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CS 143A

Homework 3

Part 1

Concurrency can be useful because it allows for many programs to run concurrently like downloading a file, listening to music, or typing in a word document. It is also helpful when writing parallel programs, such as ones that involve 3D graphics rendering. Concurrency can also be useful on single-CPU machines because of thread blocking/waiting.

Part 2

```
kippc@odin:~/143a/hw/hw3
$ make -f Makefile_my_fork
gcc -o my_fork my_fork.c -I.
kippc@odin 21:48:29 ~/143a/hw/hw3
$ my_fork
AAAAABABBAABBBBCCBCCBCCCCDDCDDDDkippc@odin 21:48:37 ~/143a/hw/hw3
$ my_fork
BBAAACCCCCABABABABABABABABCCDDDDCDDCDDDDkippc@odin 21:48:40 ~/143a/hw/hw3
$ my_fork 2
AABCCBDDkippc@odin 21:48:46 ~/143a/hw/hw3
$ python test_my_fork.py
Your output should parse okay!
kippc@odin 21:48:57 ~/143a/hw/hw3
$
```

Part 3

```
kippc@odin:~/143a/hw/hw3
$ make -f Makefile_my_shell
gcc -o my_shell my_shell.c -I.
kippc@odin 23:01:52 ~/143a/hw/hw3
$ my_shell
$mkdir foo
$touch foo/bar
$
$mv foo baz
$ls -l baz
bar
kippc@odin 23:02:20 ~/143a/hw/hw3
$ ls
baz/          Makefile_my_fork  my_fork.c  my_shell.c
inputScript.txt Makefile_my_shell my_shell*   test_my_fork.py
kippc@odin 23:02:28 ~/143a/hw/hw3
```

```
kippc@odin:~/143a/hw/hw3
$echo hello openlab
hello openlab
$ps -h
  884 pts/76    Ss      0:00 -bash
20204 pts/76    S+      0:00 my_shell
20241 pts/76    R+      0:00 ps -h
$fail
ERROR: exec failed: No such file or directory
$date -u
Thu Oct 20 06:05:19 UTC 2016
$kippc@odin 23:05:24 ~/143a/hw/hw3
$
```