

EECS 345: Homework 2

Introduction to Distributed Systems

Winter 2008

Important Dates

Out: Thursday March 6, 2008.

Due: Thursday March 13, 2008.

Submitting your homework: Please use the course submission site. There is a link to it from the class site.
Submit only ASCII text files.

Problems

1. Write the pseudocode for enforcing causally-ordered multicasting among a set of processes.
2. Consider a nonblocking primary-backup protocol used to guarantee sequential consistency in distributed data store. Does such a data store always provide read-your-writes consistency?
3. In the following figure, what are the permissible delivery orderings for the combination of FIFO and total-ordering multicasting?

Process P1	Process P2	Process P3	Process P4
sends m1	receives m1	receives m3	sends m3
sends m2	receives m3	receives m1	sends m4
	receives m2	receives m2	
	receives m4	receives m4	

4. Does it make sense to restrict the lifetime of a session key? If so, give an example of how that could be established.