Codes for Addressing Method

A Direct address; the instruction has no modR/M byte; the address of the operand is encoded in the instruction; no base register, index register, or scaling factor can be applied; e.g., far JMP (EA).

C The reg field of the modR/M byte selects a control register; e.g., MOV (0F20, 0F22).

D The reg field of the modR/M byte selects a debug register; e.g., MOV (0F21,0F23).

E A modR/M byte follows the opcode and specifies the operand. The operand is either a general register or a memory address. If it is a memory address, the address is computed from a segment register and any of the following values: a base register, an index register, a scaling factor, a displacement.

F Flags Register.

G The reg field of the modR/M byte selects a general register; e.g., ADD (00).

I Immediate data. The value of the operand is encoded in subsequent bytes of the instruction.

J The instruction contains a relative offset to be added to the instruction pointer register; e.g., JMP short, LOOP.

M The modR/M byte may refer only to memory; e.g., BOUND, LES, LDS, LSS, LFS, LGS.

O The instruction has no modR/M byte; the offset of the operand is coded as a word or double word (depending on address size attribute) in the instruction. No base register, index register, or scaling factor can be applied; e.g., MOV (A0-A3).

R The mod field of the modR/M byte may refer only to a general register; e.g., MOV (0F20-0F24, 0F26).

S The reg field of the modR/M byte selects a segment register; e.g., MOV (8C,8E).

T The reg field of the modR/M byte selects a test register; e.g., MOV (0F24,0F26).

X Memory addressed by DS:SI; e.g., MOVS, COMPS, OUTS, LODS, SCAS.

Y Memory addressed by ES:DI; e.g., MOVS, CMPS, INS, STOS.

Codes for Operant Type

a Two one-word operands in memory or two double-word operands in memory, depending on operand size attribute (used only by BOUND).

b Byte (regardless of operand size attribute)

c Byte or word, depending on operand size attribute.

d Double word (regardless of operand size attribute)

p 32-bit or 48-bit pointer, depending on operand size attribute.

s Six-byte pseudo-descriptor

v Word or double word, depending on operand size attribute.

w Word (regardless of operand size attribute)