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Lab 1

Intro to OS

1. *`chmod 777 permissions.txt`* gives rwx permissions to user, group, and all since read (4) + write (2) + execute (1) = rwx (7) in the octal format. So, you can see that rx = 5, rw = 6, rwx = 7, wx = 3.

Then, rw for user, wx for group, and r for all would be:

*`chmod 634 permissions.txt`*

1. The processor is the actual hardware component that provides compute power to the machine. On the other hand, a core is the actual processing unit of the processor. A processor can have multiple cores which can simultaneously work on multiple processes. This can be advantageous in the amount of compute power your system can perform. A system with more cores can handle more processes, reducing the time it takes to perform tasks. However, the disadvantage of having many processors is that it can increase power consumption from the system and add complexity. Processes need to also be run in parallel to be optimally take advantage of multiple cores.
2. The most challenging problems I did was sorting with pointers and figuring out if a string was a palindrome. It took me a bit of time to get familiar with differences of using pointers in arrays and then using pointers with characters for a string. For the sorting problem, I used insertion sort to insert unsorted numbers into a sorted subarray by iterating with a pointer. For the palindrome problem, I created a pointer at the start of the string and a pointer at the end of the string. The starting and ending pointer converge to the middle of the string and check that each of the letters are the same at each iteration.