Distributed Operating Systems Principle: Project - 2 Bonus Project Report

Submitted By:

Alekhya Gollamudi, ufid: **5194-2114**

Jayanth Atcha**, ufid:1168-4279**

DETAILED FINDINGS:

1. A failure mechanism has been introduced that takes the percentage of faulty nodes as an input parameter along with nodeNum, topology, and protocol.
2. Some nodes are designated as faulty nodes at random, and these nodes do not transfer data to neighboring nodes.
3. Based on the percentage of faulty nodes, a total number of faulty nodes is calculated and an array of failed nodes is generated.
4. As the number of failed nodes increases, convergence increases as these nodes do not transmit data to neighboring nodes.
5. In some cases, if all the neighboring nodes are faulty, convergence does not happen.
6. For Example, In the case of Line topology, if both the neighboring nodes(left and right) are proven to be faulty, messages can not be transmitted.
7. Convergence is achieved for other topologies with the percentage of faulty nodes up to 60%.
8. The convergence is not the same every time as the faulty nodes are picked randomly every time.