;====================================================================

;

; Author : ADI - Apps

;

; Date : Oct 2003

;

; File : Tim2\_AR.asm

;

; Hardware : ADuC847

;

; Description : Flashes light every 65536 machine cycles

; using timer 2 in Auto Reload Mode.

;\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

$MOD847 ;Use 8052 predefined Symbols

LED EQU P3.4

;\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

; BEGINNING OF CODE

CSEG

ORG 0000H

JMP MAIN

;\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

; TIMER 2 INTERRUPT ROUTINE

ORG 002Bh

CPL LED ; Flash the light

CLR TF2 ; The TF2 flag must be cleared in software

RETI

;\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

; MAIN PROGRAM

ORG 0060h ; Start code at address above interrupts

MAIN: ; Main program

SETB ET2 ; Enable timer2 interrupt

MOV TL2, #00h ; Initialise timer 2 registers & Reload

MOV TH2, #00h ; values to rollover every 65536

MOV RCAP2L, #00h ; machine cycles

MOV RCAP2H, #00h

SETB EA ; Enable interrupts

MOV T2CON, #04h ; Start timer 2 in 16-bit reload mode

JMP $ ; Wait here for timer Interrupts

END