Homework #2

Due in class at 5pm on Monday 31 October 2005
typed answers preferred

1. How does the meaning of the "reply" message differ between Lamport's Algorithm and Ricart and Agrawala's Algorithm for mutual exclusion in a distributed environment?

2. In what ways is Suzuki and Kasami's Broadcast Algorithm for mutual exclusion better and worse than the algorithms mentioned in question 1 above?

3. The Chandy, Misra, and Haas Edge-Chasing Algorithm for deadlock detection in a distributed environment does not report false deadlock. Why not?

4. One of the methods of deadlock prevention is to allow preemption. What is the major problem with this method?

5. One concurrency control mechanism for deadlock prevention is lock timeouts. What are the problems with this method?

   My homework assignments are intended to test your knowledge of some of the material presented in my lectures and in the textbook. On these homeworks, I expect clear, well-focused answers to the questions asked, answers that balance brevity and detail. While brevity is desirable, one-sentence "answers", or lists of examples without further explanation, will probably not suffice. While detail and examples are desirable, two-page answers to each question are probably unnecessary. Furthermore, unattributed "quoting" of sentences from the class textbook, from other textbooks, from the Internet, or from anywhere else will be considered plagiarism and is totally unacceptable (see the section on the course syllabus on Academic Dishonesty). I expect you to answer the question in **your own words** to convince me that you understand the material.