

Slide 1

Administrivia

- None.

Slide 2

Midterm Review — General Stuff

- Open book / open notes, questions mostly similar to homeworks and quizzes. Difficulty is likely to be somewhere between easiest quiz questions and most difficult homework problems.
- No calculators, but you should not need one — if there are calculations, they'll be easy, and/or you can leave them unsimplified (e.g., 12×4 rather than 48).

Midterm Review — Chapter 1

- Terminology, including:
 - Assemblers, compilers, linkers, loaders.
 - Assembly language, machine language, linkers.
 - Instruction set architecture.

Slide 3

Midterm Review — Chapter 2

- Relationships among clock rate, cycles per instruction, execution time, etc.

Slide 4

Midterm Review — Chapter 3

Slide 5

- MIPS assembly language — “what does this code do?? or “how would you translate this C code into assembly?”
- MIPS machine language — “how would you represent this assembly code in machine language?”
- Conventions for calling procedures — `jal` and `jr` instructions, registers for arguments and return values, use of stack to save/restore registers.

Midterm Review — Chapter 4

Slide 6

- Binary, hexadecimal, and two's complement notations.
- Addition and subtraction (and overflow).
- Shift and logical instructions.
- Floating point representation (general idea more than details) and arithmetic (how is it different from integer arithmetic?).
- Building circuits from AND and OR gates and inverters.

Minute Essay

- None — sign in..

Slide 7