The program will be passed a series of numbers on the command line and will then create three separate worker threads.

The first thread will determine the average of the given numbers and the second thread

Find the maximum value, and the third thread for minimum value.

For example, suppose your program is passed the following integers as input (assuming a.out is your program):

90 81 78 95 79 72 85

The program will report:

The average value is 82

The minimum value is 72

The maximum value is 95

The variables representing the average, minimum, and maximum values will be stored globally.

The child threads will set these values, and the parent thread will output the values once the workers have exited.

Programmer-to-User Instructions:

pthreads.c: This is the C program for the multithreaded program.

pthreads: This file is the compiled file for pthreads.c.

The child process will output the sequence of numbers generated from the algorithm specified by the Collatz conjecture.

This works because the parent and child processes have their own copies of the data.

The program perfoms fork(), then enters into a if loop and if pid == 1 (if it is busy) then it

waits till it equals 0 (not busy). When it is 0 then it can perform the calculations. It checks

to see if it is even or odd and performs the appropriate equation. This repeats until it reaches

one, then it breaks out of the loop.

To start the program: To run the assignment go to the terminal and find the directory that contains

The compiled pthreads file. To run the pthreads program, type <./pthreads> <(int) arguments with spaces between them> //without <> //refer to assignment details at top of page.