

Processes



Practice Exercises

- 3.1 Palm OS provides no means of concurrent processing. Discuss three major complications that concurrent processing adds to an operating system.
- 3.2 The Sun UltraSPARC processor has multiple register sets. Describe the actions of a context switch if the new context is already loaded into one of the register sets. What else must happen if the new context is in memory rather than in a register set and all the register sets are in use?
- 3.3 When a process creates a new process using the `fork()` operation, which of the following state is shared between the parent process and the child process?
 - a. Stack
 - b. Heap
 - c. Shared memory segments
- 3.4 Again considering the RPC mechanism, consider the “exactly once” semantic. Does the algorithm for implementing this semantic execute correctly even if the “ACK” message back to the client is lost due to a network problem? Describe the sequence of messages and whether “exactly once” is still preserved.
- 3.5 Assume that a distributed system is susceptible to server failure. What mechanisms would be required to guarantee the “exactly once” semantics for execution of RPCs?

