CSC451 DISTRIBUTED DATABASES

Learning Outcomes

- Explain the techniques used for data fragmentation, replication, and allocation during the distributed database design process.
- Evaluate simple strategies for executing a distributed query to select the strategy that minimizes the amount of data transfer.
- Explain how the two-phase commit protocol is used to deal with committing a transaction that accesses databases stored on multiple nodes.
- Describe distributed concurrency control based on the distinguished copy techniques and the voting methods.

Content

Introduction to distributed database management, Distribution architectures, Distribution design, Distributed query processing and optimization, Replication/Fragmentation, Distributed concurrency control, Distributed reliability protocols, New distribution architectures, Multi database systems, Pervasive and mobile distributed database management, Distributed Database Recovery, Distributed Data Security, Web data management, Interoperability and componentization.

Pre-requisites

CSC315 Distributed Systems

Delivery

Lectures.