(10)

Experiment - 10

Object:- WAP to arrange a block of data in ascending order

Apparatus:- Microprocessor kit, DC supply, Keyboard

Table :-

Address	Instructions	opcode	Description
2000	LXI H, 4200	21	Load Data of memory address
2001		00	4200 to H-L register pair
2002		42	
2003	MOV C, M	4E	Move data in memory to C
2004	DCR C	0D	Decrement by 1 in C
2005	MOV B, C	51	Move data in C to register B
2006	LXI H, 4201	21	Load Data of memory
2007		01	address 4201 to H-L register
2008		42	Pair
2009	MOV A, M	7E	Move data in memory to accumulator
200A	INX H	23	Increment by 1 in H
200B	CMP M	BE	Compare memory with accumulator
200C	JC 2014	DA	Jump to address 2014 if
200D		14	carry
200E		20	
200F	MOV B, M	46	Move data in memory to B
2010	MOV M, A	77	Move data in accumulator to memory
2011	DCR H	25	Decrement by 1 in H
2012	MOV M, B	70	Move data in B to memory
2013	INX H	23	Increment by 1 in H.

(8) (9)

Calculation:-

2009

(15)

(10)

2014	DCR D	15	Decrement by 1 in D
2015	JNZ 2009	C2	Jump to address 2009 if
2016		09	no zero
2017		20	
2018	DCR C	0D	Decrement by 1 in C
2019	JNZ 2005	C2	Jump to address 2005 if
201A		05	no zero
201B		20	
201C	HLT	CF	End of Program.

Result:- The program to arrange a block of data in ascending order has been performed successfully.

Precaution:-
- Don't keep the power supply unnecessarily on.
- Type the opcode carefully.

25/4

2009	STA X D	12	Store accumulator value to D
200A	INX H	23	Increment by 1 in H
200B	INX D	13	Increment by 1 in D
200C	DCR B	05	Decrement by 1 in B
200D	JNZ 2003	C2	Jump when no. zero
200E		03	
20.F		20	
2010	HLT	CF	End of the program

Result:-

The transfer of 10 nos has been successfully transferred

Precautions:-

- Switch the power supply when not in use
- Be careful while typing the opcode since they cannot be erased and need to be overwritten from the beginning.

Experiment 1

Objective: To write a program to transfer a block of data from one memory location to another memory location.

Apparatus Required:

- 8085 microprocessor kit
- DC Supply (5 V)
- Keyboard

Address	Instruction	OP code	Description
2000	LXI H, 2050 H	21	load data of memory address 2050 to HL pair
2001		50	
2002		20	
2003	LXI D, 2060 H	11	load data of 2060 to DE register pair
2004		60	
2005		20	
2006	MVI B, 0A	06	Move data immediately to B
2007		0A	
2008	MOV A, M	7E	Move data in memory to Accum

200 8		20
200 9	HLT	CF End of Program.

Result -

The 2's complement of a 8-bit number has been performed successfully.

Precautions -

Switch the power supply when not in use

Be careful while typing the opcode since they cannot be erased and need to be overwritten from the beginning.

Result :-

The 1's complement of a 8-bit number has been performed successfully

Precautions :-

1. Switch the power supply when not in use
2. Be careful while typing the opcode since they cannot be erased and need to be overwritten from the beginning

Ques

Experiment - 8

Objective:- WAP to obtain 2's complement of 8-bit number stored at 2050 location

Apparatus Required:

- 8085 microprocessor kit
- DC Supply (±5v)
- keyboard

Address	Instruction	op code	Description
2000	LDA 2050	3A	load data in Accumulator
2001		50	
2002		20	
2003	CMA	8F	Take is complement of Accumulator data
2004	ADI, 01	C6	Add 1 in the Accumulator.
2005		01	
2006	STA 2051	32	Store result in accumulator at 2051
2007		51	

2006	JNC 200A	D2	Jump if no carry generate
2007		0A	
2008		20	
2009	MOV A, M	7E	Move data from M to Register A
200A	STA 2603	32	Store data of accumulator at 2603
		03	
		26	
200B	HLT	CF	End of Program

Result:- Maximum out of two number has been performed successfully

Precautions:-

1. Switch the Power supply when not in use
2. Be careful while typing the opcodes. Since they cannot be erased and need to be overwritten from the beginning

EXPERIMENT-7

Object:- write a program to perform 1's complement of a 8-bit number which store in 2050 location

Apparatus Required:-

- 8085 microprocessor kit
- DC Supply (± 5V)
- Keyboard

Address	Instruction	opcode	Description
2000	LDA 2050	3A	load the data in accumulator
2001		50	
2002		20	
2003	CMA	8F	Takes 1's complent of Accumulator data
2004	STA 2051	32	Store result in accumulator at 2051
2005		51	
2006		20	
2007	HLT	CF	End of a program

Experiment - 6

Object:- Write a program to find out maximum number between two numbers and display the maximum number.

Apparatus Required:-

- 8085 microprocessor Kit
- DC Supply. (+5V)
- Keyboard

Address	Instruction	opcode	Description
2000	LXI H, 2601	21	Data store in H
2001		01	
2002		26	
2003	MOV A, M	7E	move data A & to M Register
2004	INX H	23	Increment in H it become for L
2005	CMP M	BE	Comparision is performed