Lecture 2 - Comp. Arch. Review

Basic Computer Organization:
  Control (FSM)
  Memory, MAR/MDR etc.
  Fast storage (registers)
  Arithemetic Units
  Program Counter,

ISAs:
  - Definition
  - Classes (load store, register, stack)
  - Memory Addressing
  - Addressing modes: immediate, displacement, scaled index register, etc. PC relative,
  - Operands: encoding, size
  - Address width/addressability
  - Operations: logical, floating point, data transfer, arithmetic, control flow
  - Control flow: branch, jump, procedure call
  - Instr encoding: variable/fixed length. Tradeoffs, etc.

The Instruction Cycle

How do we fit addresses in a fixed-width instruction??