Algorithms for Distributed Systems

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Exercise 3: LayeredBFS (I/O Automaton)

Deadline: December 14

Formulate the LayeredBFS algorithm described in Lynch's book as an I/O automaton. Please put emphasis on a good structure of the description in order to make it not only precise but also concise and clear.

Try to formalize the key invariants of the algorithm.

The deliverable of this exercise is a written report to be handed out to me in class.

Exercise 4: LayeredBFS (DAJ)

Deadline: January 4

Implement the LayeredBFS system in the DAJ system and make assertions from some of the key invariants.

The deliverable of this exercise consists of a package (.zip or .gz file) sent to me per email containing

1. the well-structured and well-documented source code,
2. the compiled class file(s), and
3. an HTML page into which the program is embedded as an applet with a short description of the algorithm.