

# Assembly Language

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Assembler are program that convert a source code program written in assembly language.

Compiler:

A compiler are programs that convert source code to object code

Assembler Tools:

- TASM - Turbo Assembler
- NASM - NetWide Assembler
- GNU - Free Software Foundation

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- **OPCODE:** Stand for operation code. It specify a particular operation to be performed.
  - **OPERAND:** It specify where to get the source and the destination for the operation. It can be variable or a constant.

```
mov
add
sub
push
pop
jmp
```

**EAX: register accumulator**

## Example 1

English: D is assigned the sum of A times B plus 10

HLL:  $D = A \times B + 10$

Line: ADD R1, R2,

Assembly language:

```
move eax, A
mul  eax, B
add  eax, 10
move D,  eax
```

## Example 2:

English: Z is assigned the sum of x times y plus 5

HLL:  $Z = xy + 5$

Assembly Language:

```
mov  eax, x
mul  eax, y
add  eax, 5
move D,  eax
```

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