```
 1
 2  AVRASM ver. 2.2.7  E:\ESE_280\$MyDocuments$\Atmel Studio\7.0\lab_5
      \pb_bounce_count_bin\pb_bounce_count_bin\main.asm Tue Oct 06 18:16:59 2020
 3
 4  E:\ESE_280\$MyDocuments$\Atmel Studio\7.0\lab_5\pb_bounce_count_bin
      \pb_bounce_count_bin\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\pb_bounce_count_bin
      \pb_bounce_count_bin\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                                    ; pb_bounce_count_bin.asm
 9                                    ;
10                                    ; Created: 10/6/2020 5:50:12 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 bb00                          out VPORTE_DIR, r16
22  000003 b91c                          out VPORTD_DIR, r17
23  000004 b90d                          out VPORTD_OUT, r16
24  000005 ef1e                          ldi r17, $FE
25
26                                    zero_loop:
27  000006 b302                          in r16, VPORTE_IN
28  000007 7001                          andi r16, $01
29  000008 3001                          cpi r16, $01
30  000009 f009                          breq one_loop
31  00000a cffb                          rjmp zero_loop
32
33                                    one_loop:
34  00000b b302                          in r16, VPORTE_IN
35  00000c 3000                          cpi r16, $00
36  00000d f009                          breq increment
37  00000e cffc                          rjmp one_loop
38
39                                    increment:
40  00000f 9513                          inc r17
41  000010 c000                          rjmp output
42
43                                    output:
44  000011 9510                          com r17
```

```
000012 b91d                         out VPORTD_OUT, r17
000013 9510                         com r17
000014 cff1                         rjmp zero_loop



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:   8 r17:   7 r18:   0 r19:   0 r20:   0
r21:   0 r22:   0 r23:   0 r24:   0 r25:   0 r26:   0 r27:   0 r28:   0
r29:   0 r30:   0 r31:   0
Registers used: 2 out of 35 (5.7%)

"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  :   2 brge  :   0 brhc  :   0
brhs  :   0 brid  :   0 brie  :   0 brlo  :   0 brlt  :   0 brmi  :   0
brne  :   0 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   :   2 cp    :   0 cpc   :   0
cpi   :   2 cpse  :   0 dec   :   0 des   :   0 eor   :   0 fmul  :   0
fmuls :   0 fmulsu:   0 icall :   0 ijmp  :   0 in    :   2 inc   :   1
jmp   :   0 ld    :   0 ldd   :   0 ldi   :   3 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   :   4
pop   :   0 push  :   0 rcall :   0 ret   :   0 reti  :   0 rjmp  :   4
rol   :   0 ror   :   0 sbc   :   0 sbci  :   0 sbi   :   0 sbic  :   0
sbis  :   0 sbiw  :   0 sbr   :   0 sbrc  :   0 sbrs  :   0 sec   :   0
seh   :   0 sei   :   0 sen   :   0 ser   :   0 ses   :   0 set   :   0
sev   :   0 sez   :   0 sleep :   0 spm   :   0 st    :   0 std   :   0
sts   :   0 sub   :   0 subi  :   0 swap  :   0 tst   :   0 wdr   :   0
```

```
 94
 95 Instructions used: 9 out of 114 (7.9%)
 96
 97 "ATmega4809" memory use summary [bytes]:
 98 Segment   Begin    End      Code   Data   Used    Size   Use%
 99 ----------------------------------------------------------------
100 [.cseg] 0x000000 0x00002a     42      0     42   49152   0.1%
101 [.dseg] 0x002800 0x002800      0      0      0    6144   0.0%
102 [.eseg] 0x000000 0x000000      0      0      0     256   0.0%
103
104 Assembly complete, 0 errors, 0 warnings
105
```