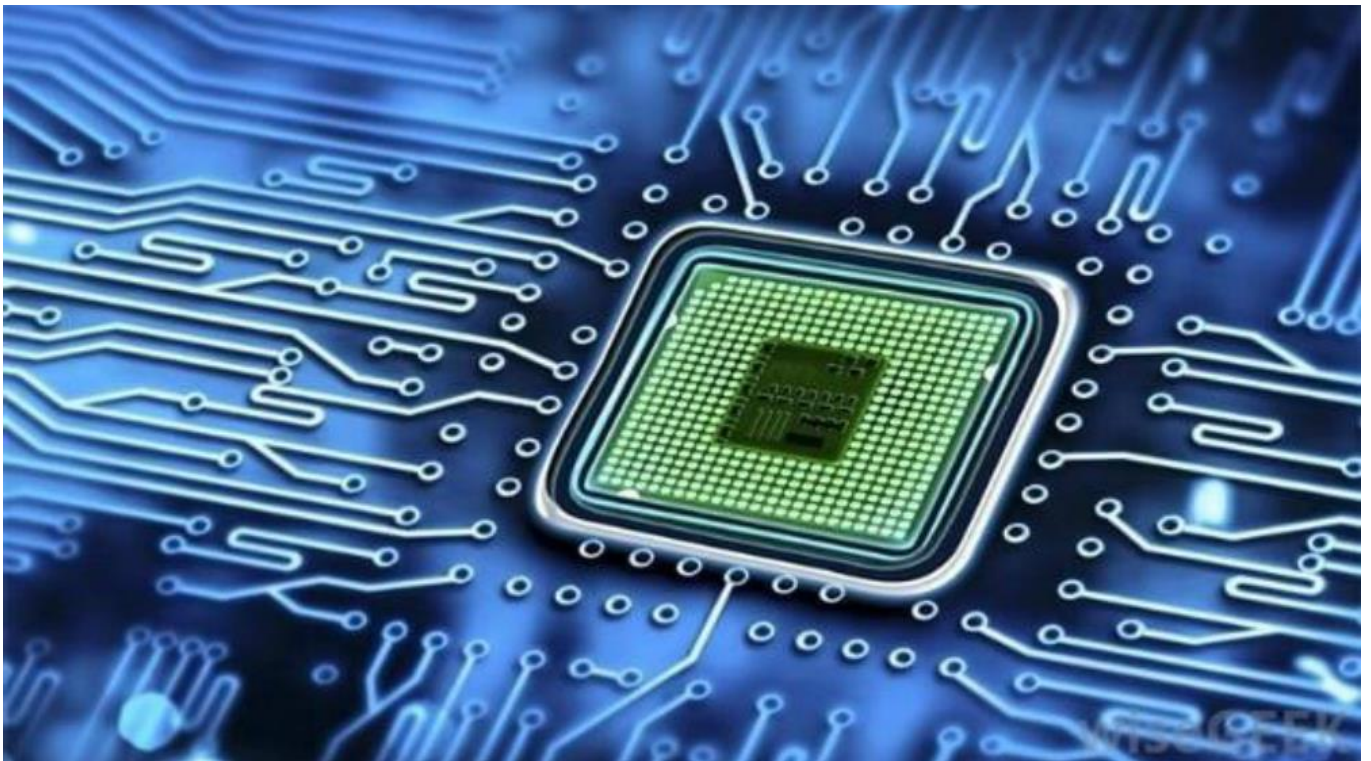جامعة الفرات الاوسط التقنية

AL-Furat al-awsat technical University

الكلية التقنية الهندسية /نجف
هندسة تقنيات الليزر والالكترونيات البصرية

مختبر معالج دقيق

Exp. No: 4

Exp. Name: Arithmetic instructions

Experiment No.:- 4
Experiment Title :- Arithmetic instructions.
Aim :- Addition and subtraction two number.
Theory :- The arithmetic operation that can be executed directly by 8085 processor are summation, subtraction, adding by 1 and subtract by1 operations.

1- Summation operation is executed for 8- bit & 16- bit numbers where in 8-bit number operation the results saved in accumulator while in 16-bit number the results executed in HL register pair.
2- Subtraction operation is executed for 8-bit number only where the results saved in accumulator.
3- Adding by 1: one can added to all general purpose registers contents.
4- Decrement by 1: one can subtracted from all general purpose registers contents.

Program :- Write A.L.Ps. to get the results of the following operations, after execution

write (A) and flags status

$$3F(H) + 4C(H) =$$
$$51(H) - 61(H) =$$

Flowchart:- flowchart below explain the steps of execution the arithmetic operation above

Addition operation   subtraction operation

Discussion:-

write A.L.P. to execute the following operation

$$10(H) + 0E(H) - 1C =$$

Where the number 1C is saved in memory location which addressed by 3500H