Homework 5: Synchronization

Due date: noon of Thursday Mar 31, 2022

**[Question 1]** Consider the methods used by process P1 and P2 for accessing their critical sections whenever needed, as given below. The initial values of shared boolean variables S1 and S2 are randomly assigned.

|  |  |
| --- | --- |
| Process 1 | Process 2 |
| while (S1 == S2);  **critical section**  S1 = S2; | while (S1 != S2);  **critical section**  S2 = not (S2); |

Does this code guarantee:

1. Mutual exclusion? Why? It does because it only allows one process to run the critical section at a time
2. Progress? Why? It does because each only threads that need the shared resource participate in the decision to access it
3. Bounded wait-time? why? No because one process finishing doesn’t guarantee the other will

**[Submission]**

Add your document to the *homeworks* directory in your shared folder on Drive.