Assembler language

- High-level language: C, C++, Basic, Pascal, Java etc.
- Low level language: assembler language

How it works:

- Machine language (machine code) is a sequence of bit patterns that a CPU can recognize and operate accordingly.
- Each CPU has its own machine language.
- Human is difficult to handle bit patterns but meaningful names, so we use names to denote patterns. (Each corresponds to an opcode.)
- Difficult combination of opcode & operands form different instruction.
- Each CPU has its own instruction set.
- Instruction set defines the operation, clock required, addressing modes supported, max. no. of operands involved in an opcode.

Example 1: Compute 40H+50H and store the result in register CX.

Example 2: Compute 1+2+3+..+10 and store the result in register AX.