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- [illegible]

**BEFORE EXECUTION
AFTER EXECUTION**

REGISTER	DATA
A	22H
R0	0X00
R1	0X00
R2	0X00
R3	0X00
R4	0X00
R5	0X00
R6	0X00
R7	0X00

R5	0X00
R6	0X00
R7	0X00

AIM: To write program & execute following operation

- ii) Exchange the 8 bit data to register to register & register to external memory

EQUIPMENTS REQUIREMENT:

- ✓ 8051 MC Trainer Kit
- ✓ CPU With Keil Simulation

Or

ALGORITHM:

- ✓ Load immediate data to R0 & Acc
- ✓ Load DPTR data
- ✓ Transfer the Acc data to external memory

PROGRAM:

ADDRESS	LABEL	MNEMONICS	OPCODE	COMMENT (MEANING)
0000		MOV R0, # 0A	780A	R0 ← 0A
0002		MOV A, # FF	74FF	A ← FF
0004		MOV DPTR, # 9000	902328	DPTR ← 9000
0007	LOOP	MOV @ DPTR, A	F0	DPTR ← A
0008		INR DPTR	A3	DPTR + 1
0009		DJNZ R0, LOOP	D8FC	
000B		SJMP \$	80F3	HLT

RESULT:

BEFORE EXECUTION

BEFORE EXECUTION

REGISTER	DATA
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A	22H
R0	0X0A
DPTR	9000

REGISTER	DATA
A	22H
R0	0X0A
9000	0XFF

AIM: To write program & execute following operation

iii) Two 8 bit addition with carry & Subtraction with borrow

EQUIPMENTS REQUIREMENT:

- ✓ 8051 MC Trainer Kit
- ✓ CPU With Keil Simulation

Or

ALGORITHM:

- ✓ Load the data to 30h
- ✓ Transfer the data Acc
- ✓ Load the 31H to data
- ✓ Arithmetic function
- ✓ Store the data
- ✓ Halt program

PROGRAM:

ADDRESS	LABEL	MNEMONICS	OPCODE	COMMENT (MEANING)
0000		MOV A,30H	E530	A ← 30H
0002		ADD A,31H	2531	A + RAM 31H
0004		MOV R0,A	F8	R0 ← A
0005		CLR A	E4	Clear ACC
0006		JNC LOOP	5002	Check Carry
0008		INC 40H	0540	40H + 1
000A	LOOP	MOV 41H,R0	8841	41H ← R0
000C		MOV A,32H	E532	A ← 32H
000E		SUBB A,33H	9533	A ← 33H
0010		MOV R1,A	F9	R1 ← A
0011		CLR A	E4	Clear ACC
0012		JNC GO	5002	Check Borrow
0014		INC 42H	0542	42 + 1
0016	GO	MOV 43H,R1	8943	43H ← R1
0018		SJMP \$	80e6	HLT

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EX.NO	9	MOTOR INTERFACE
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AIM: To write program & execute following operation

- ✓ DC motor interfacing
- ✓ Stepper motor Interfacing

EQUIPMENTS REQUIREMENT:

- ✓ 8051 MC Trainer Kit & PIC 16F887A Trainer Kit
- ✓ DC motor & stepper motor Interfacing Module
- ✓ CPU With Keil Simulation

Or

ALGORITHM:

- ✓ Inilized the port to interface motor
- ✓ Load the data continually
- ✓ Repeat the process ‘
- ✓ Stop the program

PROGRAM:

ADDRESS	LABEL	MNEMONICS	OPCODE	COMMENT
0000H		STEPPER EQU P1		Set stepper as port 1 Port
0002	MAIN:	MOV STEPPER, #0CH		Move the 0Ch to P1
0005		ACALL DELAY		Call the delay
0008		MOV STEPPER, #06H		Move the 06h to P1

EX.NO	10	LCD Interface
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AIM: To write program & execute LCD interfacing operation

EQUIPMENTS REQUIREMENT:

- ✓ 8051 MC Trainer kit
- ✓ LCD interfacing module
- ✓ CPU With Keil Simulation

Or

ALGORITHM:

- ✓ Initialized the input comments
- ✓ Load the inputs
- ✓ Get the data from MC for display
- ✓ Repeat the process
- ✓ Halt the program