CS307 PA2

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In this assignment, we were asked to run specific commands, but preventing them to blend with threads. Firstly, we were asked to decode this commands and classify them according to their types. To achieve that I used ifstream and ofstream. With ifstream, I opened the commands.txt file, read it line by line and parse them word by word into the parse.txt file with ofstream.

After the parsing process, I needed to execute commands one by one. So the first case I looked into was when the command does not contain any redirectioning or it is not a background process. In this case I executed the command directly. If ıt was containing redirectioning but it was not a background process I called another fork and executed there. If it was a background process, I used threads. I again took them as different cases according to their redirectioning direction. I opened different threads. I did not want them to work concurrently, so I used mutexes lock and unlock them so that the process can wait for other processes. I passed a thread function there, so that I can use mutexes. I did not use pipes, instead I treated them as seperate cases.