

Distributed Computing II

April 4, 2022

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Presented for the Software Architecture course
at the University of Queensland



THE UNIVERSITY
OF QUEENSLAND
AUSTRALIA

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Software Architecture

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1 Scalable Software

1.1 Scaling Up

1.2 Scaling Out

2 Load Balancing

3 Replication

3.1 Leaders and Followers

3.2 Multi-leader Replication

3.2.1 Conflict Resolution

3.3 Leaderless

4 Partitioning/Sharding

4.1 Partition by Primary Key

4.2 Partition by Secondary Index

4.3 Re-balancing

5 Transactions

5.1 ACID