Microprocessors Lap

Lecture: 3

2024 - 2023

EXAMPLE: MOV

Write a program to transfer 40 into reg CX and 52BA into reg BX then put the value of reg BX into M.L 1000 and the value of CX in M.L 1050?

```
MOV     AX  ,  0000H
MOV     DS  ,  AX
MOV     CX  ,  40H
MOV     BX  ,  52BAH
MOV     [1000H]  ,
        BX MOV
        [1050H]  , CX

HLT
```

Arithmetic instructions:

1) ADDITION (ADD) :

First operand = first operand + second operand

ADD reg, imm

ADD reg, mem

ADD reg, reg

ADD mem, imm

ADD mem, reg

Example:

ADD AX, BX

AX
BX +
_____
AX

ADD CH, DL

CH
DL +
_____
CH

2) ADDITION WITH CARRY (ADC) :

First operand = first operand + second operand + carry

ADC reg, imm

ADC reg, mem

ADC reg, reg

ADC mem, imm

ADC mem, reg

Example:

ADC DX, BX

DX +
BX +
Carry

DX

ADC CH, AL

CH +
AL +
Carry

CH