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Conditional Jump instructions (J)

- In the 8086 through the 80286 microprocessors, conditional jump instructions are always jump to any location within the current code segment.

Jcondition label

; condition : depends on the result from
 ; any arithmetic or logic operations (refers to status flags)
 ; label : refers to code label

- If the **condition** under test is **true**, a branch to the **label** associated with the conditional jump instruction is executed. If the **condition** is **false**, the next sequential step in the program is executed.

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- Although the **CMP** instruction is the same for both unsigned and signed numbers, the **conditional jump instructions** used to make a decision for the **unsigned numbers** are different from the **signed numbers**.
 - **Conditional jump instructions** which are used with **unsigned numbers** are **JA, JB, JAE, JBE, JE, and JNE**.
 - **Conditional jump instructions** which are used with **signed numbers** are **JG, JL, JGE, JLE, JE, and JNE**.
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Conditional Jump instruction for the unsigned numbers:

Conditional Jump instruction	Description	Flag condition
JE, JZ	Jump if equal (zero)	ZF = 1
JNE, JNZ	Jump if not equal (not zero)	ZF = 0

Conditional Jump instruction	Description	Flag condition
JA, JNBE	Jump if above (not below or equal)	CF=0 and ZF=0
JB, JNAE, JC	Jump if below (not above or equal/carry)	CF=1
JAE, JNB, JNC	Jump if above or equal (not below/not carry)	CF=0
JBE, JNA	Jump if below or equal (not above)	CF=1 or ZF=1
JPE, JP	Jump if parity even	PF=1
JPO, JNP	Jump if parity odd (no parity)	PF=0

Conditional Jump instruction for the signed numbers:

Conditional Jump instruction	Description	Flag condition
JE, JZ	Jump if equal (zero)	ZF = 1
JNE, JNZ	Jump if not equal (not zero)	ZF = 0
JG, JNLE	Jump if greater (not less or equal)	SF=OF and ZF=0
JL, JNGE	Jump if less (not greater or equal)	SF≠OF
JGE, JNL		SF=OF

Conditional Jump instruction	Description	Flag condition
	Jump if greater or equal (not less)	
JLE, JNG	Jump if less or equal (not greater)	SF≠OF or ZF=1
JPE, JP	Jump if parity even	PF=1
JPO, JNP	Jump if parity odd (no parity)	PF=0
JO	Jump if overflow	OF=1
JNO	Jump if not overflow	OF=0
JS	Jump if sign	SF=1
JNS	Jump if not sign	SF=0