Operating Systems
Thread Synchronization: Exercises

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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.