EXPERIMENT NO 1

8 BIT ADDITION

LDA 8500

MOV B,A

LDA 8501

ADD B

STA 8502

RST 1

EXPERIMENT NO 2

8 – BIT SUBTRACTION

LDA 8500

MOV B,A

LDA 8501

SUB B

STA 8502

RST 1

EXPERIMENT NO 3

8- BIT MULTIPLICATION

LDA 8500

MOV B,A

LDA 8501

MOV C,A

CPI 00

JZ LOOP

XRA A

LOOP1: ADD B

DCR C

JZ LOOP

JMP LOOP 1

LOOP:STA 8502

RST 1

EXPERIMENT NO 4

8-BIT DIVISION

LDA 8501

MOV B,A

LDA 8500

MVI C,00

LOOP:CMP B

JC LOOP

SUB B

INR C

JMP LOOP

STA 8503

MOV A,C

STA 8502

RST 1

EXPERIMENT NO 5

16-BIT ADDITION

LDA 8500

MOV B,A

LDA 8501

MOV C,A

LDA 8502

MOV D,A

LDA 8503

ADD C

STA 8505

MOV A,D

ADD B

STA 8504

RST 1

EXPERIMENT NO 6

16-BIT SUBTRACTION

LDA 8500

MOV B,A

LDA 8501

MOV C,A

LDA 8502

MOV D,A

LDA 8503

ADD C

STA 8505

MOV A,D

ADD B

STA 8504

RST 1

EXPERIMENT NO 7

16-BIT MULTIPLICATION

LHLD 8500

MOV D,H

MOV E,L

LDA 8502

MOV C,A

CPI 00

JZ LOOP1

LXI H,0000

LOOP: DAD D

DCR C

JZ LOOP 1

JMP LOOP

LOOP1:SHLD 8503

HLT

EXPERIMENT NO 8

16-BIT DIVISION

MOV DX,0000

MOV AX,0006H

MOV CX,0004H

DIV CX

MOV DI,1300H

MOV[DI],AH

INC DI

MOV[DI],AH

INC DI

MOV[DI],DX

HLT

EXPERIMENT NO 9

FACTORIAL OF A NUMBER

LXI H,8500H

MOV B,H

MVI D,01H

CALL MULTIPLY

DCR B

JNZ FACTORIAL

INX H

MOV M,D

HLT

MOV E,B

MVI A,00H

ADD D

DCR E

JNZ MULTIPLY LOOP

MOV D,A

RET