

M10.B4: Programming Assignment 5: Sending Signals

Due Nov 21, 2021 by 11:59pm

Points 100

Submitting a file upload

All programming assignments are developed using GCC in Linux. Be sure your program has proper documentation, including a description of the purpose of the program and your name. To make your program easier to read and debug, use indentation and spacing appropriately. Refer to examples in your reading and practice activities. To earn full credit, you must follow all instructions exactly.

INSTRUCTIONS:

This project will clarify how to start a new process for the sole purpose of sending a signal at a later time.

Write a program that will simulate an alarm clock using fork, sleep, and signal functions.

The child process will wait for 5 seconds before sending a SIGALRM signal to its parent.

Have the parent process catch the SIGALRM with a call to signal.

When the alarm sounds, print out "Ding!"

An Example:

```
$> ./alarm
Alarm app starting
Waiting for the alarm to sound....

Ding!
Done.
```

TO DO:

Upload your .c file into the Canvas dropbox before the due date and time. You may resubmit as many times as needed prior to the due date. But please note that the assignment will not be graded by your instructor until after the due date.

Grading Rubric for Programming Assignments

Criteria	Ratings			Pts
Solution	40 to >35.0 pts Exemplary A completed solution runs without errors. It meets all the specifications and works for all test data.	35 to >28.0 pts Developing Competence A completed solution is implemented on the required platform, and uses the shell specified. It runs, but has logic errors.	28 to >0 pts Insufficient An incomplete solution is implemented on the required platform. It does not compile and/or run.	40 pts
Program Design	40 to >35.0 pts Exemplary The program design uses appropriate structures. The overall program design is appropriate.	35 to >28.0 pts Developing Competence Not all of the selected structures are appropriate. Some of the program elements are appropriately designed	28 to >0 pts Insufficient Few of the selected structures are appropriate. Program elements are not well designed.	40 pts
Code Readability	20 to >18.0 pts Exemplary All required documentation is present, the program is correctly indented, and appropriate identifiers are selected.	18 to >14.0 pts Developing Competence Program is minimally documented; some identifiers are inappropriate or inconsistent in indentation.	14 to >0 pts Insufficient Insufficient program documentation, and/or poor identifier selection.	20 pts
Total Points: 100				