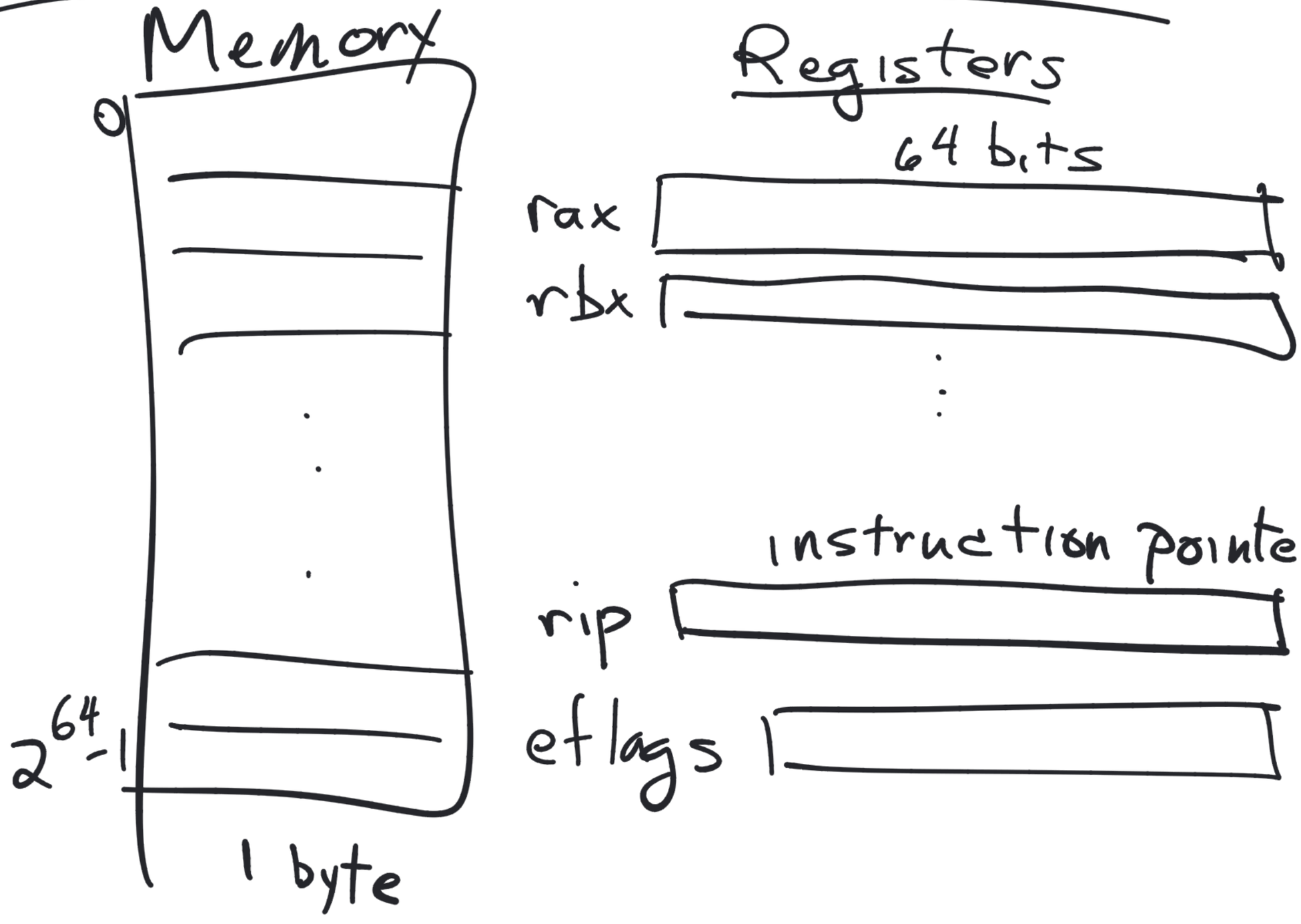
CS208

Mon, 7 Oct 2023

Architecture of x86_64



Instructions act on registers

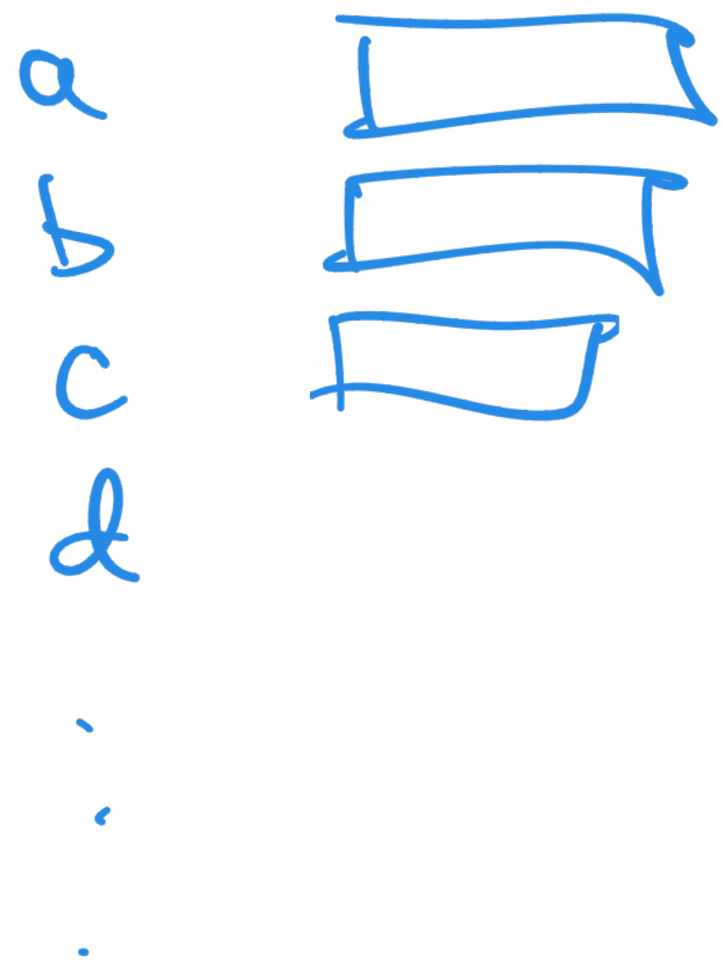
```
movl %rax, %rbx
```

copies contents of rax to rbx.

```
addl %rax, %rbx
```

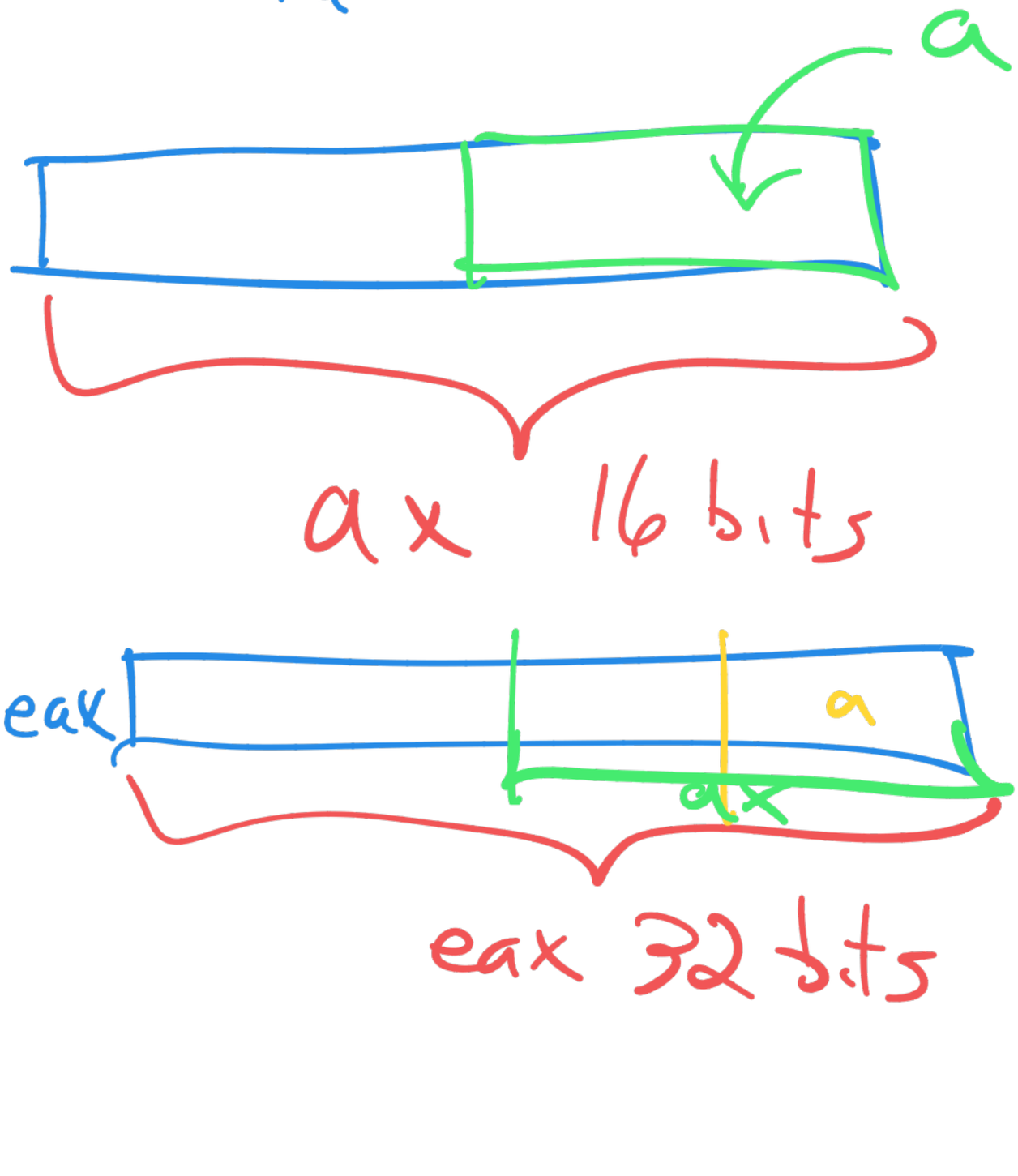
rbx = rax + rbx

8086 8-bit registers



80186 16 bits

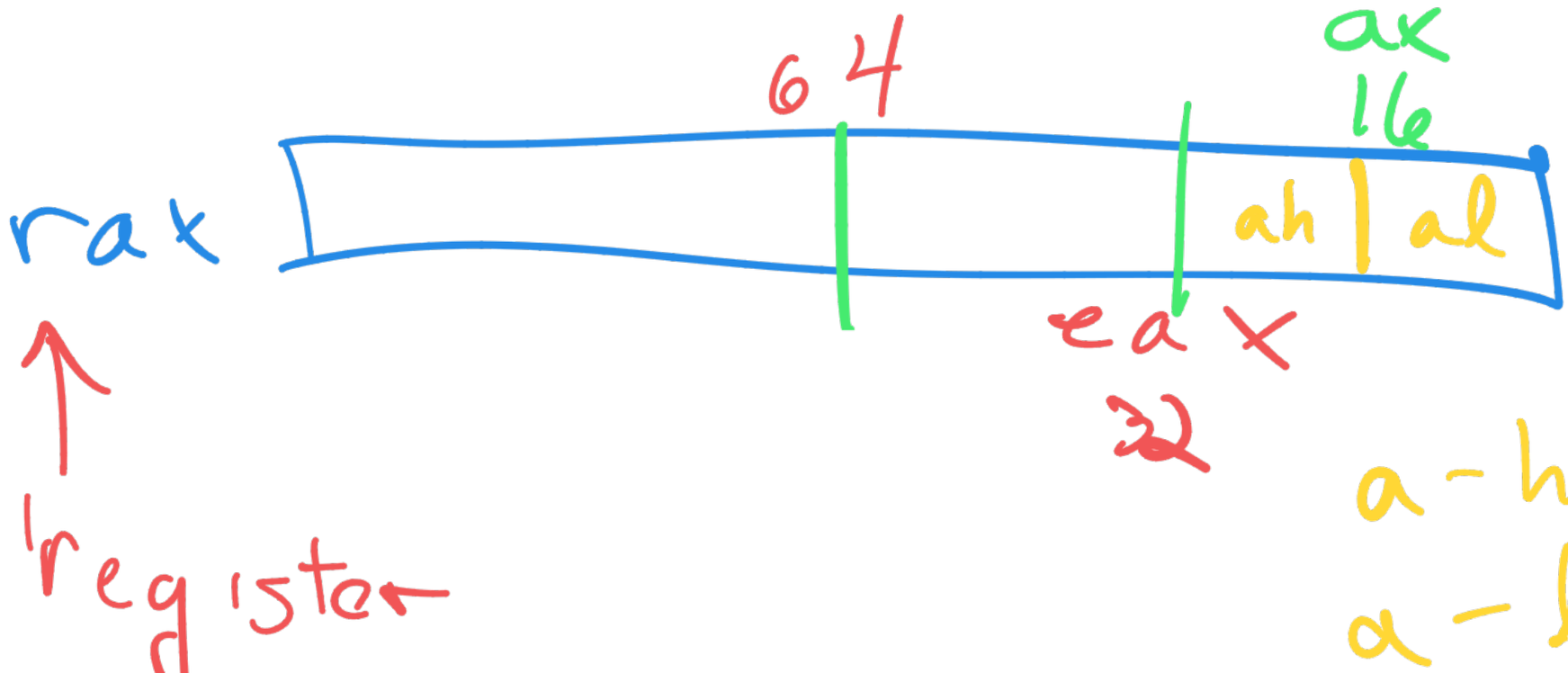
ax



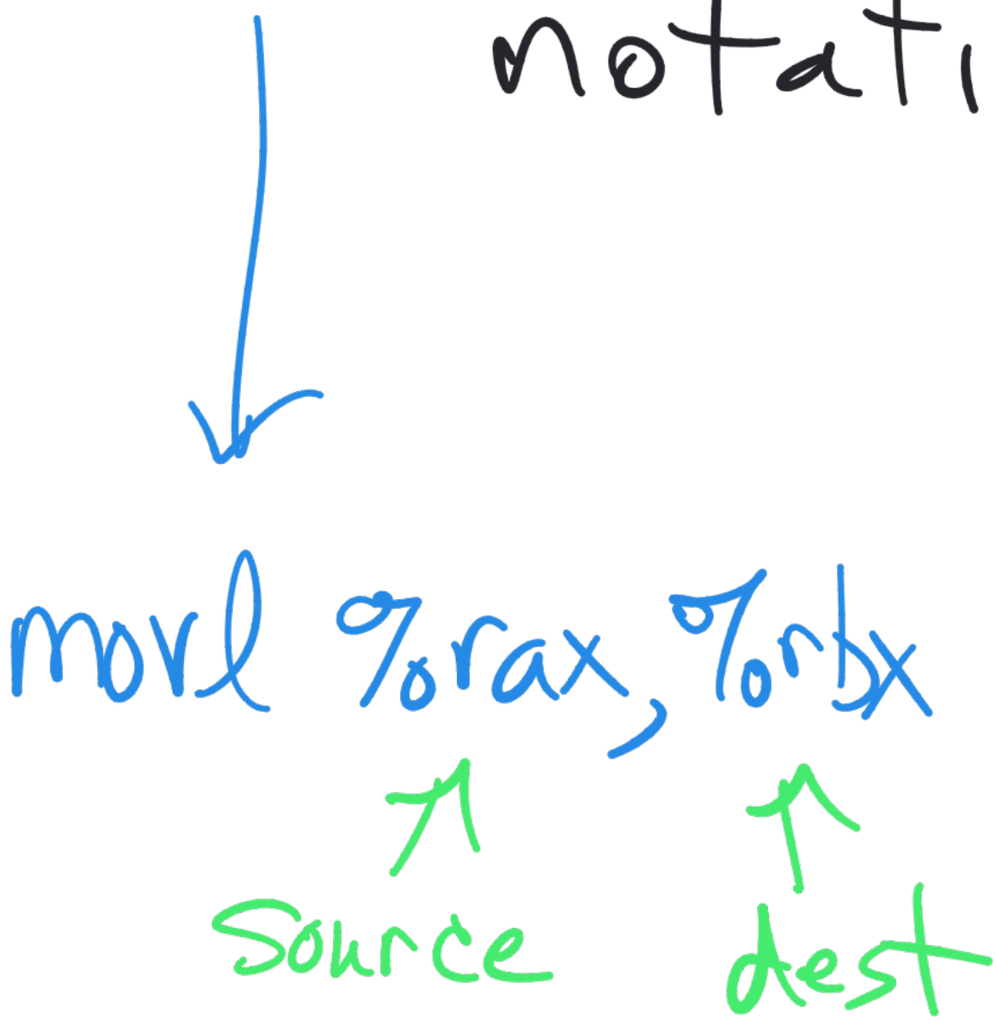
80386
32 bits

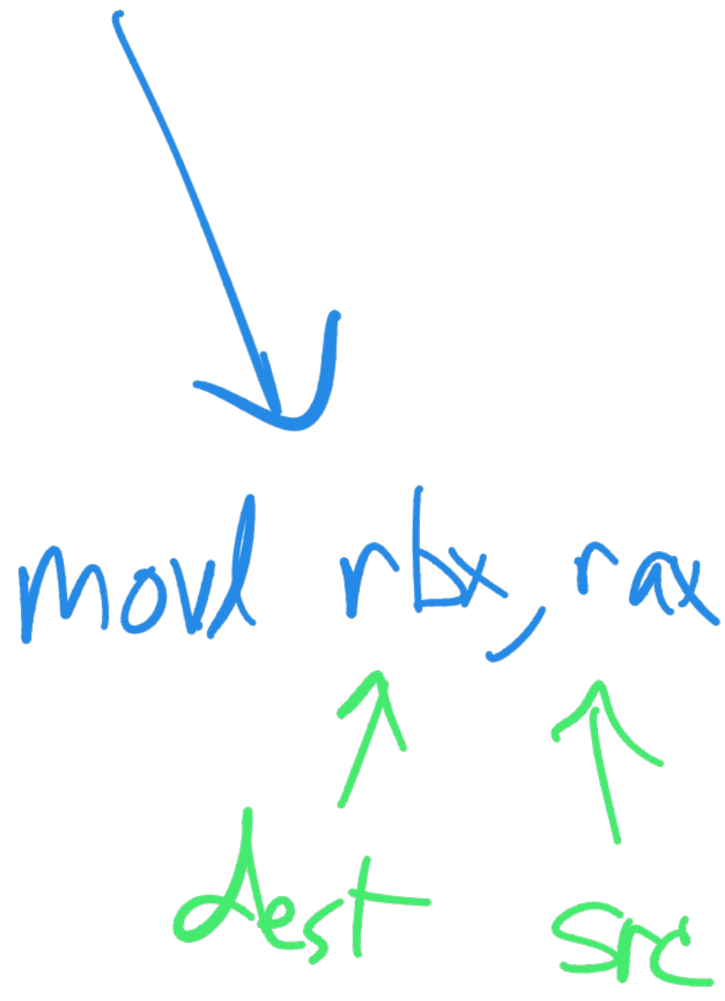
eax 32 bits

later 64 bits



AT&T vs. Intel notation





ABSOLUTE VALUE

edi | -5 (?) | ← param.

eax | +5 | ← return val.

test %edi, %edi

result = %edi AND %edi

js .L3

if the sign bit of is 1, jump to L3