; MSP430 Assembler Code Template for use with TI Code Composer Studio
;
;
.cdecls CLIST,"msp430.h" ; Include device header file
;
.data
a: .byte 10, 20, 30, 40, 50, 60, 70, 80, 90, 100
count: .space 2
;
.text ; Assemble into program memory
.retain ; Override ELF conditional linking
; and retain current section
.retainrefs ; Additionally retain any sections
; that have references to current
; section
;
RESET mov.w #_STACK_END,SP ; Initialize stackpointer
StopWDT mov.w #WDTPW|WDTMOLD,WDTCTL ; Stop watchdog timer

mov.w #0, &count ; Main loop here
mov.w #0, R5 ;initialize for-loop

for_cond:
cmp.w #10, R5
jge for_break ; (R5 >= 10) = ~(R5 < 10)
; if-structure (alternate implementation)
bit.b #BIT4, a(R5)
jnc if_break ; bit4 of a(R5) not set = ~(bit4 of a(R5)set)
icc.w count

if_break:
; end if-structure

inc.w R5 ; update for-loop
jmp for_cond

for_break:
; end for-loop

loop:  jmp loop

;
;
; Stack Pointer definition
;
.global _STACK_END
.sect .stack
;
;
Interrupt Vectors
;
.sect ".reset" ; MSP430 RESET Vector
.short RESET