Signal2 Demonstration

Files

The files for this demonstration can be found in the rlogin cluster in the directory

`/web/courses/cs3214/spring2014/butta/examples/signal-demo/signal2`

The files are `esh-sys-utils.c esh-sys-utils.h main.c Makefile rngs.c rngs.h`.

The `Makefile` will create an executable named `quad2`. This program computes the integral (the area under the curve) of a simple function using a Monte Carlo random sampling technique.

Purpose

The purposes of this demonstration are
- to see the signature of a signal handler
- to see how to associate a signal handler with a particular signal
- to see the effect of a signal handler being executed in response to a signal arriving

Part 1: Steps

1. Run the makefile to create the executable program `quad2`.
2. At the shell prompt execute the `quad2` program. Note that no output is produced.
3. When the `quad2` program is running send the "stop" signal to the program by entering a cntl-z (simultaneously pressing the "control" and "z" keys). You should see output from the `quad2` program showing the values of `above`, `below`, and the `estimate`.
4. Repeat step 3 a number of times and observe what happens.
5. When the `quad2` program is running send the `SIGINT` signal to the program by entering a cntl-c (simultaneously pressing the "control" and "c" keys).

Questions

Examine the code in main.c. Based on your observations, answer these questions.

1. What is the signature of a signal handler?
2. What is the purpose of the function `esh_signal_sethandler`?
3. What is the meaning of the first line of output produced by the signal handler?
4. What happens when a program received the `SIGINT` signal?