

ADDRESSING MODES - 8051

TYPES OF ADDRESSING MODES-8051

1. **IMMEDIATE** addressing mode
2. **REGISTER** addressing mode
3. **DIRECT** addressing mode
4. **INDIRECT** addressing mode.

IMMEDIATE ADDRESSING MODE

MNEMONIC	REMARKS
MOV A, #24	; Move immediately the data 24 into the Accumulator.
MOV B, #10	
MOV C, #46	

REGISTER ADDRESSING MODE

MNEMONIC	REMARKS
MOV A, R0	; Copy the data from register R0 into A.
MOV R0, A	; Copy the data in A into the register R0.
MOV B, A	; Copy the data in A into B.
MOV ;R1, DPH	; Copy the data in DPL into register R1.

DIRECT ADDRESSING MODE

SFR	ADDRESS (HEX)
A	0E0
B	0F0
DPL	83
DPH	83
IE	0A8
IP	0B8
PO	80

SFR	ADDRESS (HEX)
P1	90
P2	0A0
P3	0B0
PCON	87
PSW	0D0
SBUF	99
SCON	98

SFR	ADDRESS (HEX)
SP	81
TCON	88
TMOD	89
TH0	8C
TL0	8A
TH1	8D
TL1	8B

INDIRECT ADDRESSING MODE

MNEMONIC	OPERATION
MOV @Rp,#n	Copy immediate byte n to the address in Rp.
MOV @Rp,add	Copy the contents of add to the address in Rp.
MOV @Rp,A	Copy the data in A to the address in Rp.
MOV add,@Rp	Copy the contents of the address in Rp to add.
MOV A,@Rp	Copy the contents of the address in Rp to add.