16-BIT MULTIPLICATION

EXP NO: 7

AIM: To write an Assembly language program to implement 16-Bit Multiplication using 8086 processor.

PROGRAM:

ADDRESS	MNEMONICS	COMMENTS
8100	LHLD 8500	Load 8100 value into HL pair
8103	MOV D,H	Move the Highest Byte into D register
8104	MOV E,L	Move the lowest byte into E register
8105	LDA 8502	Load 8102 value into accumulator
8108	MOV C,A	Move accumulator value into C register
8109	CPI 00	If X2=0 then result is 0 and exit
810B	JZ LOOP1	If carry is zero then jump into 8119
810E	LXI H,0000	Intialize the HL and DE added value in HL reg
8111	LOOP: DAD D	16 Bit add bet HL and DE added value in HL reg
8112	DCR C	Decrement the C register
8113	JZ LOOP1	Store the result and Exit
8116	JMP LOOP	Jump multiply(multiply=8111)
8119	LOOP1: SHLD 8503	Store the content of accumulator into 8503
811C	HLT	End

INPUT:
8501 04H
8502 02H
OUTPUT:
8503 08H

8504 08H

RESULT: