Homework for Monday 4 October 2021

Exercice 1 (only1) / You should do the exercice number 4 of the official list of exercise of this chapter. Understand the **exercise 4** as follows: the goal is to receive messages in the order of the timestamp that is shown in the received messages. We do not really care about at which local time, each process treats each message.

Exercice 4 (adapted from one from Chapter 6 of Ghosh)

In a network of N processes (N>2), all channels are FIFO, and of infinite capacity. Every process is required to **accept data from the other processes in strictly increasing order of timestamps**. You can assume (i) processes send data infinitely often, and (ii) no messages is lost in transit.

First, build a 3 processes example, that illustrates this requirement: Process P1 sends 2 messages, one to P2, one to P3. On reception, P3 sends a new message to P2. All messages are timestamped using Lamport's clocks.

Then, propose an implementation to make it possible that processes respect the requirement. (Hint: Consider using null messages through a channel to signal the absence of a message from a sender).