```
1
2  AVRASM ver. 2.2.7  E:\ESE_280\$MyDocuments$\Atmel Studio\7.0\lab_4
     \color_computer\color_computer\main.asm Tue Sep 29 18:49:53 2020
3
4  E:\ESE_280\$MyDocuments$\Atmel Studio\7.0\lab_4\color_computer\color_computer
     \main.asm(9): Including file 'C:/Program Files (x86)\Atmel\Studio\7.0\Packs
     \atmel\ATmega_DFP\1.2.209\avrasm\inc\m4809def.inc'
5  E:\ESE_280\$MyDocuments$\Atmel Studio\7.0\lab_4\color_computer\color_computer
     \main.asm(9): Including file 'C:/Program Files (x86)\Atmel\Studio\7.0\Packs
     \atmel\ATmega_DFP\1.2.209\avrasm\inc\m4809def.inc'
6
7
8                                  ; color_computer.asm
9                                  ;
10                                 ; Created: 9/23/2020 11:00:26 AM
11                                 ; Author : user38x
12                                 ;
13
14                                 .list
15
16
17                                 ; Replace with your application code
18                                 start:
19 000000 e000                        ldi r16, 0x00
20 000001 ef1f                        ldi r17, 0xFF
21 000002 b900                         out VPORTA_DIR, r16
22 000003 b91c                        out VPORTD_DIR, r17
23 000004 b91d                        out VPORTD_OUT, r17
24 000005 b918                        out VPORTC_DIR, r17
25 000006 b909                        out VPORTC_OUT, r16
26
27                                 main:
28 000007 b102                        in r16, VPORTA_IN
29 000008 b909                        out VPORTC_OUT, r16
30 000009 9500                        com r16
31 00000a b90d                        out VPORTD_OUT, r16
32 00000b cffb                        rjmp main
33
34
35 RESOURCE USE INFORMATION
36 ------------------------
37
38 Notice:
39 The register and instruction counts are symbol table hit counts,
40 and hence implicitly used resources are not counted, eg, the
41 'lpm' instruction without operands implicitly uses r0 and z,
42 none of which are counted.
43
44 x,y,z are separate entities in the symbol table and are
```

```
45  counted separately from r26..r31 here.
46
47  .dseg memory usage only counts static data declared with .byte
48
49  "ATmega4809" register use summary:
50  x  :   0 y  :   0 z  :   0 r0 :   0 r1 :   0 r2 :   0 r3 :   0 r4 :   0
51  r5 :   0 r6 :   0 r7 :   0 r8 :   0 r9 :   0 r10:   0 r11:   0 r12:   0
52  r13:   0 r14:   0 r15:   0 r16:   7 r17:   4 r18:   0 r19:   0 r20:   0
53  r21:   0 r22:   0 r23:   0 r24:   0 r25:   0 r26:   0 r27:   0 r28:   0
54  r29:   0 r30:   0 r31:   0
55  Registers used: 2 out of 35 (5.7%)
56
57  "ATmega4809" instruction use summary:
58  .lds  :   0 .sts  :   0 adc   :   0 add   :   0 adiw  :   0 and   :   0
59  andi  :   0 asr   :   0 bclr  :   0 bld   :   0 brbc  :   0 brbs  :   0
60  brcc  :   0 brcs  :   0 break :   0 breq  :   0 brge  :   0 brhc  :   0
61  brhs  :   0 brid  :   0 brie  :   0 brlo  :   0 brlt  :   0 brmi  :   0
62  brne  :   0 brpl  :   0 brsh  :   0 brtc  :   0 brts  :   0 brvc  :   0
63  brvs  :   0 bset  :   0 bst   :   0 call  :   0 cbi   :   0 cbr   :   0
64  clc   :   0 clh   :   0 cli   :   0 cln   :   0 clr   :   0 cls   :   0
65  clt   :   0 clv   :   0 clz   :   0 com   :   1 cp    :   0 cpc   :   0
66  cpi   :   0 cpse  :   0 dec   :   0 des   :   0 eor   :   0 fmul  :   0
67  fmuls :   0 fmulsu:   0 icall :   0 ijmp  :   0 in    :   1 inc   :   0
68  jmp   :   0 ld    :   0 ldd   :   0 ldi   :   2 lds   :   0 lpm   :   0
69  lsl   :   0 lsr   :   0 mov   :   0 movw  :   0 mul   :   0 muls  :   0
70  mulsu :   0 neg   :   0 nop   :   0 or    :   0 ori   :   0 out   :   7
71  pop   :   0 push  :   0 rcall :   0 ret   :   0 reti  :   0 rjmp  :   1
72  rol   :   0 ror   :   0 sbc   :   0 sbci  :   0 sbi   :   0 sbic  :   0
73  sbis  :   0 sbiw  :   0 sbr   :   0 sbrc  :   0 sbrs  :   0 sec   :   0
74  seh   :   0 sei   :   0 sen   :   0 ser   :   0 ses   :   0 set   :   0
75  sev   :   0 sez   :   0 sleep :   0 spm   :   0 st    :   0 std   :   0
76  sts   :   0 sub   :   0 subi  :   0 swap  :   0 tst   :   0 wdr   :   0
77
78  Instructions used: 5 out of 114 (4.4%)
79
80  "ATmega4809" memory use summary [bytes]:
81  Segment   Begin    End      Code   Data   Used    Size   Use%
82  ----------------------------------------------------------------
83  [.cseg] 0x000000 0x000018     24      0     24   49152   0.0%
84  [.dseg] 0x002800 0x002800      0      0      0    6144   0.0%
85  [.eseg] 0x000000 0x000000      0      0      0     256   0.0%
86
87  Assembly complete, 0 errors, 0 warnings
88
```