

Chapter 5

Assembly Language Programming

Program for Addition

DATA SEGMENT

NUM1 DW 1122H

NUM2 DW 2211H

SUM DW ?

DATA ENDS

CODE SEGMENT

ASSUME CS:CODE,DS:DATA

START:MOV AX,DATA

MOV DS,AX

MOV AX,NUM1

MOV BX,NUM2

ADD AX,BX

MOV SUM,AX

MOV AH,4CH

INT 21H

CODE ENDS

END START

Program for BCD Addition

DATA SEGMENT

NUM1 DW 3344H

NUM2 DW 5366H

BCD_SUM DW ?

DATA ENDS

CODE SEGMENT

ASSUME CS:CODE,DS:DATA

START:MOV AX,DATA

MOV DS,AX

CALL BCD_ADD

MOV AH,4CH

BCD_ADD PROC

MOV AX,NUM1

MOV BX,NUM2

ADD AX,BX

DAA

MOV BCD_SUM,AX

RET

BCD_ADD ENDP

CODE ENDS

END START

Program for BCD Subtraction

```
BCD_SUB PROC
```

```
    MOV AX,NUM1
```

```
    MOV BX,NUM2
```

```
    SUB AX,BX
```

```
    DAS
```

```
    MOV BCD_SUBB,AX
```

```
    RET
```

Program to find Largest no

DATA SEGMENT

ARRAY DB 15H,45H,08H,56H,78H

LARGEST DB 00H

DATA ENDS

CODE SEGMENT

ASSUME CS:CODE,DS:DATA

MOV DX,DATA

MOV DS,DX

MOV CX,04H

MOV SI,OFFSET ARRAY

MOV AL,[SI]

UP:INC SI

 CMP AL,[SI]

 JNC NEXT

 MOV AL,[SI]

NEXT:DEC CX

 JNZ UP

 MOV LARGEST,AL

 MOV AX,4C00H

 INT 21H

 CODE ENDS

 END