This is a report of the assignment 1 of ECSE 427. I will be answering concisely, because I have ran out of time. If you have any questions, feel free to ask me. Thank you.

1. The shell would not crash when a command crashes, rather an error would be shown
2. The system calls used are execve, mmap, Mprotect and mmap
3. my\_system() and system behaves differently after using Fork, because now we have two processes, where the child executes the program and stops while the parent keeps running. In system(), we only had one process running
4. For VFORK, ls took 4 ms while mkdir took 6 ms
5. For cd, the child and parent need to share the same file directory , thus CLONE\_FS flag needs to be used. I also used CLONE\_VFORK to the processes in the same memory.

I tried to use the chdir process for cd, through an execl call in the child process. Although I could not finish it, I tested that this would perform the task of cd, if provided the proper directory. Once, child would end, the parent would return to the original directory.