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1 ;Exp 01a : Simple assembly language programming 8051 microcontroller
2 ;A2 311036 Malhar Deshmukh
3 ;6-Jul-2018
4
5 org 0000h
6
7     mov 30h,#34h      ;move a packed BCD number
8                       ;into given location
9     mov a,30h         ;get the number in A
10    anl a,#0f0h       ;Logically AND A with 11110000
11                       ;this gets us the MSB number
12    swap a            ;move the digit to lower side
13    mov r1,a          ;move the MSB digit to R1
14    mov a,30h         ;move the original number into a again
15    anl a,#0fh        ;Separate the LSB by logically ANDing
16                       ; A with 00001111
17    mov r0,a          ;move the LSB digit to R0
18    mov b,r1          ;get the MSB digit into B
19    mul ab            ;multiply A with B
20    mov r7,a          ;the result of multiplication is
21                       ; Stored in R7
22    mov b,#10         ;move 10 in b
23    div ab            ;Divide A by B(10) to get the Ten's place in the
24                       ; Result of multiplication into A as Quotient and
25                       ; the Unit's place into B as Remainder
26    swap a            ;move the Digit to MSB
27    orl a,b           ;as A has the digit at Ten's place in MSB,
28                       ;and B has the digit at units place,
29                       ;Logically Or those together
30                       ;to get a number in packed BCD format
31    mov 31h,a         ;Move the result into 31h as required
32
33 end
34
```