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Department of Computer Science and Engineering

Programme Name: B.Tech **Semester: VI Branch: Computer Science & Engg**

Course Code: CSN16400 **Course Name: Distributed Systems**

Experiment No. 7

Experiment Description
Implement the following Algorithms in Distributed Systems. **i) Distributed mutual exclusion algorithms**: Lamport Algorithm and Ricart-Agrawala Algorithm. **ii) Centralized Algorithm for Deadlock Detection**: a) Design a system where a single central coordinator is responsible for detecting deadlocks by collecting wait-for graphs (WFG) from all participating processes/nodes. b) The coordinator should periodically request resource allocation and process wait information, construct a global WFG, and check for cycles to identify deadlocks.