

## What is programming?

## Types of Programming

### Machine Code

Location	Instruction Code	Comments
100	0010 0001 0000 0100	Load first operand into AC
101	0001 0001 0000 0101	Add second operand to AC
102	0011 0001 0000 0110	Store sum in location 106
103	0111 0000 0000 0001	Halt computer
104	0000 0000 0101 0011	83 decimal
105	1111 1111 1111 1110	-2 decimal
106	0000 0000 0000 0000	Store sum here

### Assembly Language

Location	Instruction Code	Comments
	ORG 100	/Origin of program is location 100
	LDA A	/Load operand from location A
	ADD B	/Add operation form location B
	STA C	/Store sum in location C
	HLT	/Halt computer
A,	DEC 83	/Decimal operand
B,	DEC -2	/Decimal operand
C,	DEC 0	/Sum stored in location C
	END	

## High-Level Language

Java:

```
int a, b, c;
a = 83;
b = -2;
c = a + b;
```

## Compiled vs. Interpreted

XKCD: "Compiling!"