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1:
2: sbit LCD_RS at RB2_bit;
3: sbit LCD_EN at RB3_bit;
4: sbit LCD_D4 at RB4_bit;
5: sbit LCD_D5 at RB5_bit;
6: sbit LCD_D6 at RB6_bit;
7: sbit LCD_D7 at RB7_bit;
8:
9: sbit LCD_RS_Direction at TRISB2_bit;
10: sbit LCD_EN_Direction at TRISB3_bit;
11: sbit LCD_D4_Direction at TRISB4_bit;
12: sbit LCD_D5_Direction at TRISB5_bit;
13: sbit LCD_D6_Direction at TRISB6_bit;
14: sbit LCD_D7_Direction at TRISB7_bit;
15:
16: unsigned char ch, I, U;
17: unsigned int Voltage,Curent;
18: unsigned long V1,A1,V2,A2,Power1,Power2;
19:
20: void main()
21: {
22:     PORTB=0;
23:     TRISB=0;
24:     ADCON1 = 1001;
25:     TRISA = 0xFF;
26:
27:     Lcd_Init();
28:     Lcd_Cmd(_LCD_CURSOR_OFF);
29:     Lcd_Cmd(_LCD_CLEAR);
30:     Delay_ms(100);
31:     LCD_Out(1,1,"-----");
32:     LCD_Out(2,1,"      POWER ON      ");
33:     LCD_Out(3,1,"");
34:     LCD_Out(4,1,"-----");
35:     Delay_ms(1000);
36:
37:     Lcd_Cmd(_LCD_CLEAR);
38:     LCD_Out(1, 1,"U1:");
39:     LCD_Out(2, 1,"I1:");
40:     LCD_Out(3, 1,"P1:");
41:     LCD_Out(1, 12,"U2:");
42:     LCD_Out(2, 12,"I2:");
43:     LCD_Out(3, 12,"P2:");
44:     LCD_Out(4, 1," *CsOnGoRe-PSU* ");
45:     while (1)
46:     {
47: //Voltage 1
48:         Voltage = 0;
49:         for (U=0; U<10; U++)
50:         {
51:             Voltage += ADC_Read(0);
52:             Delay_ms(10);
53:         }
54:         Voltage = Voltage/U;
55:         V1 = (long)Voltage*3500;
56:         V1 = V1/1023;
57:
58:         ch = V1/1000;
59:         Lcd_Chr(1,4,48+ch);
60:         ch = (V1/100) % 10;
61:         Lcd_Chr_CP(48+ch);
62:         Lcd_Chr_CP(' ');

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63:         ch = (V1/10) % 10;
64:         Lcd_Chr_CP(48+ch);
65:         ch = V1 % 10;
66:         Lcd_Chr_CP(48+ch);
67:         LCD_Chr_CP('V');
68:         Delay_ms(10);
69: //Curent 1
70:         Curent = 0;
71:         for(I=0; I<10; I++) {
72:             Curent += ADC_Read(1);
73:             Delay_ms(10);
74:         }
75:         Curent = Curent/I;
76:         A1 = (long)Curent*600;
77:         A1 = A1/1023;
78:         ch = A1/1000;
79:         Lcd_Chr(2,4,48+ch);
80:         ch = (A1/100) % 10;
81:         Lcd_Chr_CP(48+ch);
82:         Lcd_Chr_CP('.');
83:         ch = (A1/10) %10;
84:         Lcd_Chr_CP(48+ch);
85:         ch = A1 % 10;
86:         Lcd_Chr_CP(48+ch);
87:         Lcd_Chr_CP('A');
88:         Delay_ms(10);
89: //Voltage 2
90:         Voltage = 0;
91:         for (U=0; U<10; U++) {
92:             Voltage += ADC_Read(2);
93:             Delay_ms(10);
94:         }
95:         Voltage = Voltage/U;
96:         V2 = (long)Voltage*3500;
97:         V2 = V2/1023;
98:         ch = V2/1000;
99:         Lcd_Chr(1,15,48+ch);
100:        ch = (V2/100) % 10;
101:        Lcd_Chr_CP(48+ch);
102:        Lcd_Chr_CP('.');
103:        ch = (V2/10) % 10;
104:        Lcd_Chr_CP(48+ch);
105:        ch = V2 % 10;
106:        Lcd_Chr_CP(48+ch);
107:        LCD_Chr_CP('V');
108:        Delay_ms(10);
109: //Curent 2
110:        Curent = 0;
111:        for(I=0; I<10; I++) {
112:            Curent += ADC_Read(3);
113:            Delay_ms(10);
114:        }
115:        Curent = Curent/I;
116:        A2 = (long)Curent*600;
117:        A2 = A2/1023;
118:        ch = A2/1000;
119:        Lcd_Chr(2,15,48+ch);
120:        ch = (A2/100) % 10;
121:        Lcd_Chr_CP(48+ch);
122:        Lcd_Chr_CP('.');
123:        ch = (A2/10) %10;
124:        Lcd_Chr_CP(48+ch);
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125:         ch = A2 % 10;
126:         Lcd_Chr_CP(48+ch);
127:         Lcd_Chr_CP('A');
128:         Delay_ms(10);
129:
130: //Power 1
131:         Power1 = V1*A1/1000;
132:         ch = Power1/1000;
133:         Lcd_Chr(3,4,48+ch);
134:         ch = (Power1/100) % 10;
135:         Lcd_Chr_CP(48+ch);
136:         ch = (Power1/10) %10;
137:         Lcd_Chr_CP(48+ch);
138:         Lcd_Chr_CP('.');
139:         ch = (Power1/1) % 10;
140:         Lcd_Chr_CP(48+ch);
141:         ch = Power1 % 10;
142:         Lcd_Chr_CP(48+ch);
143:         Lcd_Chr_CP('W');
144:         Delay_ms(10);
145: //Power 2
146:         Power2 = V2*A2/1000;
147:         ch = Power2/1000;
148:         Lcd_Chr(3,15,48+ch);
149:         ch = (Power2/100) % 10;
150:         Lcd_Chr_CP(48+ch);
151:         ch = (Power2/10) %10;
152:         Lcd_Chr_CP(48+ch);
153:         Lcd_Chr_CP('.');
154:         ch = (Power2/1) % 10;
155:         Lcd_Chr_CP(48+ch);
156:         ch = Power2 % 10;
157:         Lcd_Chr_CP(48+ch);
158:         Lcd_Chr_CP('W');
159:         Delay_ms(10);
160:
161:
162: }}
163:
164:
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