Session 3: Exercises

M2 MOSIG: Distributed Systems

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1 Quasi-reliable links

Question 1.1: *The quasi-reliable links algorithm presented in class (Figure 3 in the lecture notes) has a limitation that the* `delivered` *set grows infinitely. It is also mentioned in the lecture notes that, using a simple acknowledgment mechanism to be able to delete messages from the* `delivered` *set could create problems.*

Illustrate why a simple acknowledgment mechanism could create problems through an execution scenario.

2 FIFO quasi-reliable links

Several algorithm require a FIFO property for the communications (for example, Chandy-Lamport algorithm)

Question 2.2: *Specify the properties of FIFO quasi-reliable links*

Question 2.3: *Propose an implementation of FIFO quasi-reliable links on top of quasi-reliable links*