```c
1  /*
2   * parallel_in_parallel_out_struct.c
3   *
4   * Created: 2/18/2021 6:33:10 PM
5   * Author : Judah Ben-Eliezerj
6   */
7
8  #include <avr/io.h>
9
10 #define PORTA_INPUT_CONFIGURATION_gc 0x03
11 #define PORTC_INPUT_CONFIGURATON_gc 0xFC
12 #define PORTD_OUTPUT_CONFIGURATION_gc 0xFF
13
14 int main(void)
15 {
16
17     PORTA.DIR &= PORTA_INPUT_CONFIGURATION_gc;
18     PORTC.DIR &= PORTC_INPUT_CONFIGURATON_gc;
19     PORTD.DIR |= PORTD_OUTPUT_CONFIGURATION_gc;
20
21     uint8_t* ctrl_ptr = (uint8_t*)&PORTA.PIN2CTRL;
22
23     for (uint8_t i = 0; i < 6; ++i) {
24         *(ctrl_ptr + i) |= PORT_PULLUPEN_bm;
25     }
26
27     PORTC.PIN0CTRL |= PORT_PULLUPEN_bm;
28     PORTC.PIN1CTRL |= PORT_PULLUPEN_bm;
29
30     while (1)
31     {
32         PORTD.OUT = (PORTA.IN | PORTA_INPUT_CONFIGURATION_gc) | (PORTC.IN |
            PORTC_INPUT_CONFIGURATON_gc);
33     }
34 }
35
36
```