Lab-12

Friday, November 27, 2020   11:42 AM
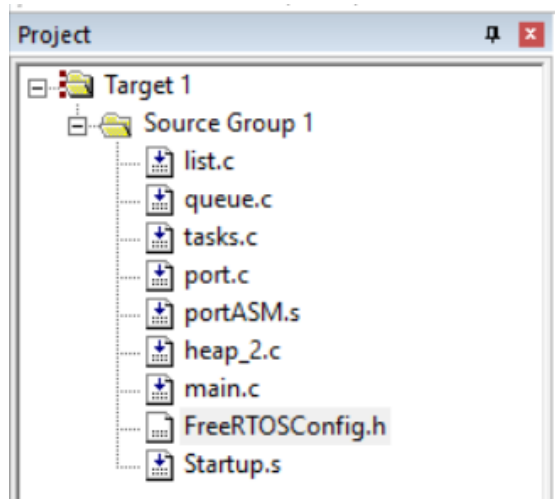
Aim: To observe LED blinking using FreeRTOS software.

Date: 27 November 2020

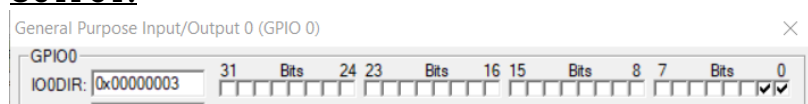Free RTOS if an open source software
Source Code:

Downloaded the source files from google drive
And imported few files like list, queue and source file.

SOURCE CODE:

```
1   #include<lpc21xx.h>
2   #include "FreeRTOS.h"
3   #include "task.h"
4
5   void f1()
6   {
7       while(1){
8           IOSET0 = 1<<0;
9           vTaskDelay(2);
10          IOCLR0 = 1<<0;
11          vTaskDelay(2);
12      }
13  }
14  void f2()
15  {
16      while(1){
17          IOSET0 = 1<<1;
18          vTaskDelay(2);
19          IOCLR0 = 1<<1;
20          vTaskDelay(2);
21      }
22  }
23
24  int main()
25  {
26      PINSEL0 = 0;
27      IODIR0 = 0x00000003;
28      xTaskCreate(f1,"Task1",20,NULL,1,NULL);
29      xTaskCreate(f2,"Task2",20,NULL,1,NULL);
30      vTaskStartScheduler();
31      while(1);
32  }
```

OUTPUT:

IO0SET: 0x00000000
IO0CLR: 0x00000000
IO0PIN: 0x03FFFFFC
Pins: 0x7BFFFFFC

General Purpose Input/Output 0 (GPIO 0) ✕

GPIO0

| | | 31 | Bits | 24 | 23 | Bits | 16 | 15 | Bits | 8 | 7 | Bits | 0 |

IO0DIR: 0x00000003
IO0SET: 0x00000003
IO0CLR: 0x00000000
IO0PIN: 0x03FFFFFF
Pins: 0x7BFFFFFF

INFERENCE:

We used FreeRTOS open software and obtained LED blinking at GPIO port 0