

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

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 == 0F) && (ZF == 0)	Greater (signed >)
jge Label	jnl	SF == 0F	Greater or equal (signed >=)
jl Label	jnge	SF != 0F	Less (signed <)
jle Label	jng	(SF != 0F) (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 <=)