Programming Assignment 3:
Investigating the Linux Scheduler

CSCI 3753 - Operating Systems
University of Colorado at Boulder
Spring 2012
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Due Date: Wednesday, April 18th, 2012 11:55pm

1 Assignment Introduction

2 Your Task

3 Some Implementation Ideas

4 What You Must Provide

When you submit your assignment, you must provide the following as a single archive file:

- A copy of all your code
- A makefile that builds any necessary code
- A README explaining how to build and run your code

5 What's Included

We provide some code to help get you started. Feel free to use it as a jumping off point (appropriately cited).

1. **pi.c** The source code for a statistically-based pi calculator. Accepts as the first argument the number of iterations to compute over. Example of a CPU bound process.
2. **Makefile** A GNU Make makefile to build all the code listed here.
3. **README** As the title so eloquently instructs: read it.

6 Extra Credit

7 Grading

40% of you grade will be based on the submission you provide. To received full credit your submission must:

- Meet all requirements elicited in this document
- Code must build with "-Wall" and "-Wextra" enabled, producing no errors or warnings.
- Code must adhere to good coding practices.

The other 60% of your grade will be determined via your grading interview where you will be expected to explain your results and answer questions regarding them and any concepts related to this assignment.

8 Obtaining Code

The starting code for this assignment is available on the Moodle and on github. If you would like practice using a version control system, consider forking the code from github. Using the github code is not a requirement, but it will help to insure that you stay up to date with any updates or changes to the supplied codebase. It is also good practice for the kind of development one might expect to do in a professional environment. And since your github code can be easily shared, it can be a good way to show off your coding skills to potential employers and other programmers.

Github code may be forked from the project page here:
`https://github.com/asayler/CU-CS3753-2012-PA4`.

9 Resources

Refer to your textbook and class notes on the Moodle for an overview of OS paging policies and implementations.

The Internet[2] is also a good resource for finding information related to solving this assignment.

You may wish to consult the man pages for the following items, as they will be useful and/or required to complete this assignment. Note that the first argument to the "man" command is the chapter, insuring that you access the appropriate version of each man page. See `man man` for more information.

- `man 1 make`

References

[1] Kernighan, Brian and Dennis, Ritchie. *The C Programming Language*. Second Edition: 2009. Prentice Hall: New Jersey.

[2] Stevens, Ted. *Speech on Net Neutrality Bill*. 2006. `http://youtu.be/f99PcP0aFNE`.

[3] Strunk, William, Jr. and White, E.B. *The Elements of Style*. Fourth Edition: 2000. Pearson: New York.