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Homework 5

8131

8176

1.a)

libnss is a set of open source crypto library where nss stands for network security services.

libc is the standard C library that has the basic functions used by C.

libdl functions are now within libc, however, libdl stays around for backwards compatibility.

libtinfo is an offshoot of terminfo which contains functions of the terminal.

b)

Apart from the virtual page numbers, they are almost identical apart from one anon being 4K different and therefore the total is different by 4K.

There is an anon that shares the same address, all others are different.

2.a)

When switching, with threads the address space does not need to change. Another difference is when using threads, there are multiple stacks and do not have to be located directly on the bottom versus processes having only one stack.

b)

Using multiple threads in a program may increase the time efficiency, both because just running at the same time and the other reason is not having to wait for the process to finish an action that would be blocking it.

c)

  a. command = /usr/lib/snapd/snapd

  b. pid = 919

   i. Thread pid:

    919

    1133

    1141

    1144

    1145

    1146

    1261

    1266

    1268

    1301

    1309

    1310

    1350

    1397

    1430

    4400

    8585

3.a)

The counter stops matching the intended value at 10,000.

b)

I think that it takes such large numbers, because initially each thread is just about in sync, but the tiny difference between them will start to get larger until there is a difference.

c)

Increasing the number of cores would cause the problem to occur sooner, due to using more threads so there are more options for things to overlap.