Universität Zürich[UZH]

Communication Systems Group (CSG)

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Exercises in SSDS

Synchronization in Distributed Systems

Handout: May 05, 2020
Discussion: May 07, 2020 08:15

1: Select the correct choice:

In this method there is a possibility that processes cannot distinguish between dead coordinator and busy resource:

a) Token-Ring approach

b) Centralized approach

c) Distributed approach

2: What is the purpose of Maekawa algorithm?

3: Bring an example algorithm of solving mutual exclusion with distribute methods.

4: Compare the message flow of Critical Section (SC) centralized, distributed and token-ring methods for solving the mutual exclusion problem.

5: Compare the entrance time of Critical Section (SC) centralized, distributed and token-ring methods for solving the mutual exclusion problem.

6: Explain the Bully algorithm with an example.

7: What is the purpose of the Ring algorithm? Bring an example. In case of failure in a ring algorithm, what would be the action taken by other nodes in setting a new coordinator?

8: Explain the problem caused and solved with multicasting methods.

9: Explain the Reliable Multicast Algorithm and explain which problems are solved and caused by this algorithm.