```
// Main routine
// *** prototype ***
void sub();

// *** extern ***
extern void psr_write( unsigned char ucPSR );
extern unsigned char psr_read(void);

// *** global ***
volatile unsigned char uc_Val;
volatile unsigned char uc_Read_IL;


/*****************************************************************************
 * main
 *   Type :     int
 *   Ret val :  0
 *   Argument : void
 *   Function : main program.
 *****************************************************************************/
main()
{
    // enable interrupt
    uc_Val = psr_read();
    uc_Val |= 0x10;
    psr_write( uc_Val );

    sub();

    // disable interrupt
    uc_Val = psr_read();
    uc_Val &= 0xef;
    psr_write( uc_Val );

    sub();

    // read IL
    uc_Val = psr_read();
    uc_Read_IL = ( uc_Val >> 5 );

    sub();

    // set IL 2
    uc_Val = psr_read();
    uc_Val &= 0x1f;
    uc_Val |= ( 2 << 5 );
    psr_write( uc_Val );

    return 0;
}


//PSR accessing sub routine
;*****************************************************************
;
;   psr_write
;
;   PSR write function
;
;   IN
;       %r0   written value
;   OUT
;       None
;
;*****************************************************************

    .text
    .align 1
    .global psr_write
    .type psr_write, @function
```

```
psr_write:
    ld.b  [%sp+3], %r0
    reti


;*********************************************************************
;
;   psr_read
;
;   PSR read function
;   This function calls int_psr_read( Vector Table No.31 ).
;
;   IN
;       None
;   OUT
;       %r0     read value
;
;*********************************************************************

    .text
    .align 1
    .global psr_read
    .type psr_read, @function

psr_read:
    int 31
    ret


;*********************************************************************
;
;   int_psr_read
;
;   PSR read interrupt function
;   This function is called by psr_read.
;   And this function is allocated to Vector Table No.31.
;
;   IN
;       None
;   OUT
;       %r0     read value
;
;*********************************************************************

    .text
    .align 1
    .global int_psr_read
    .type int_psr_read, @function

int_psr_read:
    ld.ub  %r0, [%sp+3]
    reti
```