

Homework 3

1. Give two primary reasons for replicating data in a distributed system. [0.25 marks]
2. Give one similarity and difference between sequential and causal consistency. You should answer specifically in terms of the write operations as seen by all the processes in a distributed system. [0.5 marks]
3. What is the main difference between blocking primary-backup protocol and non-blocking primary-backup protocol? [0.25 marks]
4. Give one advantage and disadvantage of non-blocking primary-backup protocol over blocking primary-backup protocol. [0.5 marks]
5. Mention the two constraints which should be satisfied while deciding the size of read quorum (N_R) and write quorum (N_W). Assume that the total number of servers is N . [0.25 marks]
6. Give one advantage and disadvantage of Read-One, Write-All (ROWA) protocol. [0.25 marks]