

Central Processing Unit (CPU)

- A CPU reads instructions from RAM and executes them
- Instructions: some binary data that tells the CPU what operation to perform, and what parameters to use (kind of like a function call)
- Example instructions (written in MIPS assembly):
 - **lw \$s0, 0(\$t1)** - load the data in RAM at the address stored in register \$t0 into register \$s0
 - **add \$s0, \$s1, \$s2** - add the data in registers \$s1 and \$s2 and store it in register \$s0

CPU schematic from 1971 (Intel 4004)

Modern CPUs have 1,000,000 times more transistors than this!

