TP 1

Tristan Perrot

# Concurrency

## Exo 1: Basic Multi-Threads

* Message printouts are in random order (the order depends on the elected thread). This is not the same order every time. But while a thread is sleeping, the others have the time to print on the console. So, the numbers in the console are in ascending order.

## Exo 2 : Command Buffer

* The buffer isn’t empty at the end, but we don’t need to access of this data and this useless data can be easily deleted by writing on it.
* When we leave the synchronisation, commands are only pushed and not pulled and the PushThread never ends.

# Deadlocks, Livelocks & Starvation

## Deadlocks:

* A deadlock happens because all the instances of a DeadlockExample shared the same lock1 & lock2 class variables.
* If they are no longer class variables, they are recreated on every call of DeadlockExample then they aren’t the same variables.

## Livelocks:

* A livelock happens because operation1() and operation2() try to acquire the same resources and by that the inter-lock themselves.
* A higher sleep time implies a longer livelock time.