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; Author : ADI - Apps www.analog.com/MicroConverter

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; Date : 31 JAN 2002

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; File : blink.asm

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; Hardware : ADuC832

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; Description : Blinks LED continuously.

; 200mSec period @ 50% duty cycle.

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$MOD832 ; use 8052 predefined symbols

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

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; MAIN PROGRAM

CSEG

ORG 0000h

MOV A,#01H ; one delay loop = 100ms

BLINK: CPL LED ; flash (complement) the red LED

CALL DELAY ; call software delay

JMP BLINK ; repeat indefinately

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; SUBROUTINES

DELAY: ; Delays by 100ms \* A

; 100mSec based on 2.097152MHZ

; Core Clock

; i.e. default ADuC832 Clock

MOV R0,A ; Acc holds delay variable

DLY0: MOV R1,#022h ; Set up delay loop0

DLY1: MOV R2,#0FFh ; Set up delay loop1

DJNZ R2,$ ; Dec R2 until R2 is zero

DJNZ R1,DLY1 ; Dec R1 & Jump DLY1 until R1 is 0

DJNZ R0,DLY0 ; Dec R0 & Jump DLY0 until R0 is 0

RET ; Return from subroutine

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END