**Introduction**

This is an operating systems project to implement an alternative Linux shell in the C programming language. The shells command prompt should consist of the username and the hostname of the system it is currently running on. The shell should be able to accept commands from the user and return the expected results to the user.

The project task was completed by Tom Gallagher, Maximilian Mandel, and Dennis Waswa Simiyu.

**Approach**

The approach to the system was to create a command line by using a while loop and creating a command prompt with the username and the hostname, where the user can input the commands.

The commands needed to be split into parts, by using strtok and could be checked with using if statements and strcmp checks.

Exec: The exec command can be implemented by using fork, execv and also wait in order to wait for the child process to finish.

Globalusage: The globalusage command can be implemented by just using printf.

Modifiers &,>: The modifiers & and > needed to implemented by using the split arguments in specific ways, like checking the last element or the second to last one. Furthermore, the working with files was necessary for the “>” to work, like parsing the file name from the commands and opening the file using C.

The modifier & needed be implemented by not using wait in the parent process of the execv and instantly continuing.

Quit: The quit command needed to list all the running processes, which can be achieved using fork and by requiring a yes or no input if the program is exited or not.

**Files:**

There is only one file “imcsh.c”, which contains all the code and the comments for it.