Exercise Sheet 6
(15 Points)

Thursday, January 16, 2020

Note: This exercise lasts for two lab sessions (16.01.2020, 23.01.2020).

6.1 Priority Inheritance Protocol (PIP) and Priority Ceiling Protocol (PCP) (15 points)

Please implement the following resource sharing protocols under fixed-priority scheduling accordingly:

- Priority Inheritance Protocol (5 points)
- Priority Ceiling Protocol (10 points): Assume the ceiling of each task is given before running the system. You must use an example that PIP will have a deadlock whereas PCP works smoothly.

Bonus - Reservation Server (10 points):

Please select one of three introduced reservation servers to implement in the FreeRTOS.

General Hint: To demonstrate the applicability of your design, you can use the examples in the lecture slides.