RTOS Project

SE350 Winter 2013

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Project Introduction

- Keil MCB1700 Cortex-M3 Board
- Design and Implement a small RTX
  - Basic multiprogramming environment
  - 5 Priority queues, preemption
  - Simple memory management
  - Message-based IPC(Interprocess Communication)
  - Basic timing Services
  - System console I/O
  - Debugging support

Organization and Deliverables

- Project Groups
  - 4 members (3 is acceptable for special cases)
  - Within the same lab section as much as possible
  - Use **Course Book System** to signup by 16:30 Jan. 17th, 2012.
  - Group split-up (one week notice in writing before a deliverable is due, only one split-up is allowed. 1% penalty)
- Deliverables
  - RTX Implementations (P1, P2 and P3)
  - RTX Demonstrations (TBA)
  - Final Project Report (30-40 pages)
  - 3 Grace days without penalty
    10% per day late submission penalty afterward.

Lab Facilities

- E2-2363 Lab facilities
  - Nexus PCs
  - MCB1700 LPC1768 (Cortex-M3) Board
  - MDK-ARM MDK-Professional ed. on some PCs
- Off campus development facilities
  - MDK-ARM MDK-Lite ed. (32KB code size limit)
- The RealView Compilation Tools (RVCT) from ARM are included in MDK-ARM installation.

Communications

- Piazza: Lab Q&A
  - Lab/Project Administration Q&A
  - Keil IDE Q&A
  - Project Q&A
  - Targeted response time: One <u>business</u> day (don't wait till the last minute to ask questions)
- Questions containing confidential personal information can be asked by individual emails.
- TA Project Help during even weeks (starting from week 2)