Computer Organization
Fall 2003

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Why CompOrg?

- Basic understanding of how computers work.
- Gentle introduction to Unix and C programming.
- Assembly Language programming
- Understanding Memory and I/O (these can have a large impact on performance).

Some Topics

- Data and Program Representation
- Instruction Set Architecture/Assembly Language Programming
- C Programming
- Logic Design & Processor Architecture
- Memory Hierarchy & Virtual Memory
- Performance

Grading

- 2 Midterm Exams: 15% each
  - Thursday October 3rd
  - Thursday November 21st
- Final Exam: 30% *comprehensive final*
- Homework: 40%
  - a few (3?) large "projects"
  - a number of smaller assignments

Grading

- Grade appeals must be resolved within 7 days (after you receive a grade)!
  - First appeal is to the grader (often a TA).
  - See Dave only after you have talked to the TA that assigned your grade.

Homework

- Unless stated otherwise, homework must be done individually!
  - some of the large projects might be done in groups – this will be announced.
- Any duplicate or near duplicate submissions will result in a *minimum* of a 2 letter grade drop from the final course grade and may result in failure for the entire course.

x86 Unix Environment

- You will be given a remote-access account on CS Linux machines
- Other options:
  - RCS public Linux machines.
  - Linux/BSD on your own computers.
  - Cygnus tools (for windows) might also be useful.

Textbooks

- Computer Systems book is required!
  - some assignments from the book.
  - focus on the issues that effect programmers
  - Intel X86 assembly language
  - Somewhat Unix oriented
- K&R C programming book is suggested if you have not used C.

Lectures

- I'll try to keep lectures to 90 minutes.
- Cover material from the book
- Demonstrations
- Discussions
- Dave's dorky videos @copyright 2002 DLH enterprises
- Review (Monday lecture before each midterm will be a review session)

Lecture Notes

- Lecture notes will be available on the course web site:
  - Some lectures will be powerpoint, these files will be available on the course web site.
  - For other lectures there will be a lecture outline made available on the course web site.
- We will be following the book pretty closely, so the book is your best resource.

Schedule

- The Syllabus includes a topic and reading list.
- The order will be as shown, but the dates will probably change a little.
  - first time teaching from this book.
- The test dates will not change!
- Homework schedule will be made available on the course home page within a few weeks.