

CG2271 Real Time Operating Systems

Assignment 2

1. Introduction

In the previous assignment you created a time-slicing multi-tasking kernel that used the timer to switch between tasks. In this assignment you will implement semaphores and a queue to coordinate between tasks and to facilitate communications.

For Windows 7 users, please download Hyperterminal.zip from IVLE and unzip it into a directory, then create a shortcut on your desktop to hypertrm.exe. You may also use PuTTY if you wish.

2. The Assignment

You are provided with 3 source files for this assignment:

coord.h: Header file for the coordination algorithms.

coord.c: You will implement your algorithms in this file.

Assg2.c: You will implement a demo program in this file. The demo program will include a creative component which will get you an extra 5 marks.

You are to implement the routines in coord.c and Assg2.c, as well design the OSSignal structure in coord.h. You should document what you have done in the attached CG2271report2 template.

You will also need the serial.h, serial.c files, as well as the multitasking kernel you implemented in Assignment 1.

Submission deadline for both Assignment Reports is 5 pm, Friday 11 November 2011. No extensions will be given.