Jump Practice

Evaluate the values of **%eax** and **%ecx** after each of the following blocks of code has executed.

	Code	%eax	%ecx

1	```mov $0, %ecx```
	```mov $5, %eax```
	```cmp %ecx, %eax```
	```jl L1```
	```add $2, %ecx```
	```L1: add $1, %ecx```		

2	```mov $0, %ecx```
	```mov $5, %eax```
	```L2: add %eax, %ecx```
	```sub $1, %eax```
	```jns L2```		

3	```mov $0, %ecx```
	```mov $5, %eax```
	```jmp L3```
	```L4: add $1, %ecx```
	```L3: sub %ecx, %eax```
	```ja L4```		

4	```mov $0, %ecx```
	```mov $5, %eax```
	```jmp L5```
	```L6: add %eax, %ecx```
	```add $1, %eax```
	```L5: test $112, %ecx```
	```je L6```		

Jump Instructions

Instruction	Synonym	Condition	Description
jmp Label		Unconditional	Direct 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 <=)