Opcodes and operands

The opcode is the instruction that is executed by the CPU and the operand is the data or memory location used to execute that instruction.

Why Learn Assembly Language?

Accessibility to system hardware

Space and Time efficiency

Writing assembly programs gives the computer designer the needed deep understanding of the instruction set and how to design one

To be able to write compilers for HLLs, we need to be expert with the machine language. Assembly programming provides this experience

An assembler is a program that converts source-code programs written in assembly language into object files in machine language

Registers are the fastest memory locations built into microprocessor. Fast means CPU quickly access it close to CPU.

The flag register is one of the special purpose register. The flag bits are changed to 0 or 1 depending upon the value of result after arithmetic or logical operations.