Some Practice Assembly Problems
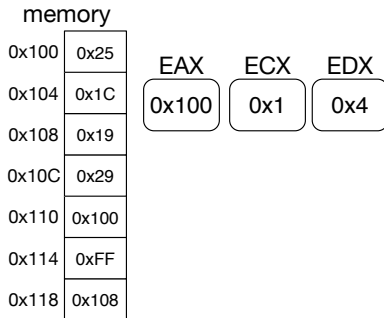
November 12, 2015

Move and Load Effective Address Instructions

What value would be stored in register %ebx after each of the following operations?

- `movl 0x100, %ebx`

0x25

memory

0x100	0x25
0x104	0x1C
0x108	0x19
0x10C	0x29
0x110	0x100
0x114	0xFF
0x118	0x108

EAX	ECX	EDX
0x100	0x1	0x4

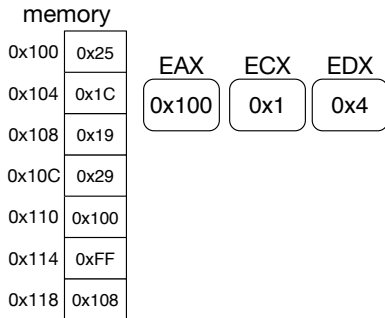# Move and Load Effective Address Instructions

What value would be stored in register %ebx after each of the following operations?

- `movl 0x100, %ebx`
- `movl $0x100, %ebx`

0x100

memory

0x100	0x25
0x104	0x1C
0x108	0x19
0x10C	0x29
0x110	0x100
0x114	0xFF
0x118	0x108

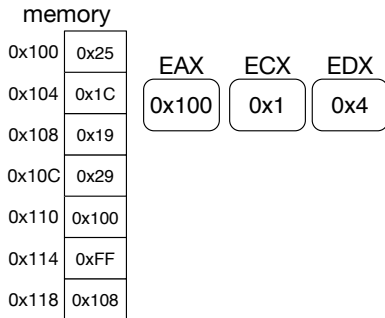| EAX	ECX	EDX
0x100	0x1	0x4

Move and Load Effective Address Instructions

What value would be stored in register %ebx after each of the following operations?

- `movl 0x100, %ebx`
- `movl $0x100, %ebx`
- `movl %eax, %ebx`

memory

0x100	0x25
0x104	0x1C
0x108	0x19
0x10C	0x29
0x110	0x100
0x114	0xFF
0x118	0x108

EAX	ECX	EDX
0x100	0x1	0x4

0x100

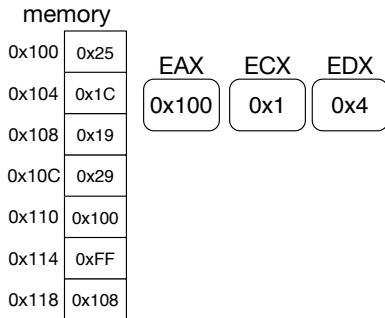# Move and Load Effective Address Instructions

What value would be stored in register %ebx after each of the following operations?

- `movl 0x100, %ebx`
- `movl $0x100, %ebx`
- `movl %eax, %ebx`
- `movl (%eax), %ebx`

memory	
0x100	0x25
0x104	0x1C
0x108	0x19
0x10C	0x29
0x110	0x100
0x114	0xFF
0x118	0x108

EAX	ECX	EDX
0x100	0x1	0x4

0x25

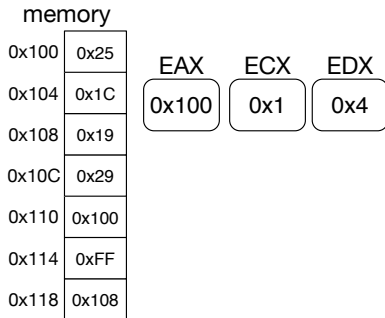# Move and Load Effective Address Instructions

What value would be stored in register %ebx after each of the following operations?

- `movl 0x100, %ebx`
- `movl $0x100, %ebx`
- `movl %eax, %ebx`
- `movl (%eax), %ebx`
- `movl 4(%eax), %ebx`

0x1C

memory

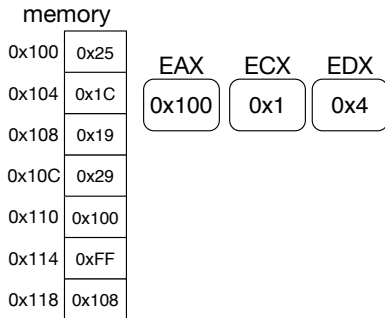|	
0x100	0x25
0x104	0x1C
0x108	0x19
0x10C	0x29
0x110	0x100
0x114	0xFF
0x118	0x108

EAX	ECX	EDX
0x100	0x1	0x4

Move and Load Effective Address Instructions

What value would be stored in register %ebx after each of the following operations?

- `movl 0x100, %ebx`
- `movl $0x100, %ebx`
- `movl %eax, %ebx`
- `movl (%eax), %ebx`
- `movl 4(%eax), %ebx`
- `leal 4(%eax), %ebx`

0x104

memory

0x100	0x25
0x104	0x1C
0x108	0x19
0x10C	0x29
0x110	0x100
0x114	0xFF
0x118	0x108

EAX	ECX	EDX
0x100	0x1	0x4

Move and Load Effective Address Instructions

What value would be stored in register %ebx after each of the following operations?

- `movl 0x100, %ebx`
- `movl $0x100, %ebx`
- `movl %eax, %ebx`
- `movl (%eax), %ebx`
- `movl 4(%eax), %ebx`
- `leal 4(%eax), %ebx`
- `movl 8(%eax, %ecx, 4), %ebx`

0x29

memory

0x100	0x25
0x104	0x1C
0x108	0x19
0x10C	0x29
0x110	0x100
0x114	0xFF
0x118	0x108

EAX	ECX	EDX
0x100	0x1	0x4

Move and Load Effective Address Instructions

What value would be stored in register %ebx after each of the following operations?

- `movl 0x100, %ebx`
- `movl $0x100, %ebx`
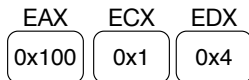- `movl %eax, %ebx`
- `movl (%eax), %ebx`
- `movl 4(%eax), %ebx`
- `leal 4(%eax), %ebx`
- `movl 8(%eax, %ecx, 4), %ebx`
- `leal 8(%eax, %ecx, 4), %ebx`

memory

0x100	0x25
0x104	0x1C
0x108	0x19
0x10C	0x29
0x110	0x100
0x114	0xFF
0x118	0x108

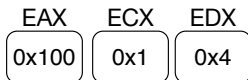| EAX	ECX	EDX
0x100	0x1	0x4

0x10C

Move and Load Effective Address Instructions

What value would be stored in register %ebx after each of the following operations?

- `movl 0x100, %ebx`
- `movl $0x100, %ebx`
- `movl %eax, %ebx`
- `movl (%eax), %ebx`
- `movl 4(%eax), %ebx`
- `leal 4(%eax), %ebx`
- `movl 8(%eax, %ecx, 4), %ebx`
- `leal 8(%eax, %ecx, 4), %ebx`
- `leal 8(, %ecx, 4), %ebx`

0xC

memory

address	value
0x100	0x25
0x104	0x1C
0x108	0x19
0x10C	0x29
0x110	0x100
0x114	0xFF
0x118	0x108

EAX	ECX	EDX
0x100	0x1	0x4