**Discuss where memory is being used in everyday aspects of your life this week.**

Memory is in use all of the time while a computer is running. By using Process Explorer (Techyv, 2012), you can see that even when a system is idle and there are no other applications open, the operating system has numerous processes running in the background. My guess is that the processes are probably waiting for keyboard and mouse input, keeping the calendar and time data, maintaining a connection to the router, and keeping track of battery power and configurations among other things. Every time a new program is opened, its associated processes are added to the running list of processes. Every process has code, a stack, and a heap associated with it, in addition to header information for each of these segments; and all of these reside in memory, either in RAM or in page files on the hard drive (Arpaci-Dusseau & Arpaci-Dusseau, 2012). We haven’t learned about persistence yet, but it is common knowledge that even when a computer is turned off, memory is still being used to store our data (thank goodness). In fact, if there is any sensitive information on a hard disk, it may not be enough to simply wipe a hard disk before disposing of a hard drive (Schofield, 2017). I find that a hammer and a screwdriver is the only way I feel confident that data has been destroyed; and it can be cathartic too. :)

References

Arpaci-Dusseau, R. & Arpaci-Dusseau, A. (2012). *Operating Systems: Three Easy Pieces. Madison, WI: University of Wisconsin-Madison.* Retrieved from <http://pages.cs.wisc.edu/~remzi/OSTEP//>

Schofield, J. (November 30, 2017). My laptop no longer works. How can I erase my personal data? *The Guardian.* Retrieved from <https://www.theguardian.com/technology/askjack/2017/nov/30/laptop-no-longer-works-erase-personal-data-hard-drive-faulty-motherboard>

Techyv (Sep 10, 2012). How to use Process Explorer to see what processes are doing. *YouTube*. Retrieved from <https://www.youtube.com/watch?v=bPI0xE8F3qc>

**Discuss the weeks activities and your observations**

This week, I did my readings (and even read the couple of chapters that we skipped because I felt I was getting a little lost). I had the most trouble with the sections discussing converting decimal to binary and hex. They do not give much explanation in the textbook, but keep discussing the math the harddrive does on a cursory level when they discuss how the address spaces are translated. This did impact some questions on the self quiz and I will need to go back and do a better job of figuring out how that all works. As for the programming assignment, even though it wasn’t programming per se, I still felt it was a worthwhile assignment to see how individual processes are using memory. I have to try to find a similar tool for linux, so I can finally see the PIDs for the fork() processes. The one concern I have is that the assignment was not very specific about which windows to take a screenshot of and without knowledge of what will be on the rubric, I am not sure that the specific screenshots I took will be graded favorably even though they do fundamentally answer the questions. We will see how that turns out. Regarding the discussion, it was good to write about the big mess so that I could consolidate what I learned from the reading.

*This is an aside on plagiarism because I feel we have enough rapport at this point that I can bring this to you and you will understand it comes from a place of helping, not critique. I understand that the only way to have students learn to not plagiarize is to give timely feedback on their writing. Perhaps you could consider doing it privately rather than publicly and with the tone of helping the student to learn a skill that takes years to master rather than accusatory. Why? Based on your profile and comments I know that you are dedicated and want to create a positive environment; and while many students have a thick skin, others may not have the same mileage as some of us. Yes, a public reprisal can be a memorable and effective learning tool. On the other hand, it can humiliate and add to stereotype threat (psychology terminology). Considering our school is serving non-traditional students from all over the globe, I think this is especially relevant because most of the students don’t fit the bill gates, steve jobs, or mark zuckerberg profile (for CS majors). Moreover, different countries have different standards for cheating and plagiarism, and while we will want them to conform to our standards, it may take some students more time to develop those skills since it is an entirely new concept to them.*

A quick intro to stereotype threat:

<https://www.apa.org/research/action/stereotype.aspx>

Stereotype threat from the point of view of one student:

<https://www.insidehighered.com/news/2016/10/31/latina-students-story-about-how-professor-reacted-word-hence-sets-debate-stereotypes>

An article on cultural differences in plagiarism:

<https://www.turnitin.com/blog/cultural-differences-in-plagiarism>

A more general discussion of plagiarism from the point of view of an educator:

<https://www.chronicle.com/article/Cheating-Inadvertently/229883>

(The section on patchwriting is particularly interesting in the above article. )