```
 1
 2  AVRASM ver. 2.2.7  E:\ESE_280\$MyDocuments$\Atmel Studio\7.0\lab_6
      \pb_bounce_count_bin2\pb_bounce_count_bin2\main.asm Tue Oct 13 19:27:36 2020
 3
 4  E:\ESE_280\$MyDocuments$\Atmel Studio\7.0\lab_6\pb_bounce_count_bin2
      \pb_bounce_count_bin2\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_6\pb_bounce_count_bin2
      \pb_bounce_count_bin2\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_bin2.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 ef0f                          ldi r16, $FF
20  000001 b90c                          out VPORTD_DIR, r16
21  000002 9880                          cbi VPORTE_DIR, 0
22  000003 b90d                          out VPORTD_OUT, r16
23  000004 e010                          ldi r17, $00
24
25                                    zero_loop:
26  000005 9990                          sbic VPORTE_IN, 0
27  000006 c004                          rjmp increment
28  000007 cffd                          rjmp zero_loop
29
30                                    one_loop:
31  000008 9b90                          sbis VPORTE_IN, 0
32  000009 cffb                          rjmp zero_loop
33  00000a cffd                          rjmp one_loop
34
35                                    increment:
36  00000b 9513                          inc r17
37  00000c c000                          rjmp output
38
39                                    output:
40  00000d 9510                          com r17
41  00000e b91d                          out VPORTD_OUT, r17
42  00000f 9510                          com r17
43
44
```

```
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:   3 r17:   5 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  :   0 asr   :   0 bclr  :   0 bld   :   0 brbc  :   0 brbs  :   0
brcc  :   0 brcs  :   0 break :   0 breq  :   0 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   :   1 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   :   0 cpse  :   0 dec   :   0 des   :   0 eor   :   0 fmul  :   0
fmuls :   0 fmulsu:   0 icall :   0 ijmp  :   0 in    :   0 inc   :   1
jmp   :   0 ld    :   0 ldd   :   0 ldi   :   2 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   :   3
pop   :   0 push  :   0 rcall :   0 ret   :   0 reti  :   0 rjmp  :   6
rol   :   0 ror   :   0 sbc   :   0 sbci  :   0 sbi   :   0 sbic  :   1
sbis  :   1 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

Instructions used: 8 out of 114 (7.0%)

"ATmega4809" memory use summary [bytes]:
Segment   Begin    End      Code   Data   Used    Size   Use%
----------------------------------------------------------------
[.cseg] 0x000000 0x000022     34      0     34   49152   0.1%
```

```
94  [.dseg] 0x002800 0x002800      0      0      0    6144   0.0%
95  [.eseg] 0x000000 0x000000      0      0      0     256   0.0%
96
97  Assembly complete, 0 errors, 0 warnings
98
```