

Lecture 01 - Machine Architecture

Survey on languages that you know

For homework that is not in MARIE - our emulated machine you have your choice of { C, C++, Python, Go, Haskell, F#, Swift, Kotlin } as your language of implementation. If you do other than C/C++/Python/Go then I will be grading your homework instead of the graduate assistant - so it may take longer to get graded. If you pick other than C, C++, Python or Go you are responsible for knowing the language (Go is taught in ⁴⁰¹⁰/₅₀₁₀ special topics - blockchain. You should have had C++. I don't care for Java or JavaScript(node.js) so don't do your homework in those languages). Some of the class will be in MARIE an assembly language. We will be learning that in this class.

More strict late policy

In previous classes with a much smaller number of people I have been lax in my late policy. 16 Students in 1015 was stretching my ability to deal with lots of late work. This class with 40 students is way to large to allow for a very liberal late policy. So...

Homework will be due on the due date with a 10% per day late penalty.

Syllabus

Homework Overview for Semester

Title	Points
Homework 1 - Setup / Access MARIE - Price Computer	200 Pts
Homework 2 - Representation of Numbers / ASCII / Unicode	200 Pts
Homework 3 - Boolean Algebra - Gates / Error Correction	200 Pts
Homework 4 - MARIE 1st program	200 Pts
Homework 5 - MARIE assembly language programs	200 Pts
Homework 6 - Implement MARIE Emulator	200 Pts
Homework 7 - Multiply/Divide Subroutine in MARIE	200 Pts
Homework 8 - Microcode Part 1	200 Pts
Homework 9 - Microcode Part 2	200 Pts

Title	Points
Homework 10 - Compiled Code / Paper (1-2 page)	200 Pts

Note on the 1-2 page paper - this is not a formal paper. Just put it in a text file. A list with your analysis of the compiled code and how it is working - along with a screen capture of the logic analyzer will be fine.

PUT YOUR NAME ON YOUR HOMEWORK if you want to receive a grade for it!