

STEPPER MOTOR INTERFACE

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STEPPER MOTOR INTERFACE

OBJECTIVE

To write an assembly language program to rotate the stepper motor controller using 8085 microprocessor trainer kit

APPARATUS REQUIRED

- 8085 Microprocessor kit
- Power Supply (+5v)
- Stepper motor

ALGORITHM

- 1.Input is zero for anticlockwise and one for clockwise.
- 2.Compare with one, if it is one give the four values for rotating clockwise
- 3.For zero, give the four values for rotating anticlockwise.
- 4.The four values are given one by one and so that the Stepper Motor moves in steps as per the given delay.
- 5.The motor rotates clockwise if one is given and anticlockwise if zero is given.

ASSEMBLY LANGUAGE PROGRAM

ADDRESS	LABEL	MNEMONICS	OPCODE/OPERAND	COMMENT
C300		MVI A,80 _H	3E 80	Initialize all the ports as o/p ports.
C302		OUT CWR	D3 DB	Write control word in CWR.
C304	START	LXI H,C400 _H	21 00 C4	Load the input sequence to be rotated.
C307		MVI C,04 _H	DE 04	Initialize the number of count.
C309	L1	MOV A,M	7E	Move the first data in to accumulator
C30A		OUT PORTC	D3 DA	Output it.
C30C		CALL DELAY	CD 17 C3	Introduce time delay.
C30F		INX H	23	Get the next data.
C310		DCR C	0D	Decrement the count.
C311		JNZ L1	C3 09 C3	Jump if count not equal to zero.
C314		JMP START	C3 04 C3	Repeat the process.
C317	DELAY	LXI D,0505 _H	11 05 05	Delay subprogram to introduce time delay.
C31A	GO	DCX D	1B	
C31B		MOV A,E	7A	
C31C		ORA D	B3	
C31D		JNZ GO	C2 1A C3	
C320		RET	C9	

EXECUTION

MODE	ADDRESS	DATA
CLOCKWISE ROTATION	C400	03 _H
	C401	09 _H
	C402	0C _H
	C403	06 _H
ANTICLOCKWISE ROTATION	C400	06 _H
	C401	0C _H
	C402	09 _H
	C403	03 _H

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