Lab Assignment 3

Yash Verma

19075083

CSE   B.tech

****

A.) Multiplication of Two 8-Bit Numbers by Bit Rotation Method

Implementation:

```
;code
start: nop
LHLD  1000H
XCHG
LDA 1002H
LXI H,0000H
MVI C,08H
up: DAD H
RAL
jnc down
DAD D
down: DCR C
JNZ up
SHLD  1003H

Hlt
```
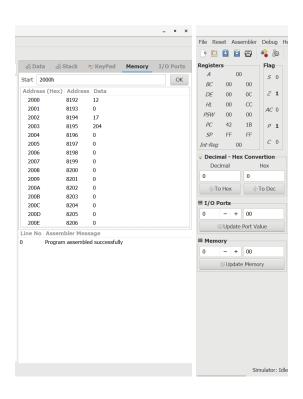
Input:

1000H->12

1002h->17

Output:

1003H-> 204

B.) Division of Two 8-Bit Numbers by Repeated Subtraction Method.

Implementation:

```
jmp start

;data


;code
start: nop
LDA 2000H;divisor
MOV   B,A
LDA 2001H;dividend
MVI C,00H
CMP B
JC down
up: SUB B
INR C
CMP B
JNC up
down: STA 2002H  ;remainder
MOV A,C
STA 2003H;quotient

hlt
```

Input:

2000H->11

2001H->61

Output:

2002H->6(remainder)

2003H->5(quotient)