

Parallel and Distributed Systems Group (PDS)  
Department Software and Computer Technology  
Faculty EEMCS  
DELFT UNIVERSITY OF TECHNOLOGY

# LAB EXERCISES

## DISTRIBUTED ALGORITHMS (IN4150)

### Exercise 1c

Implementation of total ordering  
of broadcast messages in Java/RMI

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## 1 Assignment

Implement Algorithm 3.18 of the lecture notes for total ordering of broadcast messages with Java/RMI. The implemented program should be **truly distributed** in that it can be demonstrated to run across multiple physical machines.

The assignment can be split up into the following two parts.

### First day

Implement the algorithm itself. Incorporate random delays before processes send a message.

### Second day

Design a few test cases for the algorithm. Implement a program that records all message-receive events on a per-process basis in separate files, and that checks that the algorithm works correctly.