



Microprocessors Lap

Lecture: 4

2023 - 2024

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

$$\begin{array}{r} \text{AX} \\ \text{BX} + \\ \hline \text{AX} \end{array}$$

ADD CH, DL

$$\begin{array}{r} \text{CH} \\ \text{DL} + \\ \hline \text{CH} \end{array}$$

Example:

Write a program to perform the following tasks:

1. Loading the register SI by the value 1368, AX by 659F and M.L 0400 by 1234
2. Add the content of M.L 0400 with content of reg. SI
3. Store the result in M.L 0100

Solution:

```
MOV    AX, 0000H
MOV    DS, AX
MOV    SI, 1368H
MOV    AX, 659F
MOV    [0400], 1234H
ADD    SI, [0400]
ADD    [0100], SI

HLT
```