Ch 1.1 Our Book's Title

NOTE03 - Introduces the foundational concept in our text - structured computer org

*Text reference: **Section 1.1, 1.5***

Instruction set, machine code - engineering decisions!

Structure computer organization -

important advantages

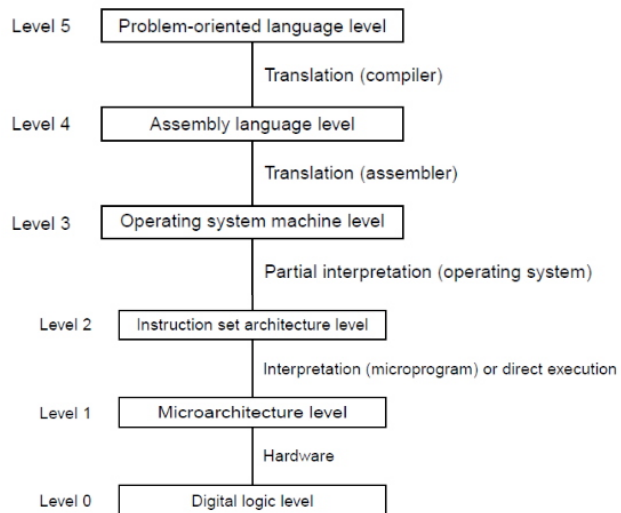Six level computer (bottom up)

5 = Bingo! Java, C++, etc.

4 = symbolic/human access

3 = sys calls & resources

2 = machine + microcode

1 = datapath, microcode

0 = gates, registers

"Hardware and Software are logically equivalent." "Hardware is just petrified software."
When can an algorithm be moved to hardware?

Software -> Microcode -> Machine code. Example: Add = machine code; Multiply = microcode. Microcode history.

Ch 1.5 - Metric units

- kilo, mega, giga, tera, peta, ...
- 10^3, 10^6, 10^9, 10^12, 10^15, …
- 2^10, 2^20, 2^30, 2^40, 2^50, ...