

# CS240 - Operating Systems

## Assignment #1

### Spring 2024

The purpose of this assignment is to use UNIX system calls to do some basic process operations, and to retrieve arguments from the command line using C/C++.

For this assignment, you are to write a program that accepts two command line arguments: a “sleep” time and an iteration count. This program should contain a loop which sleeps for the specified amount of time, then wakes up and prints its name, process ID (PID) and iteration count to `stderr`. The loop should execute the number of times specified in the iteration count. Then the program should print a message and terminate.

For example, if the name of your program is `testprog`, the following command should execute the program for 10 iterations, sleeping 4 seconds between iterations:

```
testprog 4 10
```

The output should look something like:

```
Executing testprog, process id 28435, iteration number 1
Executing testprog, process id 28435, iteration number 2
Executing testprog, process id 28435, iteration number 3
Executing testprog, process id 28435, iteration number 4
Executing testprog, process id 28435, iteration number 5
Executing testprog, process id 28435, iteration number 6
Executing testprog, process id 28435, iteration number 7
Executing testprog, process id 28435, iteration number 8
Executing testprog, process id 28435, iteration number 9
Executing testprog, process id 28435, iteration number 10
testprog is now exiting.
```

You can run this program on any UNIX/LINUX system that you have access to. However, your code will be tested on one of the CS department servers that have been set up for the class, named `cs-240a.cs.uidaho.edu` and `cs-240b.cs.uidaho.edu`, so you should test at least your final version on one of these servers (they are identical, so it doesn't matter which one you use for testing). To access these servers, you can use an `ssh` (“Secure shell”) terminal client, such as `putty` on Windows computers, or `ssh` on MacOS and Linux.

For questions or problems with these servers, you will probably get the fastest results by emailing `cshelp@uidaho.edu`.