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COVERSION OF BCD TO ASCII

Aim:

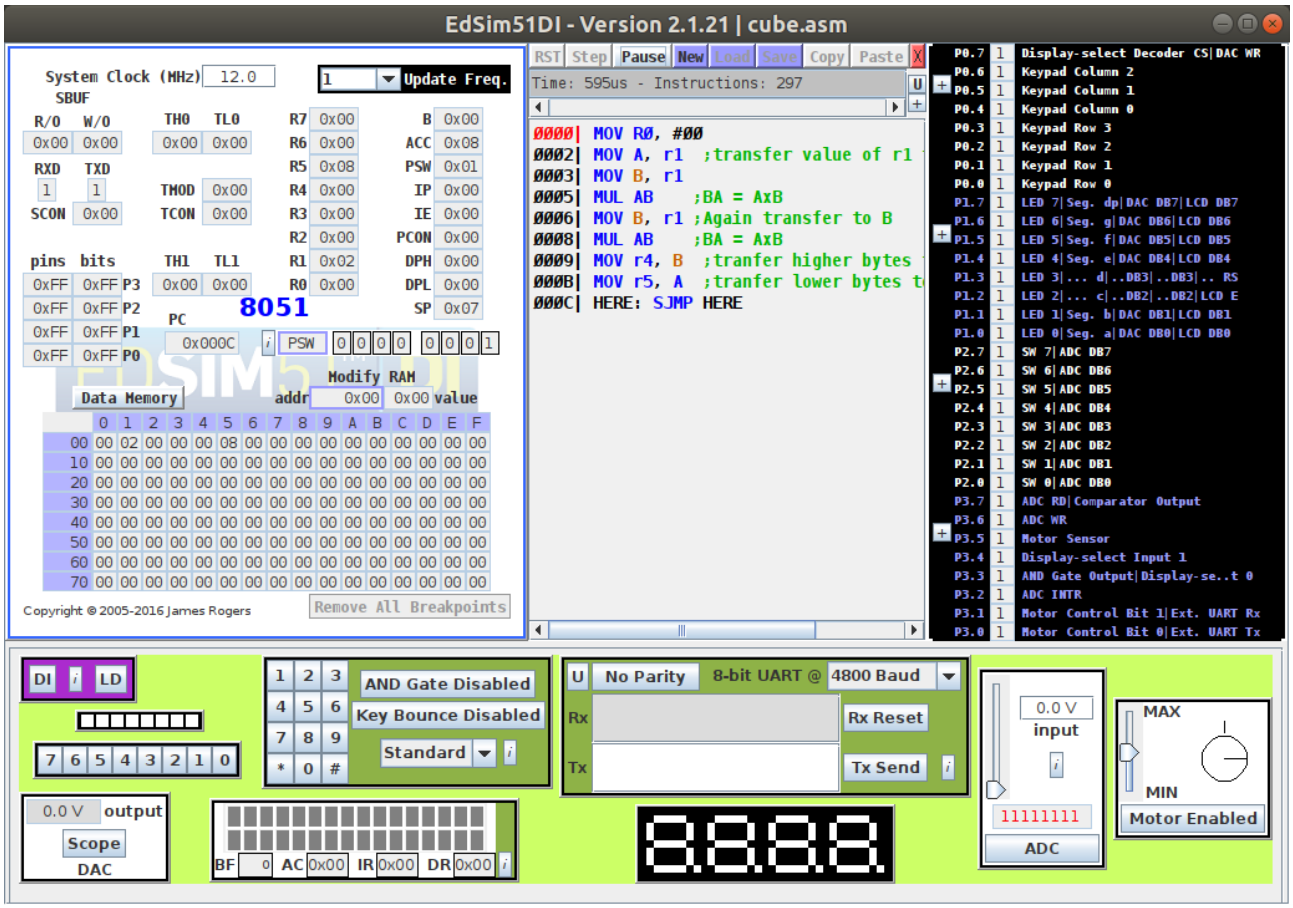
To write an assembly language program to calculate the cube of an 8-bit number using an 8051 micro controller.

Algorithm:

- Initialize R0 with 00h.
- Move the value in R1 to A.
- Move the value in R1 to B.
- Multiply A and B.
- Move the value in R1 to B.
- Multiply A and B.
- Move B to R4 (MSB of cube) and A to R5 (LSB of cube)

Program	*Comment*
MOV R0, #00	R0 has address of 0x00
MOV A, R1	Transferring 8-bit number to reg A
MOV B, R1	Transferring 8-bit number to reg B
MUL AB	BA = A x B
	B is empty since bit multiplication
MOV B, R1	Transfer 8-bit value to B
MUL AB	BA = A x B
MOV R5, A	Moving lower byte to R5
MOV R4, B	Moving higher byte to R4
HERE: *SJMP HALT*	Halt the program with a loop.

Snapshot of sample input and output:



Result:

An assembly level program was written to convert a given BCD value to its corresponding ASCII value using an 8051 microcontroller and the output was verified.