Intro to Projects

In the future we are going to be requiring projects. Don’t worry. We are going to make it easy for you.

Finding The Resources on Github

- Everyone is going to need to go to the github. *If you don't know how to get there then go to github.com and go to your profile. From there go to your organization.*

- Where do y'all think project related stuff is going to be kept in the github?

- Go to the that file/folder. Think about which are the most immediately difficult ones. Don't say them out loud yet.

Evaluating Projects

- Which directed project looks the most difficult? You can say them out loud.

- What vocab from the next slide do you remember?

- Are the projects that are most difficult related to the concepts of these vocab terms?

Vocab

Logic gates, memory, sequential logic, latch, flip flops, registers, register files, memory array, primary/secondary memory, RAM, ROM, stack memory, and flash memory.

Operating system, processes, process sections, process pages, process lifecycle, process scheduling, system interrupts, dispatch latency, user/kernel mode, virtual memory, cpu instruction cycle, parallelism, thread, concurrency, and ipc.

Integrated/stand-alone gpus, warps, gpu instruction cycle, Simt, simd, SM, caches, banking, swizzled bank, operand collector, cache memory, scratchpad memory, and hazards.

Category Overview

- Projects have categories that are largely based on the topics we have taught in the past meetings. *These categories are called OS, cpu, memory, asm, gpu, verilog, compiler and circuits.*

OS - OS largely involve replicating the way OSs work. You would learn about how to operate within the modes of the OS and truly allow yourself to understand how OSs works.

CPU - CPU largely involves the ways that cpus work and interact with their new technology.

Category Overview

Memory - Memory largely involves working with the caching and RAM.

ASM - Assembly involves a fundamental interaction with all of the previously stated categories.

GPU - Not included in the directed projects.

Verilog - Will be implemented.

Compiler - Compilers involve how code is translated into machine code.

Circuits - Circuits largely involve looking at how to architect traditional computers.

Category Explanation

A lot of these categories overlap. For example os, memory, cpus, asm and compiler all have concepts that can be applicable to multiple categories.

These directed projects are intended to allow you to reinforce the things taught during the club meetings and build on them.

With that being said which 2 categories do you like the most? From those categories choose 3 directed projects. Read them over and tell us your top 3.