

Princeton University
 COS 217: Introduction to Programming Systems
 Examples of IA-32 Instruction Operands

Type of Operand	Syntax	Semantics
Immediate	\$5 \$iPower	5 iPower (i.e., the address denoted by iPower)
Register	%eax	reg[EAX]
Memory (Direct Addressing)	iPower	mem[iPower]
Memory (Full Form)	iNumbers(%eax,%ecx,4)	mem[iNumbers + reg[EAX] + (reg[ECX] * 4)]
Memory (Indirect Addressing)	(%eax)	mem[reg[EAX]]
Memory (Indexed Addressing)	iNumbers(%eax)	mem[iNumbers + reg[EAX]]
Memory (Fancy Indexed Addressing)	iNumbers(,%ecx,4)	mem[iNumbers + (reg[ECX] * 4)]
Memory (Base-Pointer Addressing)	-4(%ebp)	mem[-4 + reg[EBP]]