```
 1
 2  AVRASM ver. 2.2.7  E:\ESE_280\$MyDocuments$\Atmel Studio\7.0\lab_5
      \conditional_input_sftwe\conditional_input_sftwe\main.asm Tue Oct 06 19:18:11
       2020
 3
 4  E:\ESE_280\$MyDocuments$\Atmel Studio\7.0\lab_5\conditional_input_sftwe
      \conditional_input_sftwe\main.asm(9): Including file 'C:/Program Files (x86)
      \Atmel\Studio\7.0\Packs\atmel\ATmega_DFP\1.3.300\avrasm\inc\m4809def.inc'
 5  E:\ESE_280\$MyDocuments$\Atmel Studio\7.0\lab_5\conditional_input_sftwe
      \conditional_input_sftwe\main.asm(9): Including file 'C:/Program Files (x86)
      \Atmel\Studio\7.0\Packs\atmel\ATmega_DFP\1.3.300\avrasm\inc\m4809def.inc'
 6
 7
 8                                    ; conditional_input_sftwe.asm
 9                                    ;
10                                    ; Created: 10/6/2020 6:38:10 PM
11                                    ; Author : hp
12                                    ;
13
14                                    .list
15
16
17                                    ; Replace with your application code
18                                    start:
19  000000 e000                          ldi r16, $00
20  000001 ef1f                          ldi r17, $FF
21  000002 ef2e                          ldi r18, $FE
22  000003 b900                           out VPORTA_DIR, r16
23  000004 b91c                          out VPORTD_DIR, r17
24  000005 b90d                          out VPORTD_OUT, r16
25  000006 bb20                          out VPORTE_DIR, r18
26  000007 e011                          ldi r17, $01    ; delay = 0.1 * r17
27
28                                    check_flag:
29  000008 e042                          ldi r20, $02
30  000009 bb41                          out VPORTE_OUT, r20
31  00000a b322                          in r18, VPORTE_IN
32  00000b 7021                          andi r18, $01
33  00000c 3021                          cpi r18, $01
34  00000d f009                          breq outer_loop
35  00000e cff9                          rjmp check_flag
36
37                                    outer_loop:
38  00000f e63e                          ldi r19, 110
39
40                                    inner_loop:
41  000010 953a                          dec r19
42  000011 f7f1                          brne inner_loop
43  000012 951a                          dec r17
```

```
000013 f7d9                         brne outer_loop

                                sw_led_io:
000014 b102                         in r16, VPORTA_IN
000015 9500                         com r16
000016 b90d                         out VPORTD_OUT, r16
000017 e040                         ldi r20, $00
000018 bb41                         out VPORTE_OUT, r20
000019 cfee                         rjmp check_flag


RESOURCE USE INFORMATION
------------------------

Notice:
The register and instruction counts are symbol table hit counts,
and hence implicitly used resources are not counted, eg, the
'lpm' instruction without operands implicitly uses r0 and z,
none of which are counted.

x,y,z are separate entities in the symbol table and are
counted separately from r26..r31 here.

.dseg memory usage only counts static data declared with .byte

"ATmega4809" register use summary:
x  :   0 y  :   0 z  :   0 r0 :   0 r1 :   0 r2 :   0 r3 :   0 r4 :   0
r5 :   0 r6 :   0 r7 :   0 r8 :   0 r9 :   0 r10:   0 r11:   0 r12:   0
r13:   0 r14:   0 r15:   0 r16:   6 r17:   4 r18:   5 r19:   2 r20:   4
r21:   0 r22:   0 r23:   0 r24:   0 r25:   0 r26:   0 r27:   0 r28:   0
r29:   0 r30:   0 r31:   0
Registers used: 5 out of 35 (14.3%)

"ATmega4809" instruction use summary:
.lds  :   0 .sts  :   0 adc   :   0 add   :   0 adiw  :   0 and   :   0
andi  :   1 asr   :   0 bclr  :   0 bld   :   0 brbc  :   0 brbs  :   0
brcc  :   0 brcs  :   0 break :   0 breq  :   1 brge  :   0 brhc  :   0
brhs  :   0 brid  :   0 brie  :   0 brlo  :   0 brlt  :   0 brmi  :   0
brne  :   2 brpl  :   0 brsh  :   0 brtc  :   0 brts  :   0 brvc  :   0
brvs  :   0 bset  :   0 bst   :   0 call  :   0 cbi   :   0 cbr   :   0
clc   :   0 clh   :   0 cli   :   0 cln   :   0 clr   :   0 cls   :   0
clt   :   0 clv   :   0 clz   :   0 com   :   1 cp    :   0 cpc   :   0
cpi   :   1 cpse  :   0 dec   :   2 des   :   0 eor   :   0 fmul  :   0
fmuls :   0 fmulsu:   0 icall :   0 ijmp  :   0 in    :   2 inc   :   0
jmp   :   0 ld    :   0 ldd   :   0 ldi   :   7 lds   :   0 lpm   :   0
lsl   :   0 lsr   :   0 mov   :   0 movw  :   0 mul   :   0 muls  :   0
mulsu :   0 neg   :   0 nop   :   0 or    :   0 ori   :   0 out   :   7
pop   :   0 push  :   0 rcall :   0 ret   :   0 reti  :   0 rjmp  :   2
rol   :   0 ror   :   0 sbc   :   0 sbci  :   0 sbi   :   0 sbic  :   0
```

```
 93  sbis  :   0 sbiw  :   0 sbr   :   0 sbrc  :   0 sbrs  :   0 sec   :   0
 94  seh   :   0 sei   :   0 sen   :   0 ser   :   0 ses   :   0 set   :   0
 95  sev   :   0 sez   :   0 sleep :   0 spm   :   0 st    :   0 std   :   0
 96  sts   :   0 sub   :   0 subi  :   0 swap  :   0 tst   :   0 wdr   :   0
 97
 98  Instructions used: 10 out of 114 (8.8%)
 99
100  "ATmega4809" memory use summary [bytes]:
101  Segment   Begin    End      Code   Data   Used    Size   Use%
102  ----------------------------------------------------------------
103  [.cseg] 0x000000 0x000034     52      0     52   49152   0.1%
104  [.dseg] 0x002800 0x002800      0      0      0    6144   0.0%
105  [.eseg] 0x000000 0x000000      0      0      0     256   0.0%
106
107  Assembly complete, 0 errors, 0 warnings
108
```