Assembly Programmer's View

CPU

PC

Registers

Condition Codes

Addresses

Data

Instructions

Memory

- **Code**
- **Data**
- **Stack**

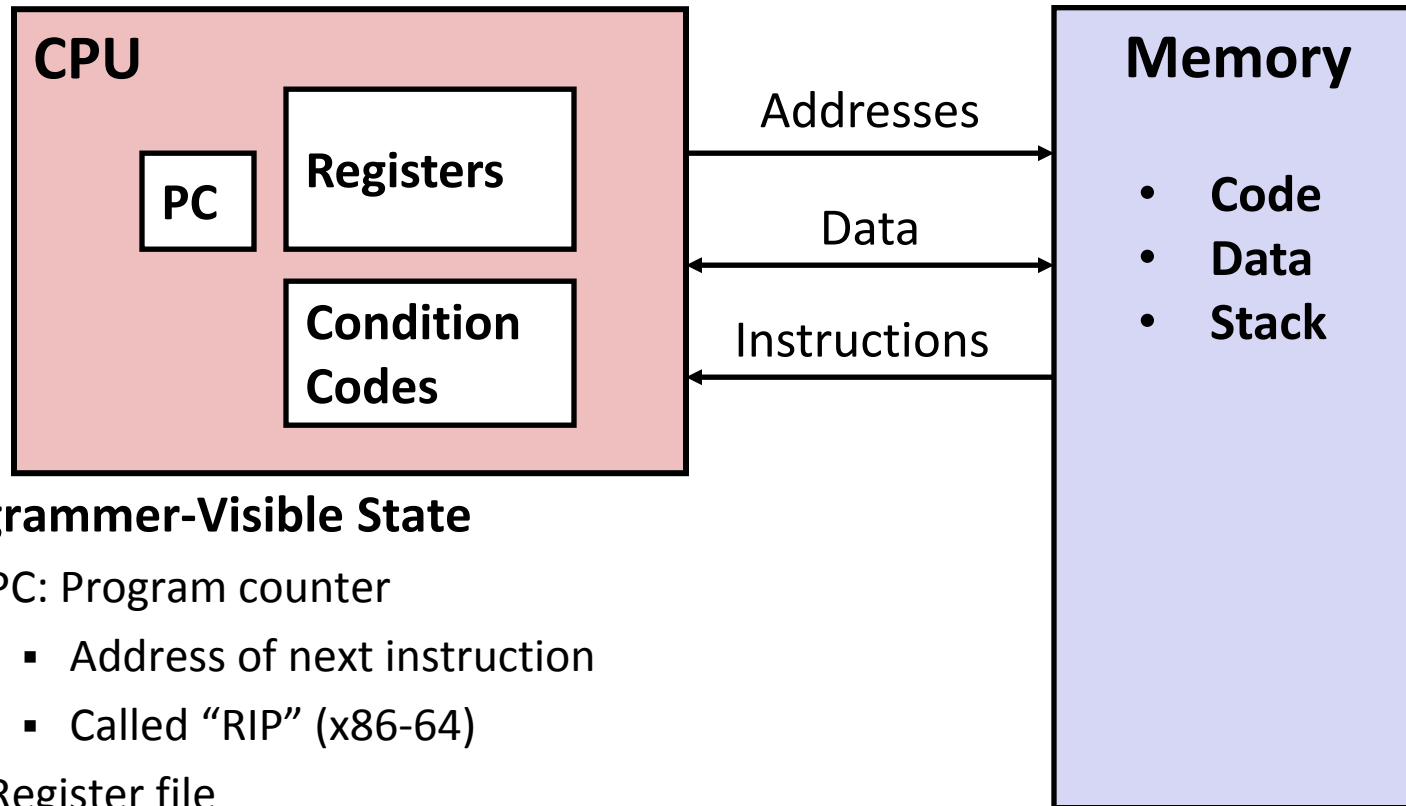- **Programmer-Visible State**
  - PC: Program counter
    - Address of next instruction
    - Called "RIP" (x86-64)
  - Register file
    - Heavily used program data
  - Condition codes
    - Store status information about most recent arithmetic operation
    - Used for conditional branching

- **Memory**
  - Byte addressable array
  - Code and user data
  - Includes stack used to support procedures (we'll come back to that)