

Module 2

PRACTICAL 1

1) Find the square of the given numbers from memory location 6100H and store the result from memory location 7000H.

Registers :									
Register	Value	7	6	5	4	3	2	1	0
Accumulator	00	0	0	0	0	0	0	0	0
Register B	05	0	0	0	0	0	1	0	1
Register C	00	0	0	0	0	0	0	0	0
Register D	70	0	1	1	1	0	0	0	0
Register E	05	0	0	0	0	0	1	0	1
Register H	61	0	1	1	0	0	0	0	1
Register L	05	0	0	0	0	0	1	0	1
Memory(M)	06	0	0	0	0	0	1	1	0

Resister	Value	S	Z	*	AC	*	P	*	CY
Flag Resister	54	0	1	0	1	0	1	0	0

Type	Value
Stack Pointer(SP)	FFFF
Memory Pointer (HL)	6105
Program Status Word(PSW)	0054
Program Counter(PC)	001C
Clock Cycle Counter	5249
Instruction Counter	865

Memory Editor	
Memory Range:	0000 ---- FFFF
Memory Address	Value
000A	05
000B	F5
000C	46
000D	4E
000E	AF
000F	80
0010	0D
0011	C2
0012	0F
0014	12
0015	23
0016	13
0017	F1
0018	3D
0019	C2
001A	0B
001C	76
6100	02
6102	03
6103	04
6104	05
6105	06
7000	04
7002	09
7003	10
7004	19
FFFD	10
FFFE	01

2) Calculate the sum of series of even numbers from the list of numbers. The length of the list is in memory location 2200H and the series itself begins from memory location 2201H. Assume the sum to be 8 bit number so you can ignore carries and store the sum at memory location 2Sample problem:

Registers :									
Register	Value	7	6	5	4	3	2	1	0
Accumulator	08	0	0	0	0	1	0	0	0
Register B	08	0	0	0	0	1	0	0	0
Register C	00	0	0	0	0	0	0	0	0
Register D	00	0	0	0	0	0	0	0	0
Register E	00	0	0	0	0	0	0	0	0
Register H	22	0	0	1	0	0	0	1	0
Register L	04	0	0	0	0	0	1	0	0
Memory(M)	02	0	0	0	0	0	0	1	0

Register	Value	S	Z	*	AC	*	P	*	CY
Flag Register	54	0	1	0	1	0	1	0	0

Type	Value
Stack Pointer(SP)	0000
Memory Pointer (HL)	2204
Program Status Word(PSW)	0854
Program Counter(PC)	0016
Clock Cycle Counter	239
Instruction Counter	38

Memory Editor	
Memory Range:	0000 ---- FFFF
Memory Address	Value
000A	0F
000C	7E
000D	80
000E	47
000F	0D
0010	C2
0011	06
0013	32
0015	23
0016	76
2200	04
2201	03
2202	02
2203	04
2204	02
2300	08

3) Calculate the sum of series of odd numbers from the list of numbers. The length of the list is in memory location 2200H and the series itself begins from memory location 2201H. Assume the sum to be 16-bit. Store the sum at memory locations 2300H and 2301H.

Registers :										
Register	Value	7	6	5	4	3	2	1	0	
Accumulator	00	0	0	0	0	0	0	0	0	
Register B	07	0	0	0	0	0	1	1	1	
Register C	03	0	0	0	0	0	0	1	1	
Register D	00	0	0	0	0	0	0	0	0	
Register E	00	0	0	0	0	0	0	0	0	
Register H	22	0	0	1	0	0	0	1	0	
Register L	04	0	0	0	0	0	1	0	0	
Memory(M)	06	0	0	0	0	0	1	1	0	

Resister	Value	S	Z	*	AC	*	P	*	CY
Flag Resister	00	0	0	0	0	0	0	0	0

Type	Value
Stack Pointer(SP)	0000
Memory Pointer (HL)	2204
Program Status Word(PSW)	0000
Program Counter(PC)	FFFF
Clock Cycle Counter	534847
Instruction Counter	132588

Memory Editor	
Memory Range:	0000 ---- FFFF
Memory Address	Value
000A	D2
000B	14
000D	7E
000E	80
000F	D2
0010	13
0012	14
0013	47
0014	0D
0015	C2
0016	07
0018	78
0019	32
001B	23
001C	7A
001D	32
001E	01
001F	23
2200	04
2201	02
2202	01
2203	03
2204	06
2300	04