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Advanced Distributed Algorithms and Data Structures

SS 2019

Homework Assignment 10

Problem 1:
Propose a way to come up with a matching of the requests for the case that the requests continuously arrive over the time and should be matched as soon as possible (see slide 31 of Chapter 7).

Problem 2:
Complete the proof of Lemma 7.7 on slide 38 of Chapter 7.

Problem 3:
Provide a formal argument why, under the assumption that we have a synchronous message passing system, we can use the strategy that if a put request has made it to A_l when leaving some $B_{i,j}$, it continues in level $i+1$ of the diffracting tree with A_{l-1} without risking a high congestion. (See also slide 42 of Chapter 7.)