

CS170 Discussion - 2009-05-01

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Outline

- Project 4 Overview
- Midterm Information
- Midterm questions / project 3 questions

Project 4

- 1) Implement a semaphore server in minix
 - Add server to the boot process
 - Add functions to posix library
 - Add message passing permissions
 - Service needs to automatically restart if killed
- 2) Solve a synchronization problem



Semaphore Service API

- `int sema_init(int semaphore_number, int start_value)`
- `int sema_down(int semaphore_number)`
- `int sema_up(int semaphore_number)`
- `int sema_release(int semaphore_number)`
- Valid semaphore_numbers: 0-9

Hint, hint

- Sending a message in minix is blocks until the reply is received
- <http://www.usenix.org/publications/login/2006-04/openpdfs/herder.pdf> -- read it



Synchronization Problem

- Many students want to ask a single professor a question
- Synchronize the questions so the professor doesn't go crazy, and the students have their questions answered



Midterm

- 5 Questions, each with multiple parts
- Covers material up to and including slide 24 of the deadlocks set (cs-170-06.pdf)
- Review all slides and projects



Questions, comments or answers?