CPU Time between Signals

This homework will require you to write an application in C or C++ that measures the amount of CPU time your program uses between receiving the stop and continue signals. You should establish a signal handler for each of those two signals to get the current CPU time and then subtract them. Print this difference and terminate the application.

1. The program **shall** print the amount of time spent on the CPU after between receiving a stop signal (SIGTSTP) and a continue signal (SIGCONT). If you receive multiple stop signals in a row, you can count from the last received signal.

2. The program **shall** terminate after printing the time above. You should do this after receiving the first continue signal.

3. The program **shall** efficiently wait for a signal. You should not be spin-looping, you should use a Linux method that stops execution until you receive a signal. You may *not* assume you will only receive two signals.

4. The program **shall** perform reasonable error checking. Make sure you can establish signal handlers and other things critical to the operation of the program.

5. The program **shall** not print excessive information.

6. You **shall** submit all source code and a makefile in a tar file.

    (a) The makefile **shall** be able to build your source in a 32 bit Lubuntu VM.

BONUS You will get two (2) bonus points for completing the assignment using the C language.