



Assignment 5

Overview

This assignment is intended to improve your understanding of how a few CPU scheduling algorithms work. It also has some questions about concurrency. The file named `hwk5_questions` that I have placed on the server has questions that you must answer. You should write the answers in a copy of that file, which you will then submit using the `submithwk_cs340` command. ***You must follow the instructions below as well as those in that file, exactly, in order to receive full credit. If you do not do exactly what the instructions state, the scripts that process your submission will not process your answers and you will lose points.***

The file has all of the information that you need. You will have to simulate a couple of scheduling algorithms on the given sets of processes and fill in a table that has the same columns as those in the slides for Chapter 5, showing the various performance measures for that algorithm applied to that process set. Detailed instructions are given in `hwk5_questions`.

You must complete this assignment by its ***deadline***, which is ***Wednesday, May 4, at 7:00 PM. This is important.***

Detailed Instructions

1. Using any ***ssh client*** on your computing device, remotely login to `eniac.cs.hunter.cuny.edu` using your CSDN username and password.
2. When you login successfully, ssh to **any cslab host**. For example, to ssh to `cslab12` you would type:

```
$ ssh cslab12
```

3. The remaining instructions assume that you have logged into some `cslab` host.
4. Change directory to `/data/biocs/b/student.accounts/cs340_sw/hwks`.
5. Copy the file `hwk5_questions` to your home directory using the command

```
$ cp hwk5_questions ~
```

If you want to work in a different directory then change the above command accordingly.

6. The file named `mynumber` is an executable file.
7. Answer the questions in the file `hwk5_questions` that you just copied into your home directory. You will need to use a text editor to do this. ***Do not use a word processor to do this.*** If you do, the file will not be readable and you will get a zero on the assignment. Instead, if you edit it on Linux, use an editor such as `vim`, `emacs`, `pico`, or `nano`. If you choose not to do this and instead use *Windows*, use *WordPad* or *NotePad*, but be warned - these programs may create a file with the wrong end-of-line characters and may make your assignment unreadable. You must convert your file to a UNIX format before submitting it. Learn how to do this by searching on the web. On a Mac, use an editor such as `NotePad++`, `atom`, or any commandline editor like the ones in the Linux list above. Make sure that you follow the instructions for how to write the answers in order to receive full credit.
8. For the third question in the assignment, you will need to run a command named `mynumber` that I placed into the `bin` directory:

```
/data/biocs/b/student.accounts/cs340_sw/bin/mynumber
```



When you run it, it will output a single number. This number is needed to answer that question.

9. When you are finished, save your file and **make sure that you do not add an extension to its name**. It can be named anything as long as it does not have periods in the name and has no extensions such as “.txt”.
10. Assuming the file is named `myhwk5_questions`, you would submit it by running the command

```
submithwk_cs340 -t 5 myhwk5_questions
```

The program will copy your file into the directory

```
/data/biocs/b/student.accounts/cs340_sw/hwks/hwk5/
```

and if it is successful, it will display the message, “File `hwk5_username` successfully submitted.” where `username` is your username. If you do not receive this message, it was not submitted successfully and you should try again. You will not be able to read this file, nor will anyone else except for me.

11. **You can do step 10 as many times as you want. Newer versions of the file will overwrite older ones.**

Grading Rubric

This assignment is 1.5% of your final grade. The relative value of each question is listed in the template file for the assignment. Partial credit may be given for partially correct answers. The deadline again is **Wednesday, May 4 at 7:00 PM**.