**Operating Systems**

**Lab Simple Shell**

Examine and run the given code, simple\_shell.c, that implements a trivial shell. It can run exactly one command at a time, with no arguments and no special characters.

Do as many of the following extensions as possible:

* Extend it to handle commands with multiple arguments. Use execvp and strtok.
* Extend it so that if the last token on a command line is “&”, the command runs in the background, rather than the foreground.
* Extend it so that a file can be passed as an argument to the shell itself, and if that argument is provided, interpret it as a filename. Append the output of all commands run to this file. Use dup2.
* Extend it to allow general redirection of stdout on each line.