

Exercise Session 7

GM and VSC

Problem 1

Show that P is the weakest failure detector for Group Membership.

The failure detector D is weakest for solving some problem A (e.g., Consensus or NBAC) if D provides the smallest amount of information about failures that allows to solve A .

Problem 2

Note: This is a continuation of Problem 3 from Exercise Session 6 (last week).

In this problem we will change the *view-synchronous communication (VSC)* abstraction in order to allow joins of new processes. Answer to the following questions:

1. ~~Are the properties of VSC (as given in the class) suitable to accommodate the joins of new processes. Why / Why not?~~ (done)
2. ~~Change the properties of VSC, so that they allow for implementations that support the joins of new processes. (Hint: focus on the properties of *group membership*)~~ (done)
3. Sketch the changes we need to perform on the Consensus-based (Algorithm II) implementation of VSC in order to support joins.