

# Optional Homework 1 - Multiple Processes

## (5 bonus points)

**Due: March 19<sup>th</sup>, 11:55PM**

Please provide *Makefile* for the problem and include a *README* file to describe how to compile/test the program.

You will need to submit your complete homework directory on Sakai. Create a gzipped tar ball that includes all your source code, *Makefile* and *README* files. The filename for the *tarball* must be **username-homework-1.tar.gz** where username is your NETID.

### ***Problem***

Implement a program that calculates the number summation:  $1+2+3+\dots+99+100$ . Please use multiple processes (i.e., at least two) to share the workload. For example, in the first process you can calculate  $1+2+3+\dots+49+50$ , and in the second process you can calculate  $51+52+53+\dots+99+100$ . Please print out the final result of the number summation.

Make your code readable and robust and output standard Linux error messages if an error occurs. For example, if the child process is failed to be created, you can use *perror("Process creation failed")* to output error messages.