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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
```