Instruction Format

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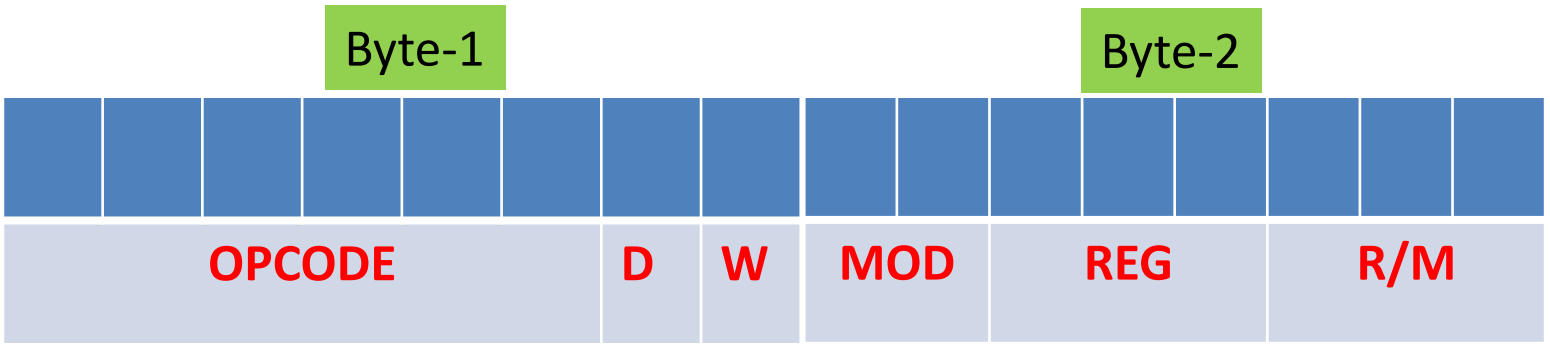
- To construct the binary codes for 8086 instructions, probably assembler is used.

- To code instructions for 8-bit processors such as 8085, is look up the hexa decimal code for each instruction on a one-page chart

Instruction Format



Indicators

W-bit
D-bit
V-bit
S-bit
Z-bit

Instruction Format

W-bit

1-word operation

0-Byte operation

D-bit

0-then REG is Source

1-then REG is Destination

V-bit

0-then no of rotations/shift=1

1- then no of rotations/shift=CL

S-bit

0-No Sign extension

1- Sign extension

Z-bit

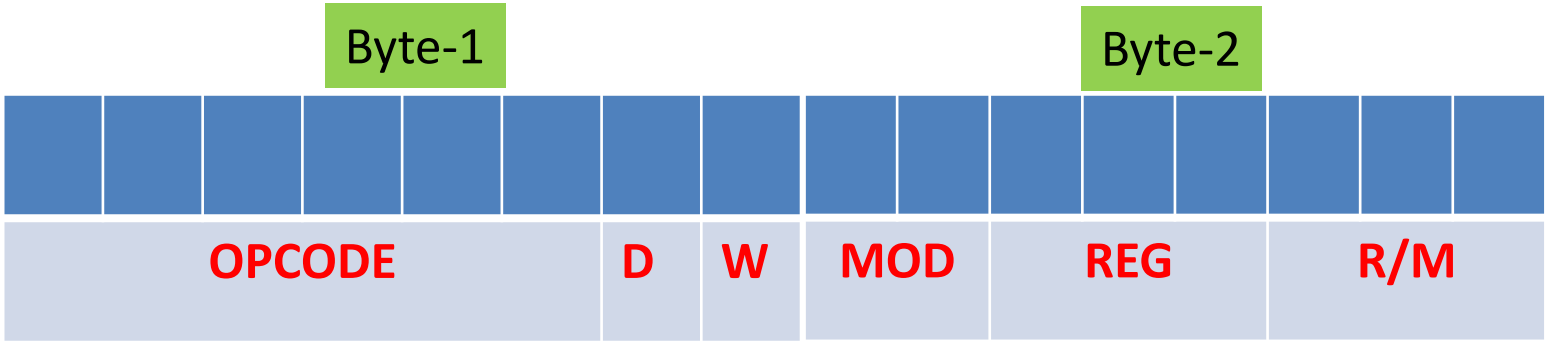
0-Repeat/loop while ZF=0

1- Repeat/loop while ZF=1

MOD / REG/R/M	00	01	10	11	
				W=0	W=1
000	[BX][SI] DS	[BX][SI]+d_8 DS	[BX][SI]+d_{16} DS	AL	AX
001	[BX][DI] DS	[BX][DI]+d_8 DS	[BX][DI]+d_{16} DS	CL	CX
010	[BP]+[SI] SS	[BP]+[SI] +d_8 SS	[BP]+[SI]+d_{16} SS	DL	DX
011	[BP]+[DI] SS	[BP]+[DI] +d_8 SS	[BP]+[DI]+d_{16} SS	BL	BX
100	[SI] DS	[SI]+d_8 DS	[SI]+d_{16} DS	AH	SP
101	[DI] ES	[DI]+d_8 ES	[DI]+d_{16} ES	CH	BP
110	d_{16} DS	[BP]+d_8 SS	[BP]+d_{16} SS	DH	SI
111	[BX] DS	[BX]+d_8 DS	[BX]+d_{16} DS	BH	DI

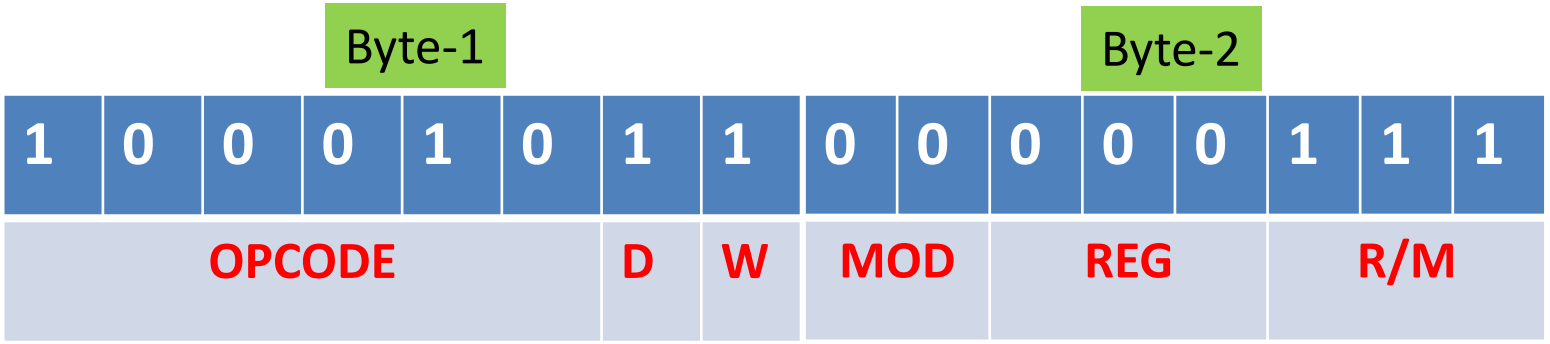
Instruction Format

Design Instruction template for MOV AX, [BX]



Instruction Format

Design Instruction template for MOV AX, [BX]



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