;;\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

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;; FILENAME: StopwatchTimerINT.asm

;; Version: 2.6, Updated on 2015/3/4 at 22:27:47

;; Generated by PSoC Designer 5.4.3191

;;

;; DESCRIPTION: Timer16 Interrupt Service Routine

;;-----------------------------------------------------------------------------

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include "m8c.inc"

include "memory.inc"

include "StopwatchTimer.inc"

;-----------------------------------------------

; Global Symbols

;-----------------------------------------------

export \_StopwatchTimer\_ISR

AREA InterruptRAM (RAM,REL,CON)

;@PSoC\_UserCode\_INIT@ (Do not change this line.)

;---------------------------------------------------

; Insert your custom declarations below this banner

;---------------------------------------------------

;------------------------

; Includes

;------------------------

;------------------------

; Constant Definitions

;------------------------

;------------------------

; Variable Allocation

;------------------------

;---------------------------------------------------

; Insert your custom declarations above this banner

;---------------------------------------------------

;@PSoC\_UserCode\_END@ (Do not change this line.)

AREA UserModules (ROM, REL)

;-----------------------------------------------------------------------------

; FUNCTION NAME: \_StopwatchTimer\_ISR

;

; DESCRIPTION: Unless modified, this implements only a null handler stub.

;

;-----------------------------------------------------------------------------

;

\_StopwatchTimer\_ISR:

;@PSoC\_UserCode\_BODY@ (Do not change this line.)

;---------------------------------------------------

;----------------STOPWATCH TIMER ISR----------------

; We increment currNumDeciSecs everytime the ISR is called

; if the value reaches 10, we update seconds, minutes, and hours

;---------------------------------------------------

;preserve registers

push A

push X

mov A, reg[CUR\_PP]

push A

inc [currNumDeciSecs]

cmp [currNumDeciSecs], 10 ;Is the count of 1/10ths of seconds == to 10? If so that means 1 sec has passed

jz updateSec

jmp restore\_stopwatchTimer\_ISR

updateSec:

mov [currNumDeciSecs],0 ;clear the deciseconds

inc [currNumSecs] ;1 second has passed

cmp [currNumSecs],60 ;has 1 minute passed?

jz updateMin

jmp restore\_stopwatchTimer\_ISR

updateMin:

mov [currNumSecs],0 ;clear the seconds

inc [currNumMins] ;1 min has passed

cmp [currNumMins],60 ;has 1 hour passed?

jz updateHour

jmp restore\_stopwatchTimer\_ISR

updateHour:

mov [currNumMins],0

inc [currNumHours] ;1 hour has passed

restore\_stopwatchTimer\_ISR:

;restore registers

pop A

mov reg[CUR\_PP],A

pop X

pop A

;---------------------------------------------------

; Insert a lcall to a C function below this banner

; and un-comment the lines between these banners

;---------------------------------------------------

;PRESERVE\_CPU\_CONTEXT

;lcall \_My\_C\_Function

;RESTORE\_CPU\_CONTEXT

;---------------------------------------------------

; Insert a lcall to a C function above this banner

; and un-comment the lines between these banners

;---------------------------------------------------

;@PSoC\_UserCode\_END@ (Do not change this line.)

reti

; end of file StopwatchTimerINT.asm