## Programming Assignment 1

### Objective

The objective of this assignment is to familiarize yourself with the standard system calls and how to use them in a program.

### Assignment: Simple File Concatenate Program

Write a C/C++ program that only uses only standard system calls to concatenate the contents of one file to another file. You should only have to use the *open(), close(),* *read()* and *write()* system calls. You can use *printf()* or *fprintf()* for error or informational messaging.  Your program should not explicitly prompt the user for input/output filenames but rather those should be provided on the command line.

#### Simple File Concatenate Program Implementation

The file concatenate program (***filecat.c***) is a simple text-based program that takes two arguments from the command line, again no prompting the user from within the program.

1.      To start the *filecat* program

*./****filecat*** *<input file> <output file>*

where *<input file>* is the file to be concatenated to *<output file>*. Note: that <*output file*> can be an empty file or a file with previous contents. To make debugging easier use ASCII readable text files only.

After your program completes you should be able to do a *“cat”* command on the *<output file>* to verify it has been concatenated. Last step is to run your program with *strace* to determine the number/type of system calls made.

#### Error Handling

Perform the necessary error checking to ensure that the input file exists and that the output file can be written. You can use the system error “*errno*” and “*strerror*” to provide additional error messaging.

### Grading

The program will be graded on the basic functionality, error handling and how well the implementation description was followed. Be sure to name your program *filecat.c* (no extra characters, capitals) and include the output from the *strace* command. Note that documentation and style are worth 10% of the assignment's grade!

### Submission

The program (source code only) should be posted to Blackboard on the due date