



UNIVERSIDAD POLITÉCNICA
DE LA ZONA METROPOLITANA DE GUADALAJARA

INTERRUPCIONES

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ING. MECATRONICA

PROGRAMACION DE SISTEMAS DE EMBEBIDOS

Código en lenguaje C

```
9  *
10  * =====
11  */
12  #include "project.h"
13  CY_ISR(Interrupcion) {
14      FOCO_Write(~FOCO_Read());
15      Swl_ClearInterrupt();
16  }
17  int main(void)
18  {
19      void LCD_BG();
20      CyGlobalIntEnable; /* Enable global interrupts. */
21      IRQ_Sw_StartEx(Interrupcion);
22      /* Place your initialization/startup code here (e.g. MyInst_Start()) */
23
24      LCD_Start();
25      LCD_ClearDisplay();
26      LCD_Position(0,5);
27
28      for(;;)
29      {
30          if(FOCO_Read())
31          {
32              LCD_ClearDisplay();
33              LCD_Position(0,0);
34              LCD_PrintString("ENCENDER LEDS");
35              LCD_Position(1,0);
36              LCD_DrawHorizontalBG( 1, 0, 1, 160);
37              LED1_Write(1);
```

```
39          if(FOCO_Read())
40          {
41              LCD_ClearDisplay();
42              LCD_Position(0,0);
43              LCD_PrintString("ENCENDER LEDS");
44              LCD_Position(1,0);
45              LCD_DrawHorizontalBG( 1, 0, 2, 160);
46              LED2_Write(1);
47              CyDelay(500);
48          }else
49          {
50              LCD_ClearDisplay();
51              LCD_Position(0,0);
52              LCD_PrintString("APAGAR LEDS");
53              LCD_Position(1,0);
54              LCD_PrintString("-----");
55              LED1_Write(0);
56              LED2_Write(0);
57              LED3_Write(0);
58              LED4_Write(0);
59              LED5_Write(0);
60              LED6_Write(0);
61              LED7_Write(0);
62              LED8_Write(0);
63              LED9_Write(0);
64              LED10_Write(0);
65              CyDelay(500);
66          }
67          if(FOCO_Read())
```

```

69 LCD_ClearDisplay();
70 LCD_Position(0,0);
71 LCD_PrintString("ENCENDER LEDS");
72 LCD_Position(1,0);
73 LCD_DrawHorizontalBG( 1, 0, 3, 160);
74 LED3_Write(1);
75 CyDelay(500);
76 }else
77 {
78 LCD_ClearDisplay();
79 LCD_Position(0,0);
80 LCD_PrintString("APAGAR LEDS");
81 LCD_Position(1,0);
82 LCD_PrintString("-----");
83 LED1_Write(0);
84 LED2_Write(0);
85 LED3_Write(0);
86 LED4_Write(0);
87 LED5_Write(0);
88 LED6_Write(0);
89 LED7_Write(0);
90 LED8_Write(0);
91 LED9_Write(0);
92 LED10_Write(0);
93 CyDelay(500);
94 }
95 if(FOCO_Read())
96 {
97 LCD_ClearDisplay();

```

```

Start Page / *main.c
96 {
97 LCD_ClearDisplay();
98 LCD_Position(0,0);
99 LCD_PrintString("ENCENDER LEDS");
100 LCD_Position(1,0);
101 LCD_DrawHorizontalBG( 1, 0, 4, 160);
102 LED4_Write(1);
103 CyDelay(500);
104 }else
105 {
106 LCD_ClearDisplay();
107 LCD_Position(0,0);
108 LCD_PrintString("APAGAR LEDS");
109 LCD_Position(1,0);
110 LCD_PrintString("-----");
111 LED1_Write(0);
112 LED2_Write(0);
113 LED3_Write(0);
114 LED4_Write(0);
115 LED5_Write(0);
116 LED6_Write(0);
117 LED7_Write(0);
118 LED8_Write(0);
119 LED9_Write(0);
120 LED10_Write(0);
121 CyDelay(500);
122 }
123 if(FOCO_Read())
124 {

```

```

Start Page  ✓ *main.c
126 LCD_Position(0,0);
127 LCD_PrintString("ENCENDER LEDS");
128 LCD_Position(1,0);
129 LCD_DrawHorizontalBG( 1, 0, 5, 160);
130 LED5_Write(1);
131 CyDelay(500);
132 }else
133 {
134     LCD_ClearDisplay();
135     LCD_Position(0,0);
136     LCD_PrintString("APAGAR LEDS");
137     LCD_Position(1,0);
138     LCD_PrintString("-----");
139     LED1_Write(0);
140     LED2_Write(0);
141     LED3_Write(0);
142     LED4_Write(0);
143     LED5_Write(0);
144     LED6_Write(0);
145     LED7_Write(0);
146     LED8_Write(0);
147     LED9_Write(0);
148     LED10_Write(0);
149     CyDelay(500);
150 }
151 if(FOCO_Read())
152 {
153     LCD_ClearDisplay();
154     LCD_Position(0,0);

```

```

Start Page  ✓ *main.c
156 LCD_Position(1,0);
157 LCD_DrawHorizontalBG( 1, 0, 6, 160);
158 LED6_Write(1);
159 CyDelay(500);}
160 else
161 {
162     LCD_ClearDisplay();
163     LCD_Position(0,0);
164     LCD_PrintString("APAGAR LEDS");
165     LCD_Position(1,0);
166     LCD_PrintString("-----");
167     LED1_Write(0);
168     LED2_Write(0);
169     LED3_Write(0);
170     LED4_Write(0);
171     LED5_Write(0);
172     LED6_Write(0);
173     LED7_Write(0);
174     LED8_Write(0);
175     LED9_Write(0);
176     LED10_Write(0);
177     CyDelay(500);
178 }
179 if(FOCO_Read())
180 {
181     LCD_ClearDisplay();
182     LCD_Position(0,0);
183     LCD_PrintString("ENCENDER LEDS");
184     LCD_Position(1,0);

```

```

StartPage/ *main.c
186 LED7_Write(1);
187 CyDelay(500);}
188 else
189 {
190     LCD_ClearDisplay();
191     LCD_Position(0,0);
192     LCD_PrintString("APAGAR LEDS");
193     LCD_Position(1,0);
194     LCD_PrintString("-----");
195     LED1_Write(0);
196     LED2_Write(0);
197     LED3_Write(0);
198     LED4_Write(0);
199     LED5_Write(0);
200     LED6_Write(0);
201     LED7_Write(0);
202     LED8_Write(0);
203     LED9_Write(0);
204     LED10_Write(0);
205     CyDelay(500);
206 }
207 if(FOCO_Read())
208 {
209     LCD_ClearDisplay();
210     LCD_Position(0,0);
211     LCD_PrintString("ENCENDER LEDS");
212     LCD_Position(1,0);
213     LCD_DrawHorizontalBG( 1, 0, 8, 160);
214     LED8_Write(1);

```

```

216 else
217 {
218     LCD_ClearDisplay();
219     LCD_Position(0,0);
220     LCD_PrintString("APAGAR LEDS");
221     LCD_Position(1,0);
222     LCD_PrintString("-----");
223     LED1_Write(0);
224     LED2_Write(0);
225     LED3_Write(0);
226     LED4_Write(0);
227     LED5_Write(0);
228     LED6_Write(0);
229     LED7_Write(0);
230     LED8_Write(0);
231     LED9_Write(0);
232     LED10_Write(0);
233     CyDelay(500);
234 }
235 if(FOCO_Read())
236 {
237     LCD_ClearDisplay();
238     LCD_Position(0,0);
239     LCD_PrintString("ENCENDER LEDS");
240     void LCD_PrintString(const char8 [] string)
241     LCD_DrawHorizontalBG( 1, 0, 9, 160);
242     LED9_Write(1);
243     CyDelay(500);}
244 else

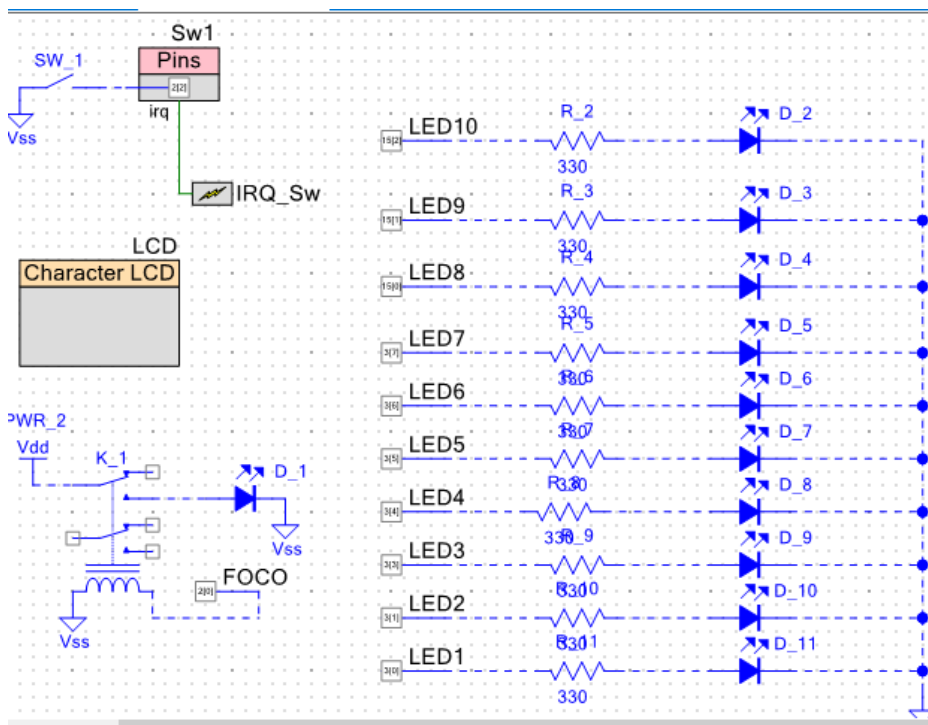
```

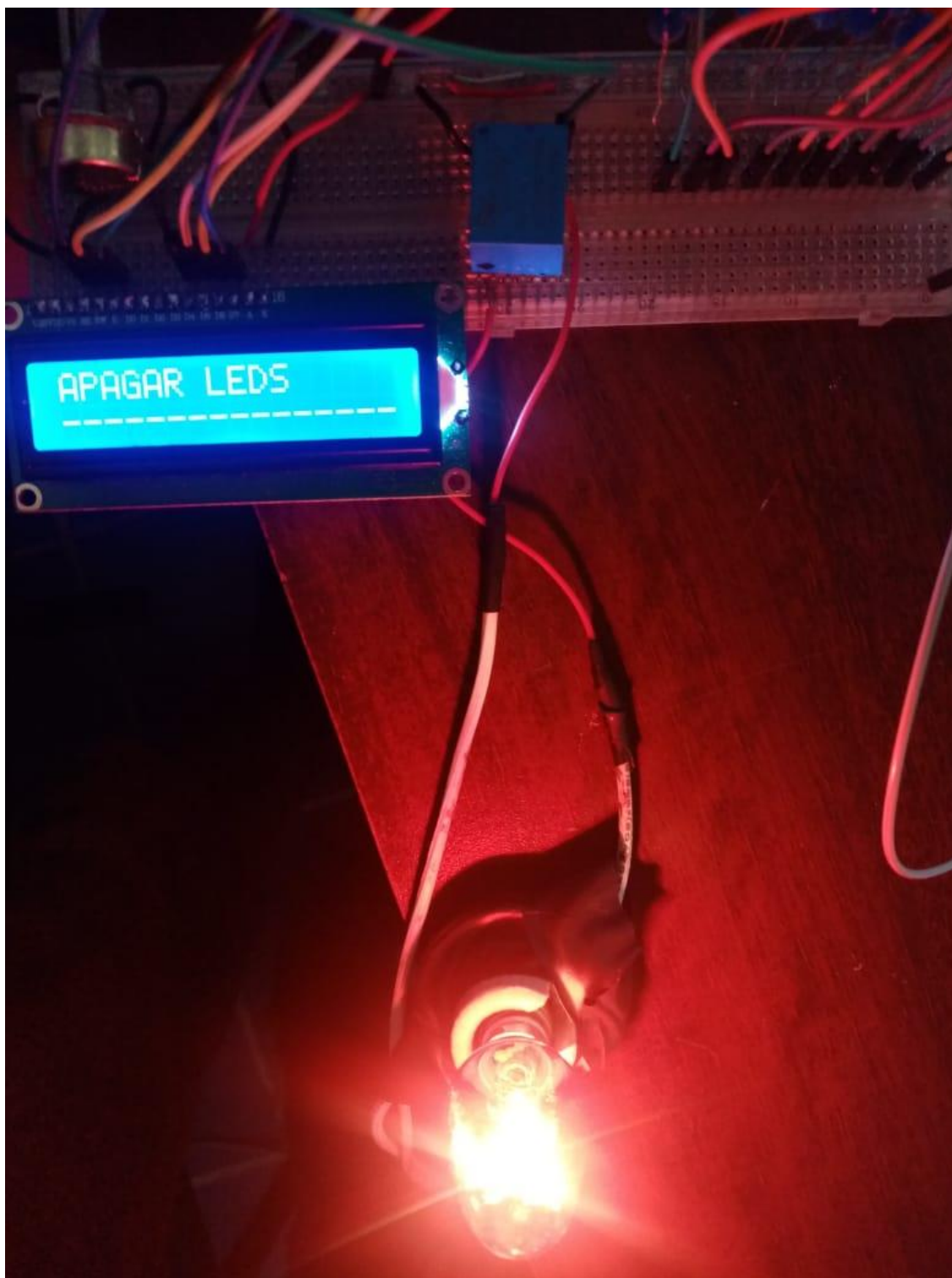
```

324 LED9_Write(0);
325 LED10_Write(0);
326 CyDelay(500);
327 }
328 }else
329 {
330     LCD_ClearDisplay();
331     LCD_Position(0,0);
332     LCD_PrintString("APAGAR LEDS");
333     LCD_Position(1,0);
334     LCD_PrintString("-----");
335     LED1_Write(0);
336     LED2_Write(0);
337     LED3_Write(0);
338     LED4_Write(0);
339     LED5_Write(0);
340     LED6_Write(0);
341     LED7_Write(0);
342     LED8_Write(0);
343     LED9_Write(0);
344     LED10_Write(0);
345     CyDelay(500);
346 }
347 }
348 }
349 }
350
351 /* [] END OF FILE */
352

```

TopDesing







Conclusion.

Este tema de interrupciones, todavía no tengo claro cómo podríamos aplicarlo a nuestro proyecto. Pero se que podría ser muy útil y no solo para el proyecto, sino también para muchas cosas mas.