University of St Andrews

Distributed Systems

CS4103

Ring-Based Distributed System

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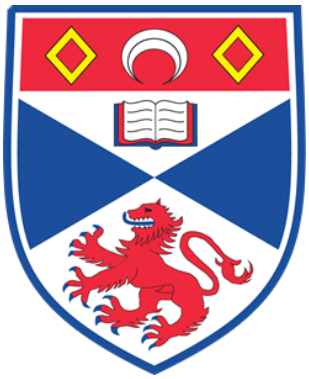

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1 Goal

To demonstrate an understanding of leader election and mutual exclusion in distributed systems by developing a ring-based distributed social media application.

2 Initial Set-up

Java 8 was chosen for this project due to it's friendly socket API, and Maven [1] was used as a build tool.

2.1 Configuration

Since each node would be running on an isolated machine, the planned testing environment would involve using *ssh* to start the node on each machine. Providing configuration as command line arguments was considered simpler than other methods, and was implemented using the Apache Commons CLI library [2].

3 Leader/Coordinator Election

4 Receive/Send Posts

References

[1] Apache. Apache maven project. `https://maven.apache.org/`.

[2] Apache Commons. Apache commons cli. `https://commons.apache.org/proper/commons-cli/`.