

Exp No: 13
Name: Swetha Saseendran
Reg No: 185001183

Date: 01/11/2020

CUBE OF A NUMBER

Aim:

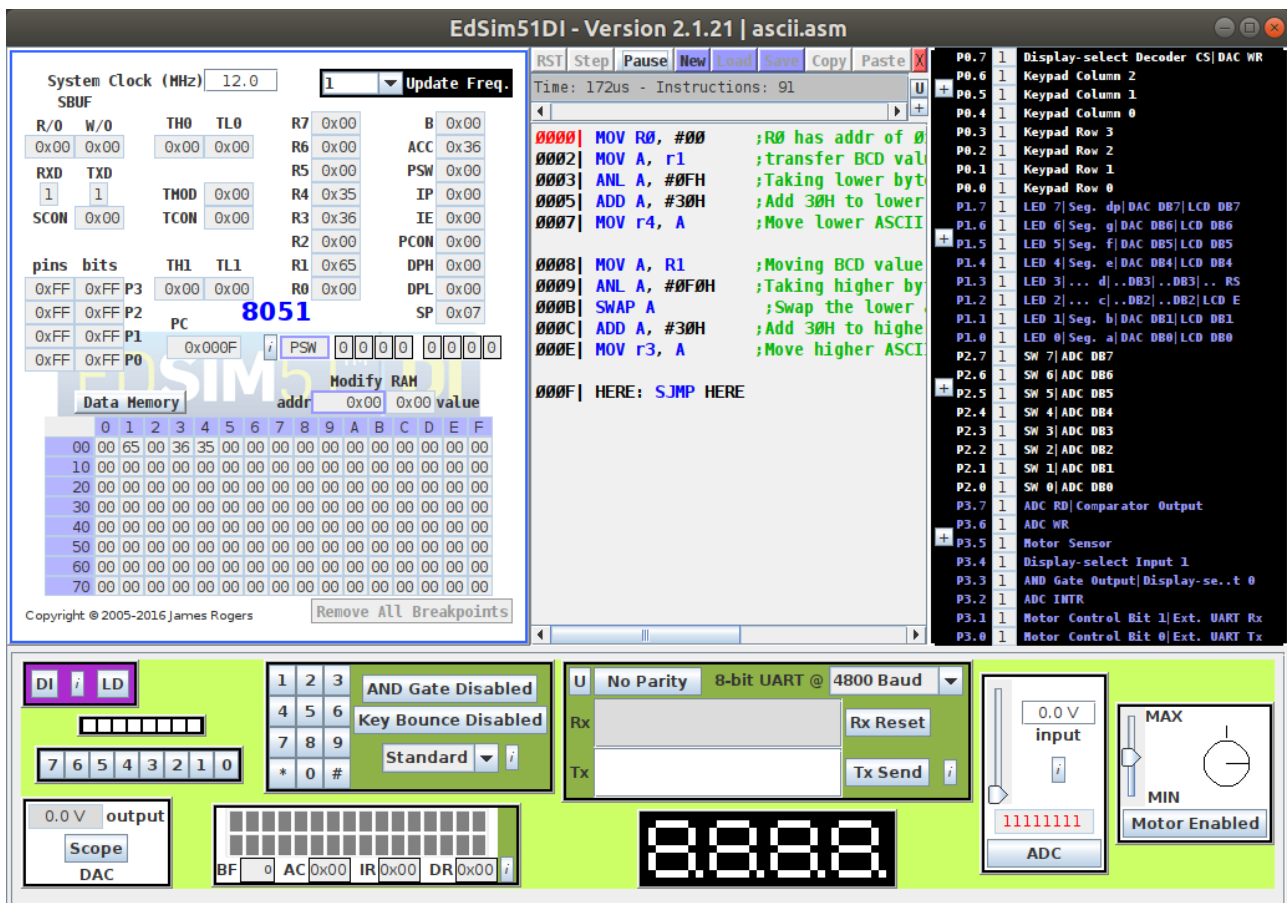
To write an Assembly language program that converts BCD value to its corresponding ascii value using an 8051 micro controller.

Algorithm:

- Move the value in R1 to A.
- Get the lower byte at A by performing logical AND over A & 0F.
- Add 30h to A.
- Move A to R4.
- Move the value in R1 to A.
- Get the higher byte at A by performing logical AND over A & F0.
- Swap the lower and higher nibble in A.
- Add 30H to A.
- Move A to R3.

Program	Comment
MOV R0, #00	R0 has addr of 0x00
MOV A, r1	transfer BCD value to A
ANL A, #0FH	Taking lower byte value of A
ADD A, #30H	Add 30H to lower byte to convert it to ASCII
MOV r4, A	Move lower ASCII byte to R4 from A
MOV A, R1	Moving BCD value again to A
ANL A, #0F0H	Taking higher byte value of A
SWAP A	Swap the lower and higher nibble in A
ADD A, #30H	Add 30H to higher byte to convert it to ASCII
MOV r3, A	Move higher ASCII byte to R3 from A
HERE: SJMP HERE	

Snapshot of sample input and output:



Result:

An assembly level program was written to calculate the cube of a given 8-bit number using an 8051 micro controller and the output was verified.