HLT

• Transfer data from 5050H to 5060H only if data is between 30H and 70H else store 00H in the next table. (Assuming 10 data)

001111110110	, ment table. (10041111118 =0 44447		
	LXI H,5050H	;source table		
	LXI B,5060H	;destination table		
	MVI D,0AH	;counter	_	
UP:	MOV A,M		5059H	
	CPI 31H	;check if number is greater or equal to 31H		
	JC DOWN	;if no goto DOWN		
	CPI 70H	;check if number is less than 70H		
	JC DOWN1	;if yes goto DOWN1		
DOWN:	MVI A,00H			
DOWN1:	STAX B	; [BC] <- A		
	INX H		5052H	
	INX B		5051H	
	DCR D	;decrease the value of counter	5050H	
	JNZ UP	goto UP until value of D is zero;	L	

• Write an 8085 program to add ten numbers stored in the consecutive memory locations starting from 4080H and store the 16-bit result at end of the table.

LXI H,4080H ;source table MVI C,0AH ;counter MVI D,00H ;sum register

MVI E,00H ;carry register

UP: MOV A,M

ADD D ;A<-A+D

MOV D,A

JNC PASS ;goto PASS if carry is not generated

INR E ;otherwise increase carry register by 1

PASS: INX H

DCR C

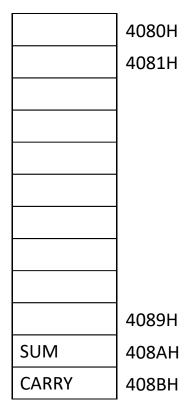
JNZ UP

MOV M, D

INX H

MOV M, E

HLT



• Transfer ten data, which has bit D5 and D0, 0 and 1 respectively from 6430H to 6440H, else store FFH instead of transformation.

iistead or traiisi	ormation.			D.7	DC	ר ו	\	Э.	- 2 -	. 1 D	0
LXI H,6430H	;source table		ANDing		טט 1						
LXI D,6440H	;destination table		7128		D6						_
MVI C,0AH	;counter(for 10 numbers)		If ans is	0	0	0	0 ()	0	0	1
MOV A,M					_						
ANI 41H	;mask D5 and D0	6439H									6449H
CPI 01H	;check if D5=0 and D0=1										
JNZ PASS	;if no, goto PASS										
MOV A,M											
JMP PASS1											
MVI A,FFH											
STAX D											
INX H											
INX D		6432H									6442H
DCR C	;decrease the value of counter	6431H									6441H
JNZ UP	goto UP until value of C is zero;										
HLT											6440H
	LXI H,6430H LXI D,6440H MVI C,0AH MOV A,M ANI 41H CPI 01H JNZ PASS MOV A,M JMP PASS1 MVI A,FFH STAX D INX H INX D DCR C JNZ UP	LXI D,6440H ;destination table MVI C,0AH ;counter(for 10 numbers) MOV A,M ANI 41H ;mask D5 and D0 CPI 01H ;check if D5=0 and D0=1 JNZ PASS ;if no, goto PASS MOV A,M JMP PASS1 MVI A,FFH STAX D INX H INX D DCR C ;decrease the value of counter JNZ UP ;goto UP until value of C is zero	LXI H,6430H ;source table LXI D,6440H ;destination table MVI C,0AH ;counter(for 10 numbers) MOV A,M ANI 41H ;mask D5 and D0 6439H CPI 01H ;check if D5=0 and D0=1 JNZ PASS ;if no, goto PASS MOV A,M JMP PASS1 MVI A,FFH STAX D INX H INX D DCR C ;decrease the value of counter JNZ UP ;goto UP until value of C is zero 6431H 6430H	LXI H,6430H ;source table ;destination table ;destination table ;destination table ;mov A,M ;counter(for 10 numbers) If ans is MOV A,M ANI 41H ;mask D5 and D0 6439H CPI 01H ;check if D5=0 and D0=1 JNZ PASS ;if no, goto PASS MOV A,M JMP PASS1 MVI A,FFH STAX D INX H INX D 6432H DCR C ;decrease the value of counter JNZ UP ;goto UP until value of C is zero 6430H	LXI H,6430H ;source table ANDing 0 LXI D,6440H ;destination table 0 MVI C,0AH ;counter(for 10 numbers) If ans is 0 MOV A,M ANI 41H ;mask D5 and D0 6439H CPI 01H ;check if D5=0 and D0=1 JNZ PASS ;if no, goto PASS MOV A,M JMP PASS1 MVI A,FFH STAX D INX H INX D DCR C ;decrease the value of counter JNZ UP ;goto UP until value of C is zero 6430H	LXI H,6430H ;source table LXI D,6440H ;destination table MVI C,0AH ;counter(for 10 numbers) MOV A,M ANI 41H ;mask D5 and D0 6439H CPI 01H ;check if D5=0 and D0=1 JNZ PASS ;if no, goto PASS MOV A,M JMP PASS1 MVI A,FFH STAX D INX H INX D DCR C ;decrease the value of counter JNZ UP ;goto UP until value of C is zero ANDing 0 1 0 1 0 D7 D6 ANDing 0 1 0 1 0 D6 6439H If ans is 0 0 0 0	LXI H,6430H ;source table LXI D,6440H ;destination table MVI C,0AH ;counter(for 10 numbers) MOV A,M ANI 41H ;mask D5 and D0 6439H CPI 01H ;check if D5=0 and D0=1 JNZ PASS ;if no, goto PASS MOV A,M JMP PASS1 MVI A,FFH STAX D INX H INX D DCR C ;decrease the value of counter JNZ UP ;goto UP until value of C is zero ANDing 0 1 0 0 D6 0 0 0	LXI H,6430H ;source table LXI D,6440H ;destination table MVI C,0AH ;counter(for 10 numbers) MOV A,M ANI 41H ;mask D5 and D0 CPI 01H ;check if D5=0 and D0=1 JNZ PASS ;if no, goto PASS MOV A,M JMP PASS1 MVI A,FFH STAX D INX H INX D DCR C ;decrease the value of counter JNZ UP ;goto UP until value of C is zero ANDing D7 D6 D5 D4 D ANDing D7 D6 D6 D5 D4 D ANDing D7 D6 D6 D6 D6 D6 ANDing D7 D6 D6 D6 D6 D6 ANDing D7 D6 D6 D6 ANDing D7 D6 D6 ANDing D7 D6 D6 ANDing D7	LXI H,6430H ;source table LXI D,6440H ;destination table MVI C,0AH ;counter(for 10 numbers) MOV A,M ANI 41H ;mask D5 and D0 6439H CPI 01H ;check if D5=0 and D0=1 JNZ PASS ;if no, goto PASS MOV A,M JMP PASS1 MVI A,FFH STAX D INX H INX D DCR C ;decrease the value of counter JNZ UP ;goto UP until value of C is zero ANDing D7 D6 D5 D4 D3 D4 D3 D4 D5 D4 D3 D4 D5 D4 D3 D4 D5 D5 D5 D4 D5	LXI H,6430H ;source table LXI D,6440H ;destination table MVI C,0AH ;counter(for 10 numbers) MOV A,M ANI 41H ;mask D5 and D0 6439H CPI 01H ;check if D5=0 and D0=1 JNZ PASS ;if no, goto PASS MOV A,M JMP PASS1 MVI A,FFH STAX D INX H INX D DCR C ;decrease the value of counter JNZ UP ;goto UP until value of C is zero ANDing 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	LXI H,6430H

• Write a program to transfer eight-bit numbers from 9080H to 9090H if bit D₅ is 1 and D₃ is 0. Otherwise transfer data by changing bit D₂ and D₆ from 1 to 0 or from 0 to 1. Assume there are ten numbers

	LXI H,9080H	;source table			D7	D6	D5	D4	D3	D2	D1	D0
	LXI D,9090H	;destination table		ANDing	0	0	1	0	1	0	0	0
	MVI C,0AH	;counter			0				D3		0	
UP:	MOV A,M			If ans is	0	0	1	0	0	0	0	0
	ANI 28H	;mask D5 and D3				7						7
	CPI 20H	;check if D5=1 and D3=0	9089H									9099H
	JNZ PASS	;if no goto PASS										
	MOV A,M											
	JMP DOWN											
PASS:	MOV A,M											
	XRI 44H	;toggle bit D2 and D6						-				
DOWN:	STAX D							-				
	INX H		000011									
	INX D		9082H									9092H
	DCR C		9081H									9091H
	JNZ UP		9090H									9090H
	HLT											

• 8-bit data are stored in two tables starting at 4050H and 4070H, 16 data in each table. Add corresponding data and store it in the third table starting at 4090H.

	LXI H,4050H	;first source table			
	LXI B,4070H	;second source table			
	LXI D,4090H	;destination table			
UP:	LDAX B	;A<-[BC]	405FH		407FH
	ADD M	;A<-A+[HL]	403111		4U/FN
	STAX D	;storing sum			
	INX H				
	INX B				
	INX D				
	MOV A,L				
	CPI 60H		4052H		4072H
	JNZ UP		4051H		4071H
	HLT		4050H		4070H