$NOMOD51 ; for Keil uVision - do not pre-define 8051 SFRs

$INCLUDE (MOD841) ; load this definition file instead

LED EQU P3.4 ; P3.4 is red LED on eval board

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; MAIN PROGRAM

CSEG ; working in code segment - program memory

ORG 0000h ; starting at address 0

MOV A, #011 ; set delay length for 0.622 ms

BLINK: CPL LED

CALL DELAY ; call software delay routine

JMP BLINK ; repeat indefinately

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; SUBROUTINES

DELAY: ; delay for time A x 11 ms.

MOV R5, A ; set number of repetitions for outer loop

DLY2: MOV R6, #004 ; middle loop repeats 4 times

DLY1: MOV R7, #050 ; inner loop repeats 50 times

DJNZ R7, $ ; inner loop 50 x 3 cycles = 150 cycles

DJNZ R6, DLY1 ; + 5 to reload, x 4 = 620 cycles

DJNZ R5, DLY2 ; + 5 to reload = 625 cycles = 0.0565 ms

RET ; return from subroutine

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END