Outline

- **Instruction set architecture**
  - RISC vs. CISC
  - MIPS/ARM/x86
- **Instructions:**
  - Arithmetic instruction: add, sub, …
  - Data transfer instruction: lw, sw, lh, sh, …
  - Logical instruction: and, or, …
  - Conditional branch beq, bne, …
- **Basic concepts:**
  - Operands: register vs. memory vs. immediate
  - Numeric representation: signed, unsigned, sign extension
  - Instruction format: R-format vs. I-format

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