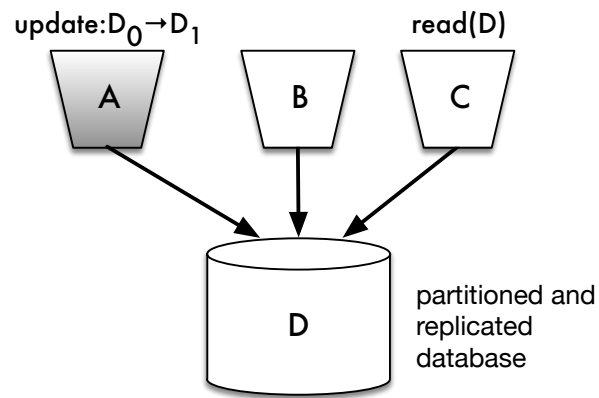
Assignment 4: Explain the problems occurring at distributing transactions! How can these problems be solved? To do this, describe necessary implementation details.

Assignment 5: How does the previously known locking protocols change in a distributed application field?

Assignment 6: How can deadlocks be prevented and/ or detected in distributed scenarios?

Assignment 7: What does the CAP-Theorem state about the properties of a database system?

Assignment 8: Given is the following scenario: Compare the execution of ACID and BASE.



Assignment 9: When should you use replication?

Assignment 10: How can 1-copy-serializable be guaranteed? Explain possible options?