

Operating Systems

Thread Synchronization: Exercises

Thomas Ropars

`thomas.ropars@univ-grenoble-alpes.fr`

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Peterson's algorithm

What if lines 4 and 5 are swapped?

Algorithm 1 Peterson's algorithm for thread T_i

Global Variables:

```
1: bool wants[2] = {false, false};
2: int not_turn; /* can be 0 or 1 */

3: enter_CS()
4:   not_turn = i;
5:   wants[i] = true;
6:   while wants[1-i] == true and not_turn == i do
7:     /* do nothing */
8:   end while

9: leave_CS()
10:  wants[i] = false;
```

Peterson's algorithm

Discuss the correctness of this new version of the algorithm:

- If you think the algorithm is correct, briefly justify why.
- If you think the algorithm is not correct, describe the problem.