

```
1  /*****
2   * Name:      UART.c
3   * Description: STM32 UART initialization and functions
4   * Version: V1.00
5   * Author: Ammar Alvi & Shannon D'Souza
6   *
7   * This software is supplied "AS IS" without warranties of any kind.
8   *****/
9
10 #include "stm32f10x.h"
11 #include "GPIO.h"
12 #include "UTIL.h"
13
14
15 /*
16 * Name:      void UART3_init(void)
17 * Paramaters: none
18 * Description: Initiazlize UART3 by writing 1 to Usart Enable
19                and Transmit Enable. 9600 Baudrate
20 */
21 void UART3_init(void)
22 {
23     USART3->CR1 |= USART_CR1_UE;
24     USART3->BRR = 0x9C4;
25     USART3->CR1 |= USART_CR1_TE;
26 }
27
28
29 /*
30 * Name:      void UART3_TX_Byte(uint8_t val)
31 * Paramaters: 8 bit value
32 * Description: Transmit a byte to HC05 bluetooth module
33 */
34 void UART3_TX_Byte(uint8_t val)
35 {
36
37     while(((USART3->SR & USART_SR_TXE)>>7) != 1)
38     { }
39     USART3->DR = val;
40 }
41
42 /*
43 * Name:      void UART3_TX_str(char data[])
44 * Paramaters: array of char
45 * Description: Transmitting a null terminated string of characters
46 */
47 void UART3_TX_str(char data[])
48 {
49     for(int i = 0; data[i] != 0;i++)
50     {
51         UART3_TX_Byte(data[i]);
52     }
53 }
54
55
56
```