

EXPERIMENT - 4

AIM:- TO PERFORM SORTING ON NUMBERS STORED IN MEMORY LOCATION.

CODE:-

```
ORG 0000H
    CLR C
    MOV R4,#09H
    MOV R0,#31H
    MOV R6,#0AH
    LABEL3:DEC R6
    MOV A,R6
    MOV R5,A
    MOV A,R0
    MOV R1,A
    INC R1
    LABEL1:MOV A,@R0
    SUBB A,@R1
    MOV A,@R0
    JC LABEL2
    MOV B,@R1
    MOV @R1,A
    MOV @R0,B
    LABEL2:INC R1
    CLR C
    DJNZ R5,LABEL1
    INC R0
    DJNZ R4,LABEL3
    END
```

INPUT:-

Memory 1													
Address:		I:0031H											
I:0x31:	0A	09	08	07	06	05	04	03	02	01	00	00	00
I:0x54:	00	00	00	00	00	00	00	00	00	00	00	00	00
I:0x77:	00	00	00	00	00	00	00	00	00	00	00	00	00
I:0x9A:	00	00	00	00	00	00	00	00	00	00	00	00	00
I:0xBD:	00	00	00	00	00	00	00	00	00	00	00	00	00
I:0xE0:	00	00	00	00	00	00	00	00	00	00	00	00	00
I:0x03:	00	00	00	01	00	00	00	00	00	00	00	00	00
T:0x26:	00	00	00	00	00	00	00	00	00	00	00	0A	09
Call Stack + Locals		Memory 1											

OUTPUT:-

Memory 1													
Address:		I:0031H											
I:0x31:	01	02	03	04	05	06	07	08	09	0A	00	00	00
I:0x54:	00	00	00	00	00	00	00	00	00	00	00	00	00
I:0x77:	00	00	00	00	00	00	00	00	00	00	00	00	00
I:0x9A:	00	00	00	00	00	00	00	00	00	00	00	00	00
I:0xBD:	00	00	00	00	00	00	00	00	00	00	00	00	00
I:0xE0:	00	00	00	00	00	00	00	00	00	00	00	00	00
I:0x03:	00	00	00	01	00	00	00	00	00	00	00	00	00
T:0x26:	00	00	00	00	00	00	00	00	00	00	00	01	02
Call Stack + Locals		Memory 1											

RESULT:

BEFORE SORTING: 0A 09 08 07 06 05 04 03 02 01

AFTER SORTING: 01 02 03 04 05 06 07 08 09 0A