Lab 3 Report

For my project, I changed the push_command, process_execute, and start_process on my process.c file. I had a hard time understand what to do until the secret sauce was given. The whole idea of references and pointers to pointers was quite confusing to me so it took up a while to figure out what to do. I knew that I had to parse through the command line so obviously it made sense to focus on argc and argv. I first had to separate each argument and put it into an array. Obviously when you have multiple arguments they are separated by white space so I used that as my part. Once I figured that out, I worked by going through each argument and storing it into the esp which is the word align with the stack pointer. The pointer arithmetic was confusing, but after reading the secret sauce and canvas it became better. I basically had to do pointer of pointers so that I could put the address and save the arguments. Process_execute works I had to add my own functions which were similar to the first method with the same strtok_r which was used to get the name of the file as a thread name. Additionally I had to add a semaphore to the function. The start process was flushed out for the main part however once again I had to get the name of the file that I wanted to be loaded. This basically allows me to load the process and have it to start running.

In syscall.c I wasn't able to do what I wanted. I wanted to be able to write some of the functions. I was actually able to get some of the others running however or have a good idea. However I could not figure out the open function which the other functions rely on to make it work. However I was able to add the create function which reads in the file and size of file which is being created. I needed to add a filelock so that other processes couldn't access the file at the same time so there wouldn't be multiple reads or writes which could cause corruption. All I had to do for this was to follow the same idea as the write handler and just use filesys_create and have the name and size of the file.

My Lab only passed the first 65% consistently. The rest of the percent sometimes worked, but I do not think it worked consistently. I'm not 100% sure why some of the other tests would work in some scenarios or have weird fluctuations in percentages.