

**Systems Qualifier Exam
Spring, 2011**

Name : _____

SID: _____

Score : _____

3. Draw a picture illustrating how recursive name resolution works in a distributed naming system. Explain in one or two sentences why recursive name resolution might be a bottleneck in a naming system such as DNS.

4. Explain briefly why message logging allows a distributed application to take infrequent checkpoints and yet recover quickly from a crash.

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

6. Java and other languages suppose exceptions, which are raised when an error occurs. How would you implement exceptions in RPCs and RMIs?

9. Consistent model

Assume initially $x=y=0$.

Process P1	Process P2
$x = 1;$ if ($y == 0$) kill (P2);	$y = 1;$ if ($x == 0$) kill (P1);

- (a) Define what the sequential consistency (SC) and first-in first-out (FIFO) model are
- (b) Is it possible to have both the processes killed in SC and FIFO model?
- (c) Provide arguments to support your answer given in (b)