

CSE231: Operating Systems

Assignment 5, Question 2

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Description

In this very rudimentary text editor, the program opens the file, displays the current file contents, has the ability to *append* lines to the file, and save and close the file, and exit the program once an EOF is received.

- We first open the file and attempt to acquire lock using the flock function, with the flags:
 - LOCK_EX: exclusive lock
 - LOCK_NB: non-blocking lock
- If we fail to acquire lock, we check whether this is due to the lock already being acquired on the file in another process (using the errno EWOULDBLOCK).
 - If yes, we display an advisory warning, but still let the editor edit/append to the file.
- If no, we continue normally.
- We print the contents of the file.
- In a loop, we request the user to enter lines that must be appended to the output file
 - If we reach an EOF, either through a file using input redirection, or through CTRL+D, we exit the file
- Finally, close the file and exit!

Shell Script

The shell script opens two instances of the gnome-terminal on Ubuntu, and supplies it with the command to run the make built files. The two instances are commanded to run simultaneously using the ‘&’ operator.

Makefile

The Makefile:

- Clears the output in the output.txt file.
- Generates the executable using gcc.
- Permits the executable to be run.