

Exp No: 13
Date: 19/10/2020

Cube of a number using 8051

Name: Gokhulnath T
Register Number: 185001051

Aim: To write assembly program to do Cube of a number using 8051.

Program:

Program	Comments
MOV R0, #00	Transferring the data 00 to R0
MOV R2, #00	Transferring the data 00 to R2
MOV R3, #00	Transferring the data 00 to R3
MOV R4, #00	Transferring the data 00 to R4
MOV A, r1	Transferring the input data from r1 to A
MOV B, r1	Transferring the input data from r1 to B
MUL AB	$A \times B = BA$
MOV r7, B	Transferring the data from B to r7
MOV 08, A	Transferring the data A to 08
MOV B, r1	Transferring the data B to R1
MUL AB	$A \times B = BA$
MOV r4, A	Transferring the data A to r4
MOV r5, B	Transferring the data B to R5
MOV A, r7	Transferring the data r7 to A
MOV B, r1	Transferring the data r1 to B
MUL AB	$A \times B = BA$
MOV r2, A	Transferring the data A to R2
MOV r6, B	Transferring the data B to R6
MOV A, r5	Transferring the data r5 to A
ADD A, r6	Transferring the data r6 to A $A=r6+A$

MOV r3, A	Transferring the data A to r3
HERE: SJMP HERE	Infinite loop

Input 1 :

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
00	00	0F	00	00	00	00	00	00	00	00	00	00	00	00	00	00
10	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
20	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
30	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
40	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
50	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
60	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
70	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00

Output 1:

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
00	00	0F	00	0D	2F	0D	00	00	E1	00	00	00	00	00	00	00
10	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
20	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
30	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
40	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
50	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
60	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
70	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00

Explanation: F*F*F=0D2F

Result:

Thus, the assembly program for Cube of a number is written and executed.