

Lab 3: Exercise 3

1 1

In Minix (or any other Unix), if user 2 links to a file owned by user 1, then user 1 removes the file, what happens when user 2 tries to read the file? (Tanenbaum and Woodhull, Ch. 1, Ex. 15)

ANS: Nothing because there is another because in the inode structure there is a another link. And you cant fully remove a file unless the number of links is one.

2 2

Under what circumstances is multiprogramming likely to increase CPU utilization? Why?

ANS: Under the case where one one process is blocked and you want to run another process. Because one is waiting for I/O and the CPU is free.

3 3

suppose a computer can execute 1 billion instructions/sec and that a system call takes 1000 instructions, including the trap and all the context switching. How many system calls can the computer execute per second and still have half the CPU capacity for running application code? (TW 1-21)

ANS:

3.1 4

whatt is a race condition? What are the symptoms of a race condition?(TW 2-9)

ANS: When two/more processes are reading/wrtiing some shared resource and the final results depend on who runs. Symptoms: Unexpected ouputs such as no result