Expected / Projected / Actual Class Progression

Week 1 - 2/1

- Syllabus
- What's already assigned
- Install
- Questions
- Recording

Week 2 - 2/6 2/8

- Tuesday's Recording
- Thursday's Recording
- Apple Silicon
- Windows
- Intel Mac - get the distro, get QEMU, follow instructions for Windows except use your plain old terminal instead of WSL.
- Binary
- Powers of 2 up to 216
- Signed and Unsigned Integers
- 1's Complement and 2's Complement
- Registers
  - Integer Registers w & x
  - Why Have Registers
    - Speed of Processors Relative to RAM
  - *Up to this point was Tuesday 2/6. Thursday's class follows.*
  - Special Registers
    - Program Counter - pc
    - Stack Pointer - sp

Week 3 - 2/13 2/15

- Tuesday's Recording
- Floating Point Registers ***h***, s, d, v & q

  - h are half floats - not used much - are least significant half of s's
  - s are single precision values - least significant half of d's
  - d are double precision values - are least significant half of v's
  - v's are a vector of something
  - q's are a single 128 bit value
- Floating Point Construction
  - Floats / Doubles are approximations
  - Normalized scientific notation
    * Sign
    * Exponent
    * Mantissa
  - Single Precision - how above are implemented
  - Double Precision - how above are implemented
- Why Have Registers (Continued)
  - Steps Needed to Execute an Instruction
  - Pipelined Execution
- Aside:
  - Bit fields in C/C++
  - Unions in C/C++
- **Above this was covered Tuesday. Below this covered Thursday.**
- Special Registers (other than the *really* special registers)
  - Frame Pointer - x29
  - Link Register - x30
- Assembly Language!

Week 4 - 2/20 2/22

- **Tuesday**
- Assembly Language
- **Thursday**
- Assembly Language

Week 5 - 2/27 2/29

Week 6 - 3/12 3/14

Week 7 - 3/19 3/21

Week 8 - 3/26 3/28

Week 9 - 4/2 4/4

Week 10 - 4/9 4/11

Week 11 - 4/16 4/18

Week 12 - 4/23 4/25

Week 13 - 4/30 5/2

Week 14 - 5/7 5/9