Distributed Computing: Spring 2024
Theory Assignment 2: Leader Election
Submission Date: 3rd April 2024 21:00 hrs

Q1. The bully algorithm operates effectively on a completely connected graph, assuming:
    (1) Communication links are fault-free,
    (2) Processes can only fail by stopping, and
    (3) Failures can be accurately detected using mechanisms like timeouts.

How could you adapt the bully algorithm to function on a connected graph but is not a completed graph. Since the graph is connected, there exists a path between any two vertices of the graph. Please keep the remaining assumptions unchanged which includes the assumption of a synchronous system.

Q2. In the class, we studied leader election for arbitrary networks for synchronous systems. Can you change this algorithm to work for asynchronous systems?

Note: Submit your answer as a pdf by the deadline mentioned above. Please follow the naming convention as Theory-Assign2-<rollno>.pdf for the submission.