
Explore Fixed Priority Scheduling

is to all students of ANU/FEIT/DCS/COMP4330

This is still an open 'make yourself familiar' assignment. So no deliverables, but you should complete this in two weeks.

1. Subject

Understanding scheduling in a fixed priority scheduling (FPS) environment. Deepen or re-fresh your knowledge about protected objects.

2. Assignment

Re-write the task-compatible version of the example queues into a stack-package. Use this package as a way of communication between multiple (three or

more) tasks. Make sure tasks are blocked (suspended) in both cases of stack-underrun and stack-overflow.

Identify one of the tasks as a 'critical' task and make sure that this task is always unblocked first, in case that there are multiple possibilities to unblock tasks which are waiting for conditions at the protected object to apply. Can you implement such a schema based on delay statements alone?

An obvious way is to assign priorities. Experiment with static and dynamic priorities in your task-set. Can you guarantee minimal blocking times for a specific task also without assigning task priorities? How would you do that?