# 8 BIT ADDITIONS, SUBTRACTION MULTICATION AND DIVISION

AIM: Write an assembly language program to find addition, subtraction, Multiplication and division

## ADDITION PROGRAM:

ORG 000H

MOV A,40H

MOV B,41H

ADD A,B

MOV 42H,A

END

OUTPUT:

LOCATION DATA

INPUT 40H41H

 0203

OUTPUT 42H 05

## SUBTRACTION PROGRAM:

ORG 000H

MOV A,40H

MOV B,41H

SUBB A,B

MOV 42H,A

END

**OUTPUT:**

**LOCATION DATA**

**INPUT 40H 41H**

 **0503**

**OUTPUT 42H 02**

## MULTIPLICATION PROGRAM:

```
ORG 0000H

MOV A,40H

MOV B,41H

MUL AB

MOV 42H,A

MOV A,B

MOV 43H,A

END
```

**OUTPUT:**

**LOCATION DATA**

**INPUT 40H41H**

**0202**

**OUTPUT 42H43H**

**0400**

## DIVISION PROGRAM:

```
ORG 000H

MOV A,40H

MOV B,41H

DIV AB

MOV 42H,A

MOV A,B

MOV 43H,A

END
```

**OUTPUT:**

**LOCATION DATA**

**INPUT 40H41H**

# 16 BIT ADDITIONS

AIM: Write an assembly language program to find 16 bit addition from internaland external memory

PROGRAM:

**16 BIT ADDITIONS FROM EXTERNAL MEMORY**

ORG 0000H

MOV DPTR,#4300H

MOVX A,@DPTR

MOV R0,A

INC DPTR

MOVX A,@DPTR

MOV R1,A

INC DPTR

MOVX A,@DPTR

MOV R2,A

INC DPTR

MOVX A,@DPTR

MOV R3,A

MOV A,R0

ADDC A,R2

MOV DPTR,#4500H

MOVX @DPTR,A

MOV A,R1

ADDC A,R3

MOV DPTR,#4501H

MOVX @DPTR,A

END

**OUTPUT:**

**LOCATION DATA**

**INPUT 4300H4301H4302H4303H**

**05101520**

**OUTPUT 4500H4501H**

      **1A30**

# 16 BIT ADDITIONS FROM INTERNAL MEMORY

ORG 0000H

MOV A,60H

MOV R0,61H

MOV R1,62H

MOV R2,63H

ADDC A,R1

MOV 70H,A

CLR A

MOV A,R0

ADDC A,R2

MOV 71H,A

END

*OUTPUT:*

*LOCATION DATA*

*INPUT 60H61H62H63H*

*01011010*

# 16 BIT ADDITION/SUBTRACTION

AIM: Write an assembly language program to find the sum and difference of two

16 bit numbers using 8051.

PROGRAM:

ORG 0000H

MOV DPTR,#4200H

MOVX A,@DPTR

MOV B,A

INC DPTR

MOVX A,@DPTR

ADD A,B

INC DPTR

MOVX @DPTR,A

MOV DPTR,#4200H

MOVX A,@DPTR

MOV B,A

INC DPTR

MOVX A,@DPTR

SUBB A,B

MOV DPTR,#4203H

MOVX @DPTR,A

END