Alexandra Feely

Systems Lab 2

Learning exactly how to chase down and interact with pointers in swap1.c and swap2.c was *extremely* helpful. In the past when I learned C it was my single greatest struggle and I used to spend hours debugging programs throwing errors relating to this. The concept and syntax being laid out so plainly was enlightening this time around for me. I completed both of these programs during the lab andI’ll include both of these files to show my understanding.

Dealing with malloc was a little trickier. I managed to complete a basic example during the lab, but have gone over with a fine tooth comb since then. I reserved memory for three ints and these were their addresses:

0x134d010

0x134d030

0x134d050

The difference between each one is 20 in hex, which translates to 32 bits, which then translates into 4 bytes (We went over this in the lab but my understanding is still a bit shaky). Considering ints are 4 bytes each, the memory allocation seems to be sequential. The next bit of this confused me though. I attempted to allocate space for 20 ints, which I would think would allocate more space. However, these were my results:

0x1582010

0x1582070

The difference in hex is 60. While this is more than the individual ints, it’s a far cry from the 20 I thought I’d reserved. I tried writing my own method based on what I’d done so far and one nearly identical to the book. Both ended up with the same result, so I don’t know if I’m doing something wrong. I’ll submit both with this document.