

Jump Explore

eax	ebx	ecx	edx
0x01234567	0x89ABCDEF	0xFEDCBA98	0x76543210

Based on the given contents of the registers, evaluate whether each code block would trigger a jump. Put a check next to each block that *would* jump.

	Code	Jump?
1	cmpl %eax, %eax jmp L2	
2	cmpl \$0x01234567, %eax je L2	
3	cmpl \$0x01234567, %eax jne L2	
4	cmpl %eax, %ebx jg L2	
5	cmpl %edx, %eax jle L2	
6	cmpl %ebx, %eax jb L2	
7	testl %eax, %eax jns L2	
8	testl \$0xFFFFFFFF, %eax jz L2	
9	testb \$1, %cl jnz L2	

Jump Instructions

Instruction	Synonym	Condition	Description
jmp Label		Unconditional	Direct jump
jmp *Operand		Unconditional	Indirect jump
je Label	jz	ZF == 1	Equal / zero
jne Label	jnz	ZF == 0	Not equal / not zero
js Label		SF == 1	Negative
jns Label		SF == 0	Nonnegative
jg Label	jnle	(SF == OF) && (ZF == 0)	Greater (signed >)
jge Label	jnl	SF == OF	Greater or equal (signed >=)
jl Label	jnge	SF != OF	Less (signed <)
jle Label	jng	(SF != OF) (ZF == 1)	Less or equal (signed <=)
ja Label	jnbe	(CF == 0) && (ZF == 0)	Above (unsigned >)
jae Label	jnb	CF == 0	Above or equal (unsigned >=)
jb Label	jnae	CF == 1	Below (unsigned <)
jbe Label	jna	(CF == 1) (ZF == 1)	Below or equal (unsigned <=)