

Homework 4 (due 4/21/2009 at 12:05pm)

via email to ada@cc or hardcopy in class

1. Describe the data structures which need to be maintained at the client- and the server-side in the Sprite file system in order to support the sharing and consistency semantics described in the paper.

2. Assumption: all variables originally hold the value 0.

a) Consider the following sequence of operations:

P1: W(x)1 R(x)2 W(x)3

P2: W(x)2

P3: R(x)2 R(x)1

P4: R(x)2 R(x)3

Is this execution causally consistent? Add or modify an event to change the answer.

b) Consider the following sequence of operations:

P1: W(x)1 W(x)3 S

P2: R(x)3 S R(x)1

Is this execution weakly consistent? Add or modify an event to change the answer.