

# Operating Systems

CMPT 424

## Lab 7

### Goals

#### Executing many programs in memory

This approximately one-hour active learning exercise will help you make progress on the practical aspects of developing your operating system.

### Instructions

1. If your memory is implemented properly and your context switching is working properly, then executing many programs in memory at once should be working just fine.
2. You and I both know that this is not the case. So here are some test programs (below) to help you debug.
3. Add the rest of the features as specified in your Issues and iProject 3.
4. Test. (You know this by now. Keep doing it.)
5. Read chapters 5.1.2 and 5.1.3 in the 8<sup>th</sup> edition of our text again. Read all of chapter 5 if you have not already done so. Even if you have already read it, read it again. It's probably my favorite chapter in our book. It's really good.
6. Read chapters 5.6.2 and 5.6.3 as well. Cool stuff.

### Questions

1. Matt Smith: a great Doctor, or the greatest Doctor? Bonus: What about Jodie? Double bonus: Who's next?

### Resources

- Test programs:

```
// a0a1a2adone
```

```
A9 00 8D 7B 00 A9 00 8D 7B 00 A9 00 8D 7C 00 A9 00 8D 7C 00 A9 01 8D 7A 00 A2 00 EC 7A 00 D0 39 A0 7D A2  
02 FF AC 7B 00 A2 01 FF AD 7B 00 8D 7A 00 A9 01 6D 7A 00 8D 7B 00 A9 03 AE 7B 00 8D 7A 00 A9 00 EC 7A 00  
D0 02 A9 01 8D 7A 00 A2 01 EC 7A 00 D0 05 A9 01 8D 7C 00 A9 00 AE 7C 00 8D 7A 00 A9 00 EC 7A 00 D0 02 A9  
01 8D 7A 00 A2 00 EC 7A 00 D0 AC A0 7F A2 02 FF 00 00 00 00 61 00 61 64 6F 6E 65 00
```

```
// inner1 inner2 outer1 inner1 inner2 outer2 inner1 inner2 outer3
```

```
A9 00 8D EC 00 A9 00 8D EC 00 A9 00 8D ED 00 A9 00 8D ED 00 A9 00 8D EE 00 A9 00 8D EF 00 AD ED 00 8D FF  
00 AE FF 00 A9 00 8D FF 00 EC FF 00 D0 BA AD EC 00 8D FF 00 A9 01 6D FF 00 8D EC 00 AD EC 00 8D FF 00 AE FF  
00 A9 03 8D FF 00 EC FF 00 D0 05 A9 01 8D ED 00 A9 00 8D EE 00 A9 00 8D EF 00 AD EF 00 8D FF 00 AE FF 00 A9  
00 8D FF 00 EC FF 00 D0 49 AD EE 00 8D FF 00 A9 01 6D FF 00 8D EE 00 AD EE 00 8D FF 00 AE FF 00 A9 02 8D FF  
00 EC FF 00 D0 05 A9 01 8D EF 00 A9 F8 8D FF 00 A2 02 AC FF 00 FF AD EE 00 A2 01 8D FF 00 AC FF 00 FF A9 00  
8D FF 00 A2 01 EC FF 00 D0 A4 A9 F1 8D FF 00 A2 02 AC FF 00 FF AD EC 00 A2 01 8D FF 00 AC FF 00 FF A9 EE 8D  
FF 00 A2 02 AC FF 00 FF A9 00 8D FF 00 A2 01 EC FF 00 D0 33 00 00 00 20 20 00 20 6F 75 74 65 72 00 20 69 6E  
6E 65 72 00 00
```

### Grading

Your work on this lab will contribute to your grade for iProject3.

### Submitting

Commit your work to your **private** GitHub account in an appropriately-named folder. Make sure to tag your commit messages with the Issue number they address.

