Due Tuesday February 12, 2019

A. Exercises: 3.1, 3.2

B. Exercise: 3.15 (Note: it should refer to Figure 3.21 instead of 3.32)

C. Exercise: 3.16 (Note: it should refer to Figure 3.22 instead of 3.33)

D. Exercise: 3.17 (Note: it should refer to Figure 3.23 instead of 3.34)

E. Exercise: 3.20 (Note: it should refer to Figure 3.24 instead of 3.35)

F. Consider the following code sequence:
   char buf1[400], buf2[300], buf3[1500];
   int x,y,z,w;
   x = (open 'xyz', 2);
   if (x < 0) { printf("error 1"); exit(-1)}
   w=lseek(x,700,1);
   if (w < 0) { printf("error 2"); exit(-2)}
   y = read(x,buf1,220); // the first read system call
   if (y < 0) { printf("error 2"); exit(-3)}
   y = read(x,buf2,100); // the second read system call
   if (y < 0) { printf("error 2"); exit(-3)}
   z = read(x,buf3,1300); // the third read system call
   if (z < 0) { printf("error"); exit(4)}

Assume that it takes 4 milliseconds and 5 milliseconds to
perform read and write disc operation, respectively, and that it
takes 0.1 millisecond and 0.08 millisecond for operating system
to process a system call and hardware interrupt, respectively.
Also, assume that the given process is the only active
process in the system and that no error happens during the
execution of system calls or I/O operations. For how long this
process will be blocked after issuing:
   a. lseek system call. Explain.
   b. the first read system call? Explain.
   c. the second read system call? Explain.
   d. the third read system call? Explain.

G. The clock interrupt handler on a certain computer system
requires 0.01 millisecond (including CPU switch). If the clock
routine is activated 50 times per second, what is a fraction of
the CPU time devoted to the clock?