

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
 - Floating Point Registers ***h***, s, d, v & q
 - Floating Point Construction

Week 3 - 2/13 2/15

- 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
 - Special Registers (other than the *really* special registers)
 - * Frame Pointer - x29
 - * Link Register - x30
 - Aside:
 - * Bit fields in C/C++
 - * Unions in C/C++

Week 4 - 2/20 2/22

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