```
1 /*
2
   * defineslOpin.h
3
4
   * Created: 2017-07-16 오전 10:55:47
 5
   * Author: insoo
9 #ifndef definesIOpin_H_
10 #define definesIOpin_H_
11
12 /*** MCU PIN assignment ********
13 datasheet: Ch.
14 ****************************
15 /*----
16 --- PORTD for LCD
17 PD7 6 5 4 3 2
                        1
18 D7 D6 D5 D4 E RS NC NC
19 ----*/
20 // LCD interface (should agree with the diagram in LCD.c)
21 // make sure that the LCD RW pin is connected to GND
22 #define lcd_D7_port
                        PORTD
                                             // Icd D7 connection
23 #define lcd_D7_bit
                        PORTD7
24 #define lcd_D7_ddr
                        DDRD
25
26 #define lcd_D6_port
                        PORTD
                                              // Icd D6 connection
27 #define lcd_D6_bit
                        PORTD6
28 #define lcd_D6_ddr
                        DDRD
29
30 #define lcd_D5_port
                        PORTD
                                              // Icd D5 connection
31 #define lcd_D5_bit
                        PORTD5
32 #define lcd_D5_ddr
                        DDRD
33
34 #define lcd_D4_port
                        PORTD
                                              // Icd D4 connection
35 #define lcd_D4_bit
                        PORTD4
36 #define lcd_D4_ddr
                        DDRD
37
38 #define lcd_E_port
                        PORTD
                                              // Icd Enable pin
39 #define lcd_E_bit
                        PORTD3
40 #define lcd_E_ddr
                        DDRD
41
                                  // Icd Register Select pin
42 #define lcd RS port
                        PORTD
43 #define lcd RS bit
                         PORTD2
44 #define lcd_RS_ddr
                        DDRD
45
46 /*----
47 --- PORTB
                                    2
48 PB7 6 5
                        4
                              3
                                              1
49 DS1307_Vcc LCD_Vdd NC Switch debugPin DHT_Vcc DHT_Sig NC
50 ----*/
51
52 //added by Insoo (Jul 12, 2017)
53 #define DS1307_VCC_port PORTB
                                   // DS1307 VCC (Power supply) pin
54 #define DS1307_VCC_bit
                            PORTB7
55 #define DS1307_VCC_ddr
                            DDRB
56
```

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57 //added by Insoo (Jul 11, 2017)
58 #define lcd_VDD_port
                            PORTB
                                       // Icd Vdd (Power supply) pin
59 #define lcd_VDD_bit
                            PORTB6
60 #define lcd_VDD_ddr
                            DDRB
61
62 #define tactile_Switch_port PINB
63 #define tactile_Switch_bit PORTB4
64 #define tactile_Switch_ddr DDRB
65
66 //added by Insoo (Jul 14, 2017)
67 #define debug_PIN_port
                              PORTB
                                         // debug pin
68 #define debug_PIN_bit
                              PORTB3
69 #define debug_PIN_ddr
                              DDRB
71 //added by Insoo (Jul 14, 2017)
72 #define DHT_VCC_port
                            PORTB
73 #define DHT_VCC_bit
                            PORTB2
74 #define DHT_VCC_ddr
                            DDRB
75
76 //naming conformity by Insoo (Jul 16, 2017)
77 #define DHT_SIG_port
                            PORTB
78 #define DHT_SIG_bit
                            PORTB1 //DHT11 signal
79 #define DHT_SIG_ddr
                            DDRB
80
81 #define Icd_Backlight_port PORTB
82 #define lcd_Backlight_bit PORTB0
83 #define lcd_Backlight_ddr DDRB
85 #endif /* definesIOpin_H_ */
```