Homework 7 – Leader Election in asynchronous ring $O(n^2)$

Overview:

- Simulation has been implemented on 5 processors P0, P1, P2, P3 and P4. Each processor has an integer id value and each processor is running in its own thread.
- Each processor has its own incoming and outgoing channel.
- Initially these processors start sending IDENTIFIER messages to their left neighbor in a ring topology.
- On receiving a IDENTIFIER message from its neighbor, the processor will check its own id value with the received value. If the value received is smaller, then the message gets swallowed at current processor. If the value received is greater, it forwards this message to its left neighbor.
- A processor declares itself as a leader on receiving its own message back and it then sends a TERMINATE message in a ring of the processors.

Input:

Processors nodes with their in-channel, out-channel and information about left neighbors.

Class Diagram: