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Simple CPU (Central Processing Unit) is the core component of a computer system responsible for executing instructions. While Full-featured CPUs are complex and handle various tasks like multi-threading, pipelines, and caching, a simple CPU is a more basic model designed toe execute a small set of operations in a predictable, sequential manner.

1. Instruction set
   1. NOP: No Operation(does nothing)
   2. ADD: Adds an operand to the accumulator (acc)
   3. SUB: Subtracts an operand from the accumulator
   4. AND: Bitwise AND between the accumulator and the operand.
   5. OR: Bitwise OR between the accumulator and the operand.
   6. LDI: Load an immediate value into the accumulator
   7. JMP: Jump to a specific address in the program.
   8. HLT: Halt the CPU execution
2. Program Counter (PC): a 4-bit program counter that increments each clock cycle to fetch the next extrusion from memory.
3. Accumulator (ACC): a 4-bit register that stores the result of arithmetic and logical operations.