

```

1  /*****
2  * Name:      clock.c
3  * Description: STM32 peripherals initialization and functions
4  * Version: V1.00
5  * Author: Daris Lychuk
6  *
7  * This software is supplied "AS IS" without warranties of any kind.
8  *
9  *
10 *-----
11 * History:
12 *      V1.00 Initial Version
13 *      V1.1 reformatted (kjn)
14 *****/
15 #include "project.h"
16
17 // CLOCK AND TIMING FUNCTIONS
18
19 /*
20 * Name:      void clockInit()
21 * Paramaters: none
22 * Description: This function will initialize the device internal
23 *              clock to 24 Mhz
24 */
25 void clockInit(void)
26 {
27     uint32_t temp = 0x00;
28     //If you hover over the RCC you can go to the definition and then
29     //see it is a structure of all the RCC registers. Then you can
30     //simply assign a value.
31     RCC->CFGR = 0x07050002;    // Output PLL/2 as MCO,
32                               // PLLMUL X3, PREDIV1 is PLL input
33
34     RCC->CR = 0x01010081;    // Turn on PLL, HSE, HSI
35
36     while (temp != 0x02000000) // Wait for the PLL to stabilize
37     {
38         temp = RCC->CR & 0x02000000; //Check to see if the PLL lock bit is set
39     }
40
41     //Enable peripheral clocks for various ports and subsystems
42     //Bit 4: Port C Bit3: Port B Bit 2: Port A
43     RCC->APB2ENR |= RCC_APB2ENR_IOPAEN | RCC_APB2ENR_AFIOEN | RCC_APB2ENR_IOPBEN; // |
44     RCC->APB2ENR_USART1EN;
45     RCC->APB1ENR |= RCC_APB1ENR_USART3EN;
46
47     AFIO->MAPR |= AFIO_MAPR_SWJ_CFG_JTAGDISABLE;
48     // Write a 0xB ( 1011b ) into the configuration and mode bits for PA8 (AFIO)
49     // GPIOA->CRH |= GPIO_CRH_MODE15;
50     // GPIOA->CRH &= ~GPIO_CRH_CNF15;
51
52     GPIOB->CRH |= GPIO_CRH_MODE15;
53     GPIOB->CRH &= ~GPIO_CRH_CNF15;
54
55     GPIOB->CRH |= GPIO_CRH_CNF10_1 | GPIO_CRH_MODE10_0 | GPIO_CRH_MODE10_1;
56     GPIOB->CRH &= ~GPIO_CRH_CNF10_0 ;
57
58     GPIOB->CRH |= GPIO_CRH_CNF11_0 ;
59     GPIOB->CRH &= ~GPIO_CRH_CNF11_1 & ~GPIO_CRH_MODE11_1 & ~GPIO_CRH_MODE11_0 ;
60 }
61 void delay(uint32_t count)
62 {
63     int i=0;
64     for(i=0; i< count; ++i)
65     {
66     }
67 }
68

```