

SEVEN SEGMENT DISPLAY INTERFACE USING VI KIT

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SEVEN SEGMENT DISPLAY INTERFACE USING VI KIT

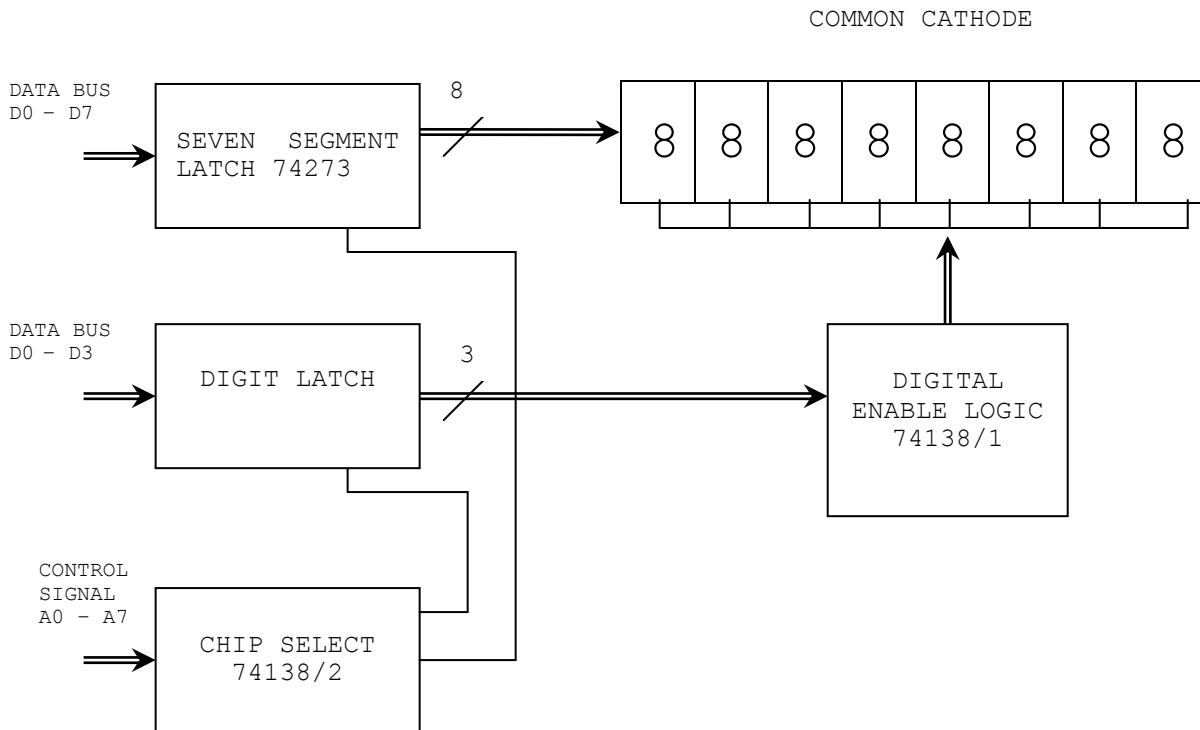
OBJECTIVE

To write an assembly language program to interface the seven segment display with 8085 microprocessor Trainer kit (VI Kit).

APPARATUS REQUIRED

- 8085 Microprocessor trainer kit(VI Kit)
- Display kit
- Power Supply
- Flat Ribbon Cable

BLOCK DIAGRAM

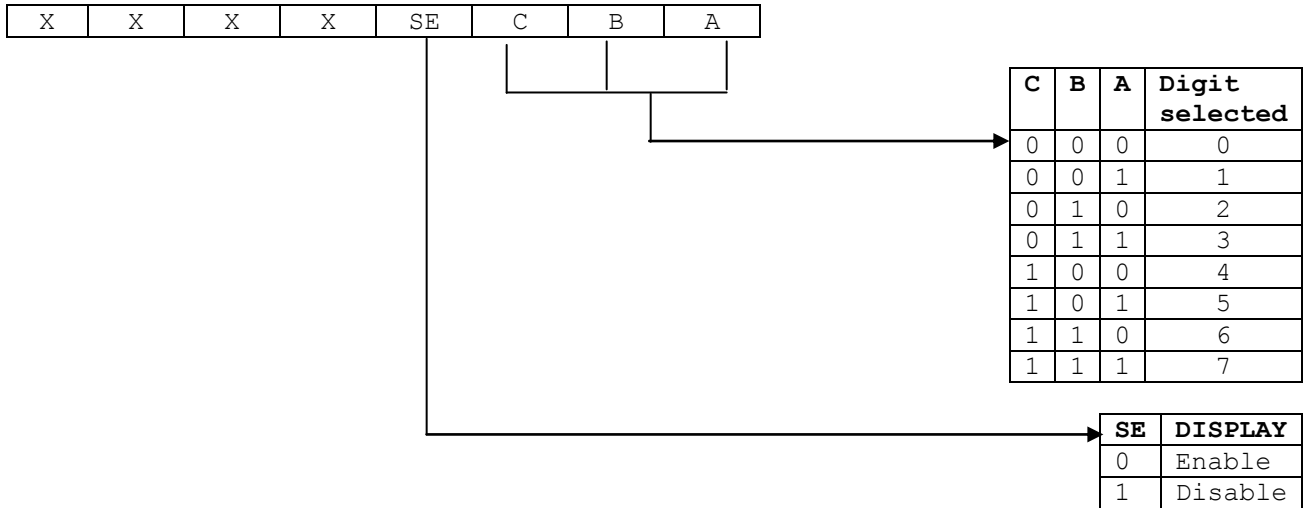


FORMAT FOR COINING HEXADECIMAL DATA



The BCD data for turning ON the display is latched through 4 bit latch 74LS173.

CONTROL WORD FORMAT



STILL DISPLAY

ASSEMBLY LANGUAGE PROGRAM

ADDRESS	LABEL	MNEMONICS	OPCODE/OPERAND
		ORG 4100 _H	
4100		MVI A,00 _H	3E 00
4102		OUT CNT	D3 C2
4104		MVI A,CC _H	3E CC
4106		OUT CNT	D3 C2
4108		MVI A,90 _H	3E 90
410A		OUT CNT	D3 C2
410C		LXI H,4200 _H	21 00 42
410F		MVI C,06 _H	0E 06
4111		MOV A,M	7E
4112	LP1	OUT DAT	D3 C0
4114		INX H	23
4115		DCR C	0D
4116		JNZ LP1	C2 11 41
4119		HLT	76

EXECUTION

LETTER	d	c	b	a	h	g	F	e	MEMORY LOCATION	HEX CODE
S	0	0	1	0	1	0	0	1	4200 _H	29 _H
C	0	1	1	0	1	1	0	0	4202 _H	6C _H
S	0	0	1	0	1	0	0	1	4200 _H	29 _H
E	0	1	1	0	1	0	0	0	4203 _H	68 _H
	1	1	1	1	1	1	1	1	4204 _H	FF _H
	1	1	1	1	1	1	1	1	4205 _H	FF _H

OUTPUT

S	C	S	E		
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ROLLING DISPLAY

ASSEMBLY LANGUAGE PROGRAM

ADDRESS	LABEL	MNEMONICS	OPCODE/OPERAND
4100	START	LXI H,412C _H	21 2C 41
4103		MVI D,0F _H	16 0F
4105		MVI A,10 _H	3E 10
4107		OUT CNT	D3 C2
4109		MVI A,CC _H	3E CC
410B		OUT CNT	D3 C2
410D		MVI A,90 _H	3E 90
410F		OUT CNT	D3 C2
4110	LP	MOV A,M	7E
4111		OUT DAT	D3 C0
4113		CALL DELAY	CD 1C 41
4116		INX H	23
4117		DCR D	15
4118		JNZ LP	C2 11 41
4119		JMP START	C3 00 41

411C	DELAY	MVI B,0A_H	06 0A
411F	LP1	MVI C,FF_H	0E FF
4121	LP2	DCR C	0D
4122		JNZ LP2	C2 23 41
4125		DCR B	05
4126		JNZ LP1	C2 1F 41
4129		RET	C9

EXECUTION

LETTER	d	c	b	a	h	g	f	e	MEMORY LOCATION	HEX CODE
	1	1	1	1	1	1	1	1	412C _H	FF _H
	1	1	1	1	1	1	1	1	412D _H	FF _H
	1	1	1	1	1	1	1	1	412E _H	FF _H
	1	1	1	1	1	1	1	1	412F _H	FF _H
A	1	0	0	0	1	0	0	0	4130 _H	88 _H
L	0	1	1	1	1	1	0	0	4135 _H	7C _H
U	0	0	0	1	1	1	0	0	4132 _H	1C _H
A	1	0	0	0	1	0	0	0	4133 _H	88 _H
A	1	0	0	0	1	0	0	0	4134 _H	88 _H
L	0	1	1	1	1	1	0	0	4135 _H	7C _H
A	1	0	0	0	1	0	0	0	4136 _H	88 _H

L	0	1	1	1	1	1	0	0	4137 _H	7C _H
E	0	1	1	0	1	0	0	0	4138 _H	68 _H
	1	1	1	1	1	1	1	1	4139 _H	FF _H
	1	1	1	1	1	1	1	1	413A _H	FF _H
	1	1	1	1	1	1	1	1	413B _H	FF _H

OUTPUT

				A	L
U	A	A	L	A	L
E					
		A	L	U	A
A	L	A	L	E	

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