Course Conclusion

5-2-2003

Opening Discussion

❚ What did we talk about last class?

❚ Have you seen anything interesting in the news?

Topics

❚ We have covered a large number of topics over the course of the semester and basically managed to get through the entire text.

  ❚ Generalities of computer hardware and the process of making chips.

  ❚ Performance benchmarking.

  ❚ Machine and assembly languages of the MIPS processor. Also the design tradeoffs involved in designing an architecture.

More Topics

- Arithmetic in computers and how components are built from digital logic.
- Basic methods of putting datapaths and control into a digital circuit to connect the components built from logic circuits.
- How to pipeline the datapath for better performance. Also the difficulties associated with pipelining like hazards and dealing with exceptions properly.
- Memory hierarchies and the role and function of both cache and virtual memory.

Still More Topics

- I/O and communicating with components outside the processor. Buses and their role in machines.
- Briefly we looked at what happens when we try to put multiple processors together to work on a problem and the design decisions that go along with that.

Course Objectives

- More important than the specific topics though is whether the course met its broader objectives.
  - Did this course make you think? Do you now look at computers and think about them differently than you did before?
  - Understanding hardware and what goes on at the levels below that code you normally write. When you read reviews of hardware do you understand more of what is said and why it matters?

Minute Essay

❚ What times work well for your review session? What times to you have finals or other things that would make it impossible for you to attend? If you won't attend even at a good time you can say that so I don't alter the schedule.

❚ Fill out the course evaluations and I'll see you all at the final. (8:30am on the 9th)