Shri Vile Parle Kelavani Mandal's
DWARKADAS J. SANGHVI COLLEGE OF ENGINEERING
(Autonomous College Affiliated to the University of Mumbai)
NAAC Accredited with "A" Grade (CGPA : 3.18)

A.Y. 2022-2023

PROCESSOR ORGANIZATION AND ARCHITECTURE

AYUSH JAIN

COMPUTER ENGINEERING | TE – B2 | 60004200132

EXPERIMENT – 5

AIM: Addition and Subtraction of 16 bit numbers using 8086 Emulator

Immediate addressing mode

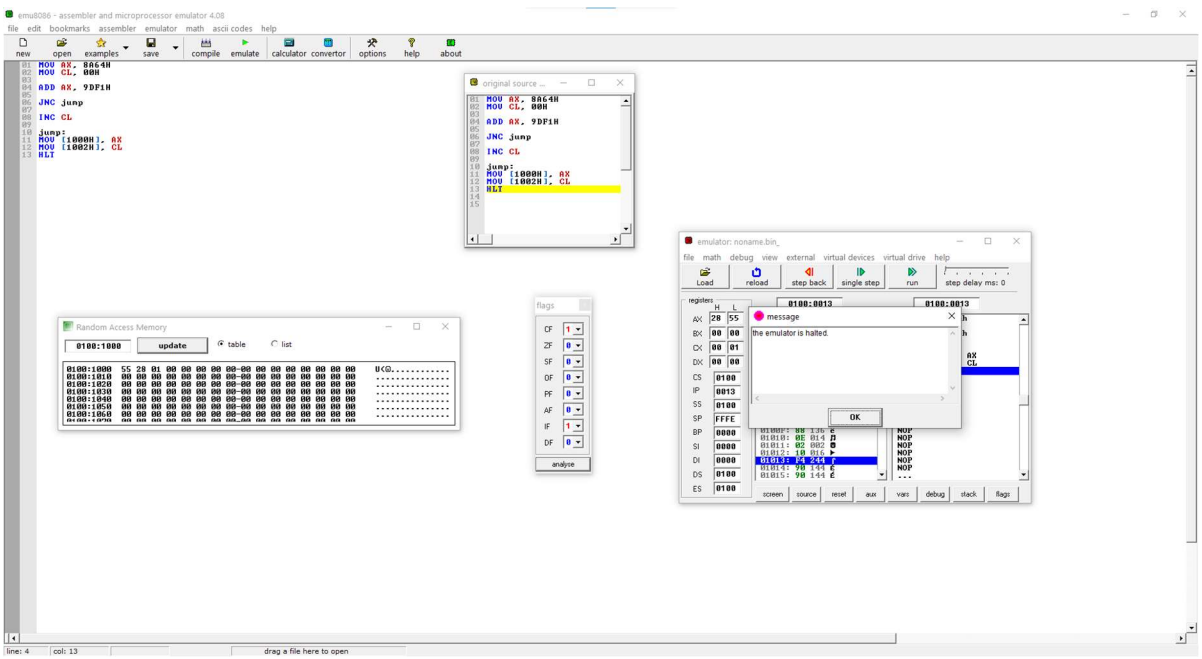
The addressing mode in which the data operand is a part of the instruction itself is known as immediate addressing mode.

Example

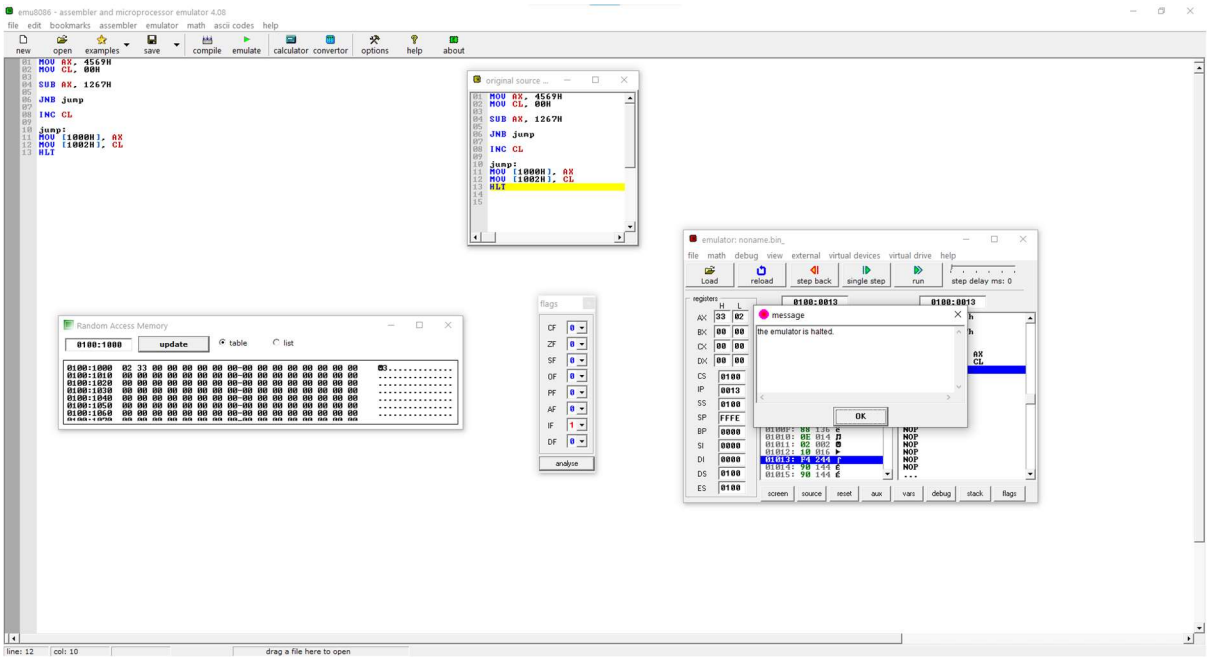
MOV CX, 4929 H,

ADD AX, 2387 H,

MOV AL, FFH



Addition using Immediate addressing mode (with carry)



Subtraction using Immediate addressing mode (without borrow)

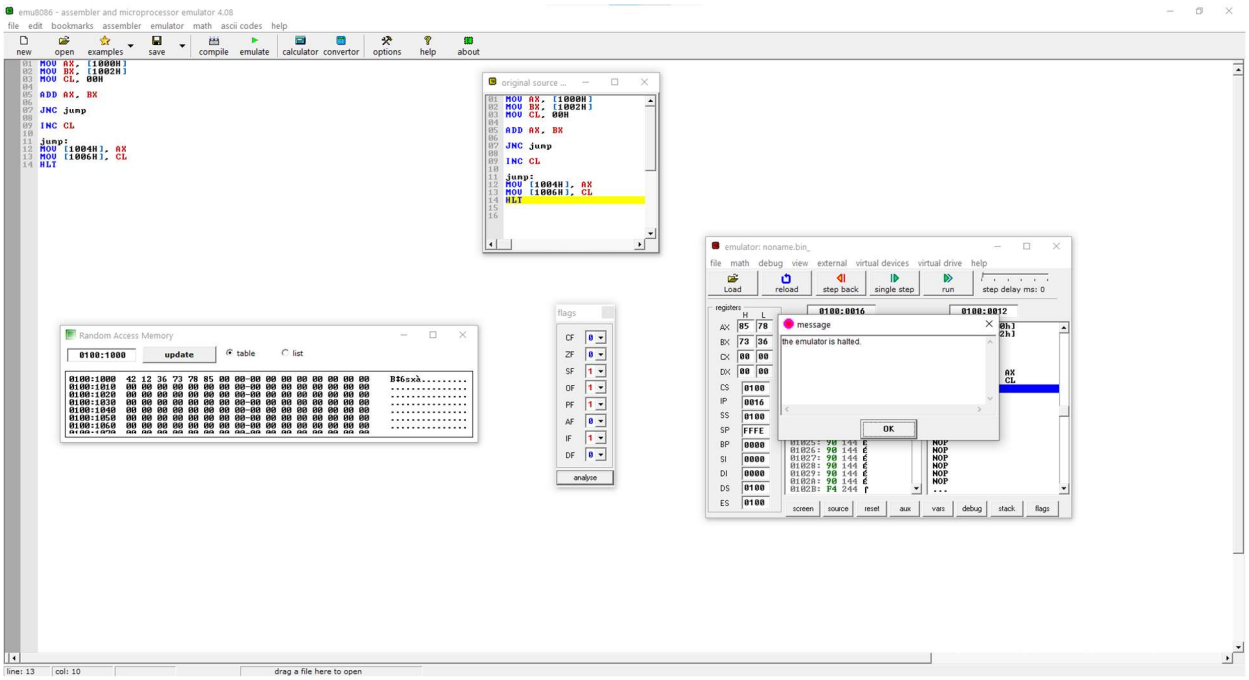
Direct addressing mode

The addressing mode in which the effective address of the memory location is written directly in the instruction.

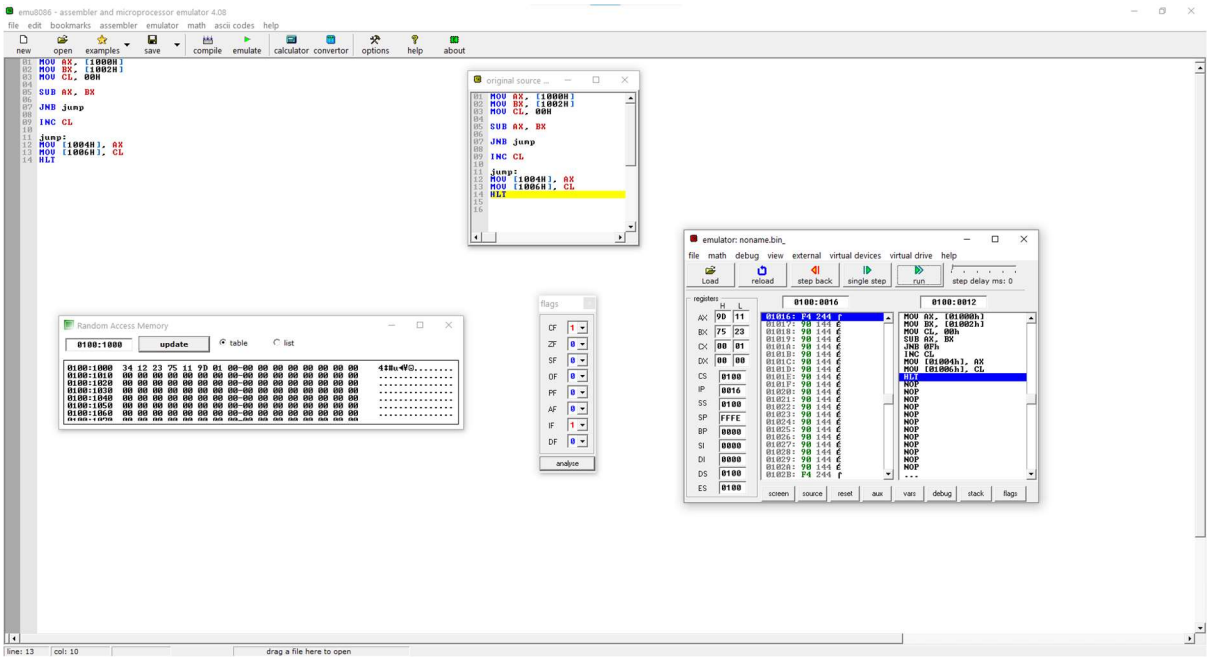
Example

MOV AX, [1592H],

MOV AL, [0300H]



Addition using Direct addressing mode (without carry)



Subtraction using Direct addressing mode (with borrow)

Conclusion:

Performed Addition and Subtraction on 8086 microprocessor using

EMU8086 - MICROPROCESSOR EMULATOR