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## Experiment No. 02

(A) Aim: Write a program to multiply two 8-bit numbers stored in consecutive nemory locations, by repetitive addition.

PROGRAM:

Address	Mnemonics	Comments
	Start	
2000H	LX1 H, 2050H	Storing memory location
2001H	MOV B, M	Moving data to B
2002 H	INX H	Increment H-L Pair address
2003 H	MOV C, M	Moving data to c
2004 H	MVS A, 208	assign 00 to A
2005 H	TOP ; ADD B	Add Acc. with B
2006H	DCR C	de Oremant sugister C
2007 H	UNZ TOPA	Jump to TOP, if c = 0
2008 H	ENX H	Increment H-L pair address More reput from A to memory
2009 H	A,M VCM	More futur from 1
	HLT	

2050H -> 3

2051H -> 5

2052 H → 15

Result: The two numbers will be multiplied and stored of 2052 H.

Teacher's Signature: \_

START Load H-L Paire with address of memory location Moving 1st operand located at memory to negister B Increment memory location Moving 2nd operand located Assign 00 to accumulator Decoument negister a by 1 Increment Memory location (STOP) for multiplication of two

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(B) Aim: Write a program to divide two 8 bit numbers stored in consecutive memory locations.

## PROGRAM:

Address	Mnemonics	Comments !
	Start	
2000Н	LXI H, 2050H	Stooning nemoty location
2001 H	MOV B, M	Moving divisor data in B
2002 H	MVI 0,00	Assign 00 to c
2003 4	INX H	Increment H-L pair address
2004 H	MOV A,M	Moving dividend data into A
2005 H	NXT: CMP B	Compare B with accumulator
2006 H	JC LOOP	dump to loop, if cY=1
2007 H	SUR B	Subtract B from A
	INR C	Increment c by one
	JMP NXT:	Jump to NXT
	LOOP: STA 2054H	Store remainder in 2054H from A
2011 H	MOV A,C	Move quotient data from c to A
2012 H	STA 2053 H	Store quotient in 2053H from A
	HLT	
	2000H 2001 H 2002 H 2003 H 2004 H 2005 H 2006 H 2007 H 2008 H 2009 H 2010 H 2011 H	Start  2000H LXI H, 2050H  2001H MOV B, M  2002H MVI C, 00  2003H INX H  2004H MOV A, M  2005H NXT: CMP B  2006 H JC LOOP  2007 H SUR B  2008H INR C  2009 H LOOP: STA 2054H  2011 H MOV A, C  STA 2053 H

2050H  $\rightarrow$  5 = Divisor 2051H  $\rightarrow$  17 = Dividend 2053H  $\rightarrow$  3 = Questient 2054H  $\rightarrow$  2 = Remainder

Teacher's Signature:

START Load H-L Pair with address of memory location Moving Divisor data into sugister B Assign 00 to negister C Increment memory location Moving dividend data into accumulator A Compare negister B with accumulator INO Increment a negister by Jump back again to compare B and A Store remainder from A into given memory location Move quotient data into accumulator Store qualient from A into given menory location (STOP FLOW chart divide two