Goals

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

Instructions

1. Add the iProject 2 functional requirements as Issues (optionally labeled as enhancements) in GitHub as element of an “iProject 2” milestone.
2. Have a look at cpu.ts in the host directory. This is where you will implement the 6502a operation codes (see resources, below) so you can execute a single user program. Start on this with the LDA and STA op codes.
3. Testing LDA and STA operations is a nice way to test your memory implementation too.
4. Add the new features as specified in your Issues and iProject 2. Continue demonstrating programming best practices. (If you have not been demonstrating programming best practices up to this point then drop this class before it’s too late and Alan will see you again next year. Go read Code Complete 2nd edition in the meantime.)
5. Test everything.
6. Test again.
7. Keep testing. Did you think this would change?
8. Read chapter 8.3 in the 8th edition of our text.

Questions

1. Explain the difference between internal and external fragmentation.
2. Given five (5) memory partitions of 100KB, 500KB, 200KB, 300KB, and 600KB (in that order), how would optimal, first-fit, best-fit, and worst-fit algorithms place processes of 212KB, 417KB, 112KB, and 426KB (in that order)?

Resources

- https://skilldrick.github.io/easy6502/
- http://www.visual6502.org
- http://www.atariarchives.org/mlb/

Grading

Your work on this lab will contribute to your grade for iProject 2.

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.