



assembly

text to describe action

- 1 line = 1 instruction
- very simple syntax
- meta directives
- Labels

instruction op, op

S:

add %rax, %rdx
jmp S

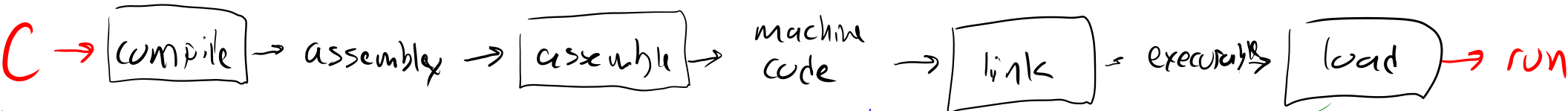
0x12346AB

- 7C B2

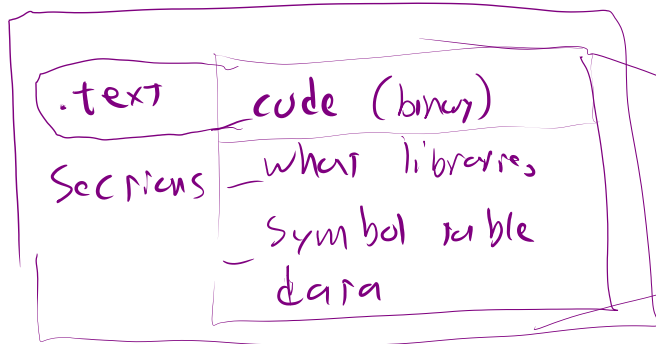
- 83 12346AB

Compilation Pipeline

disassembly
reversible



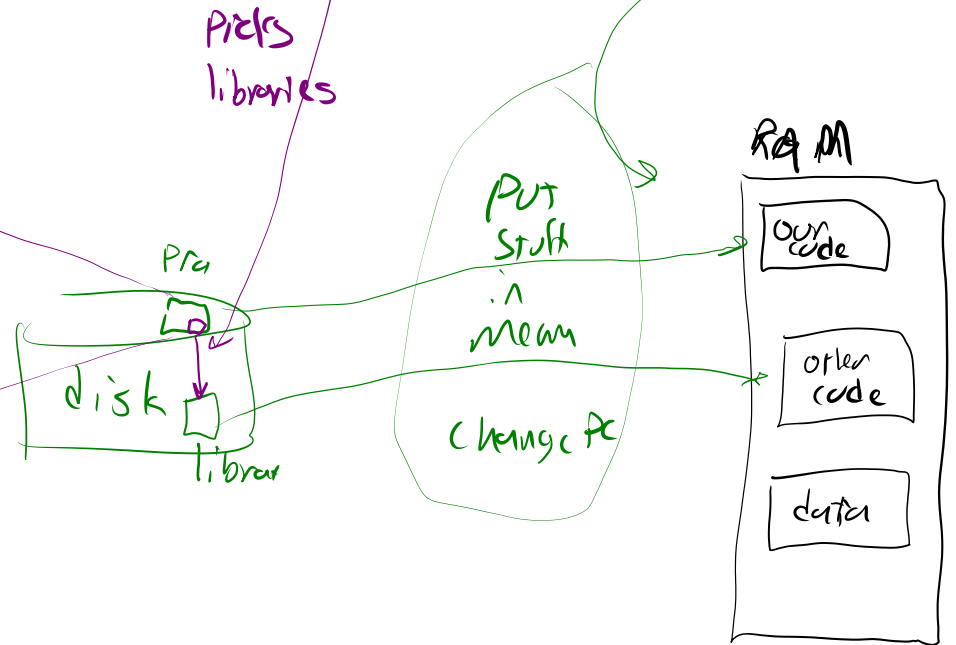
PA03, PA04



ELF

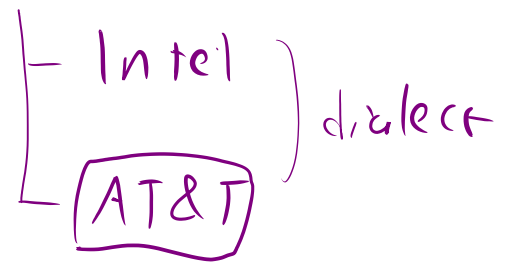
DWARF

...
exe

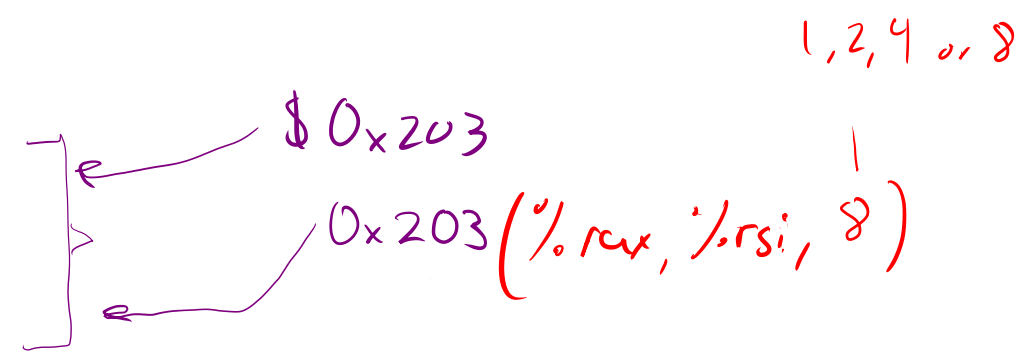


x86-64

ARM



register %
 immediate
 memory
 instruction add $\begin{matrix} b \\ w \\ l \\ q \end{matrix}$



$$addr = 0x203 + \%rax + \%rsi \cdot 8$$

word size = bits in an ^{register} address
:
= 16

long double word 32

quad word 64