Exercise 3:Message Passing and Distributed Mutual Exclusion

Objective:

To understand and implement message passing between distributed processes.

To implement a distributed mutual exclusion algorithm to manage resource access in a distributed system.

Part 1: Message Passing

Task 1: Implement a Simple Message Passing System

Description: Create a message passing system where multiple processes communicate with each other using Java sockets. Each process will send and receive messages.

Part 2: Distributed Mutual Exclusion

Task 1: Implement Distributed Mutual Exclusion Using Ricart-Agrawala Algorithm

Description: Implement a distributed mutual exclusion algorithm (Ricart-Agrawala) to ensure that only one process at a time can access a critical section.