

Operating Systems, Spring 2002
CS 43201/53201
Department of Math and Computer Science
Kent State University
Take Home Assignment #2
100x10=1000 points (Due: March 6)

All problem and page numbers refer to your text book (5th Edition, OS Concepts, Silberschartz). If you are using a different version of the book make sure you match the problem number correctly.

1. Problem 6.1 on page 150.
2. Problem 6.3 on page 150.
3. Problem 6.4 on page 151.
4. Problem 6.7 on page 152.

5. Problem 7.1 on page 200.
6. Problem 7.3 on page 201.

7. Show that message passing and semaphores have equivalent functionality by:
 - a. Implementing a message passing using semaphores. Hint: make use of a shared buffer area to hold mailboxes, each one consisting of an array of message slots.
 - b. Implementing a semaphore using message passing. Hint: introduce a separate synchronization process.

8. Problem 8.4 on page 232.
9. Problem 8.6 on page 232.
10. Problem 8.13 on page 234.