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1  #include "stm32f10x.h"
2  #include "lcd.h"
3  #include "ports.h"
4  #include "keypad.h"
5
6  void delay(uint32_t count)
7  {
8      int i=0;
9      for(i=0; i< count; ++i)
10     {
11     }
12 }
13
14 void LCD_port()
15 {
16     RCC->APB2ENR |= RCC_APB2ENR_IOPAEN | RCC_APB2ENR_IOPBEN | RCC_APB2ENR_IOPCEN | RCC_APB2ENR_ADC1EN;
17     GPIOB->CRL |= GPIO_CRL_MODE0 | GPIO_CRL_MODE5 | GPIO_CRL_MODE1;
18     GPIOB->CRL &= ~GPIO_CRL_CNF0 & ~GPIO_CRL_CNF5 & ~GPIO_CRL_CNF1;
19     GPIOC->CRL |= GPIO_CRL_MODE0 | GPIO_CRL_MODE1 | GPIO_CRL_MODE2 | GPIO_CRL_MODE3 | GPIO_CRL_MODE4 |
20     GPIO_CRL_MODE5 | GPIO_CRL_MODE6 | GPIO_CRL_MODE7;
21     GPIOC->CRL &= ~GPIO_CRL_CNF0 & ~GPIO_CRL_CNF1 & ~GPIO_CRL_CNF2 & ~GPIO_CRL_CNF3 & ~GPIO_CRL_CNF4 &
22     ~GPIO_CRL_CNF5 & ~GPIO_CRL_CNF6 & ~GPIO_CRL_CNF7;
23 }
24
25 void CMD_2_LCD(uint8_t data)
26 {
27     GPIOB->BSRR = LCD_CM_ENA;
28     GPIOC->ODR &= 0xFF00;
29     GPIOC->ODR |= data;
30     delay(8000);
31     GPIOB->BSRR = LCD_CM_DIS;
32     delay(80000);
33 }
34
35 void LCD_Init1(void)
36 {
37     delay(120000);
38     CMD_2_LCD(LCD_8B2L);
39     delay(80000);
40     CMD_2_LCD(LCD_8B2L);
41     delay(80000);
42     CMD_2_LCD(LCD_8B2L);
43     delay(80000);
44     CMD_2_LCD(LCD_DCB);
45     delay(80000);
46     CMD_2_LCD(LCD_MCR);
47     delay(80000);
48     CMD_2_LCD(LCD_CLR);
49     delay(80000);
50     CMD_2_LCD(LCD_LN1);
51     delay(80000);
52 }
53
54 void Data_2_LCD(uint8_t data)
55 {
56     GPIOB->BSRR = LCD_DM_ENA;
57     GPIOC->ODR &= 0xFF00;
58     GPIOC->BSRR |= data;
59     delay(8000);
60     GPIOB->BSRR = LCD_DM_DIS;
61     delay(80000);
62 }
63
64 void STR_2_LCD(char *ptr)
65 {
66     while (*ptr)
67     {
68         Data_2_LCD(*ptr);
69         ptr++;
70     }
71 }
72
73 void name_2_LCD()
74 {
75     CMD_2_LCD(LCD_CLR);
76 }
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```
72     char x[] = "1:Enter Building";
73     char x1[] = "2:New User      ";
74     char *ptr1 = x;
75     char *ptr2 = x1;
76     CMD_2_LCD(LCD_LN1);
77     STR_2_LCD(ptr1);
78     CMD_2_LCD(LCD_LN2);
79     STR_2_LCD(ptr2);
80 }
81 void second_2_LCD()
82 {
83     CMD_2_LCD(LCD_CLR);
84     char x[] = "Scan RFID Card";
85     char x1[] = "Waiting.....";
86     char *ptr1 = x;
87     char *ptr2 = x1;
88     CMD_2_LCD(LCD_LN1);
89     STR_2_LCD(ptr1);
90     CMD_2_LCD(LCD_LN2);
91     STR_2_LCD(ptr2);
92 }
93 void third_2_LCD()
94 {
95     CMD_2_LCD(LCD_CLR);
96     char x[] = "Card Already";
97     char x1[] = "Present";
98     char *ptr1 = x;
99     char *ptr2 = x1;
100    CMD_2_LCD(LCD_LN1);
101    STR_2_LCD(ptr1);
102    CMD_2_LCD(LCD_LN2);
103    STR_2_LCD(ptr2);
104 }
105 void fourth_2_LCD()
106 {
107     CMD_2_LCD(LCD_CLR);
108     char x[] = "RFID Timed Out";
109     char x1[] = "Try Again";
110     char *ptr1 = x;
111     char *ptr2 = x1;
112     CMD_2_LCD(LCD_LN1);
113     STR_2_LCD(ptr1);
114     CMD_2_LCD(LCD_LN2);
115     STR_2_LCD(ptr2);
116 }
117 void fifth_2_LCD()
118 {
119     CMD_2_LCD(LCD_CLR);
120     char x[] = "Card Scanned!";
121     char x1[] = "ID: ";
122     char *ptr1 = x;
123     char *ptr2 = x1;
124     CMD_2_LCD(LCD_LN1);
125     STR_2_LCD(ptr1);
126     CMD_2_LCD(LCD_LN2);
127     STR_2_LCD(ptr2);
128 }
129 void sixth_2_LCD()
130 {
131     CMD_2_LCD(LCD_CLR);
132     char x[] = "Enter Password";
133     char *ptr1 = x;
134     CMD_2_LCD(LCD_LN1);
135     STR_2_LCD(ptr1);
136     CMD_2_LCD(LCD_LN2);
137 }
138 void seventh_2_LCD()
139 {
140     CMD_2_LCD(LCD_CLR);
141     char x[] = "Delete Profile";
142     char x1[] = "1: Yes 2: No";
143     char *ptr1 = x;
144     char *ptr2 = x1;
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```
145     CMD_2_LCD(LCD_LN1);
146     STR_2_LCD(ptr1);
147     CMD_2_LCD(LCD_LN2);
148     STR_2_LCD(ptr2);
149 }
150 void eighth_2_LCD()
151 {
152     CMD_2_LCD(LCD_CLR);
153     char x[] = "Enter Password";
154     char x1[] = "    Again: ";
155     char *ptr1 = x;
156     char *ptr2 = x1;
157     CMD_2_LCD(LCD_LN1);
158     STR_2_LCD(ptr1);
159     CMD_2_LCD(LCD_LN2);
160     STR_2_LCD(ptr2);
161 }
162 void ninth_2_LCD()
163 {
164     CMD_2_LCD(LCD_CLR);
165     char x[] = "Don't Match";
166     char x1[] = "Enter Again";
167     char *ptr1 = x;
168     char *ptr2 = x1;
169     CMD_2_LCD(LCD_LN1);
170     STR_2_LCD(ptr1);
171     CMD_2_LCD(LCD_LN2);
172     STR_2_LCD(ptr2);
173 }
174 void tenth_2_LCD()
175 {
176     CMD_2_LCD(LCD_CLR);
177     char x[] = "User Enrollment";
178     char x1[] = "    Successful!";
179     char *ptr1 = x;
180     char *ptr2 = x1;
181     CMD_2_LCD(LCD_LN1);
182     STR_2_LCD(ptr1);
183     CMD_2_LCD(LCD_LN2);
184     STR_2_LCD(ptr2);
185 }
186 void eleventh_2_LCD()
187 {
188     CMD_2_LCD(LCD_CLR);
189     char x[] = "Enter System";
190     char x1[] = "    Code: ";
191     char *ptr1 = x;
192     char *ptr2 = x1;
193     CMD_2_LCD(LCD_LN1);
194     STR_2_LCD(ptr1);
195     CMD_2_LCD(LCD_LN2);
196     STR_2_LCD(ptr2);
197 }
198 void twelvth_2_LCD()
199 {
200     CMD_2_LCD(LCD_CLR);
201     char x[] = "Card Not Found";
202     char *ptr1 = x;
203     CMD_2_LCD(LCD_LN1);
204     STR_2_LCD(ptr1);
205     CMD_2_LCD(LCD_LN2);
206 }
207 }
208 void thirteenth_2_LCD()
209 {
210     CMD_2_LCD(LCD_CLR);
211     char x[] = "User Recognized";
212     char *ptr1 = x;
213     CMD_2_LCD(LCD_LN1);
214     STR_2_LCD(ptr1);
215     CMD_2_LCD(LCD_LN2);
216 }
217 void fourteenth_2_LCD()
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```
218     {
219         CMD_2_LCD(LCD_CLR);
220         char x[] = "Password Does";
221         char x1[] = "Not Match";
222         char *ptr1 = x;
223         char *ptr2 = x1;
224         CMD_2_LCD(LCD_LN1);
225         STR_2_LCD(ptr1);
226         CMD_2_LCD(LCD_LN2);
227         STR_2_LCD(ptr2);
228     }
229 void fifteenth_2_LCD()
230 {
231     CMD_2_LCD(LCD_CLR);
232     char x[] = "Timed Out";
233     char x1[] = "Try Again";
234     char *ptr1 = x;
235     char *ptr2 = x1;
236     CMD_2_LCD(LCD_LN1);
237     STR_2_LCD(ptr1);
238     CMD_2_LCD(LCD_LN2);
239     STR_2_LCD(ptr2);
240 }
241 void sixteenth_2_LCD()
242 {
243     CMD_2_LCD(LCD_CLR);
244     char x[] = "Door Opening...";
245     char *ptr1 = x;
246     CMD_2_LCD(LCD_LN1);
247     STR_2_LCD(ptr1);
248 }
249 void seventeenth_2_LCD()
250 {
251     CMD_2_LCD(LCD_CLR);
252     char x[] = "Users Stored: ";
253     char *ptr1 = x;
254     CMD_2_LCD(LCD_LN1);
255     STR_2_LCD(ptr1);
256 }
257 void eighteenth_2_LCD()
258 {
259     CMD_2_LCD(LCD_CLR);
260     char x[] = "Code Doesn't";
261     char x1[] = "Match";
262     char *ptr1 = x;
263     char *ptr2 = x1;
264     CMD_2_LCD(LCD_LN1);
265     STR_2_LCD(ptr1);
266     CMD_2_LCD(LCD_LN2);
267     STR_2_LCD(ptr2);
268 }
269
```