

```

/* USER CODE BEGIN Header */
/**
 * *****
 * @file    stm32f0xx_it.c
 * @brief   Interrupt Service Routines.
 * *****
 * @attention
 *
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 *
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 * in the root directory of this software component.
 * If no LICENSE file comes with this software, it is provided AS-IS.
 *
 * *****
 */
/* USER CODE END Header */

/* Includes -----*/
#include "main.h"
#include "stm32f0xx_it.h"
/* Private includes -----*/
/* USER CODE BEGIN Includes */
/* USER CODE END Includes */

/* Private typedef -----*/
/* USER CODE BEGIN TD */

/* USER CODE END TD */

/* Private define -----*/
/* USER CODE BEGIN PD */

/* USER CODE END PD */

/* Private macro -----*/
/* USER CODE BEGIN PM */

/* USER CODE END PM */

/* Private variables -----*/
/* USER CODE BEGIN PV */

/* USER CODE END PV */

/* Private function prototypes -----*/
/* USER CODE BEGIN PFP */

/* USER CODE END PFP */

/* Private user code -----*/
/* USER CODE BEGIN 0 */

/* USER CODE END 0 */

/* External variables -----*/
/* USER CODE BEGIN EV */

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/* USER CODE END EV */

/*****
/*          Cortex-M0 Processor Interruption and Exception Handlers          */
*****/

void EXTI0_1_IRQHandler(void)
{
    EXTI->PR |= EXTI_PR_PIF0;    /* "ACK" the interrupt */
}

char RecvChar(USART_TypeDef *Def);
void WriteChar(USART_TypeDef *Def, char Cur);
void SetColor(char c, char val);

static char Count[2];
static uint8_t Status = 0;

void WriteAsyncChar(USART_TypeDef *Def, char Cur)
{
    Def->TDR = Cur;
}

void USART3_4_IRQHandler(void)
{
    if ((USART3->ISR & USART_ISR_RXNE) == USART_ISR_RXNE)
    {
        Count[Status] = USART3->RDR;
        Status++;
    }

    if (Status == 2)
    {
        if (Count[1] == '0' || Count[1] == '1')
        {
            SetColor(Count[0], Count[1] == '1');
            Status = 0;
        }
        else
        {
            SetColor('e', 0); /* Submit an error */
            Status = 0;
        }
    }
    USART3->ICR |= (USART_ISR_ORE | USART_ISR_RXNE);
}

/**
 * @brief This function handles Non maskable interrupt.
 */
void NMI_Handler(void)
{

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/* USER CODE BEGIN NonMaskableInt_IRQn 0 */

/* USER CODE END NonMaskableInt_IRQn 0 */
/* USER CODE BEGIN NonMaskableInt_IRQn 1 */
while (1)
{
}
/* USER CODE END NonMaskableInt_IRQn 1 */
}

/**
 * @brief This function handles Hard fault interrupt.
 */
void HardFault_Handler(void)
{
/* USER CODE BEGIN HardFault_IRQn 0 */

/* USER CODE END HardFault_IRQn 0 */
while (1)
{
/* USER CODE BEGIN W1_HardFault_IRQn 0 */
/* USER CODE END W1_HardFault_IRQn 0 */
}
}

/**
 * @brief This function handles System service call via SWI instruction.
 */
void SVC_Handler(void)
{
/* USER CODE BEGIN SVC_IRQn 0 */

/* USER CODE END SVC_IRQn 0 */
/* USER CODE BEGIN SVC_IRQn 1 */

/* USER CODE END SVC_IRQn 1 */
}

/**
 * @brief This function handles Pendable request for system service.
 */
void PendSV_Handler(void)
{
/* USER CODE BEGIN PendSV_IRQn 0 */

/* USER CODE END PendSV_IRQn 0 */
/* USER CODE BEGIN PendSV_IRQn 1 */

/* USER CODE END PendSV_IRQn 1 */
}

/**
 * @brief This function handles System tick timer.
 */
void SysTick_Handler(void)
{
/* USER CODE BEGIN SysTick_IRQn 0 */

/* USER CODE END SysTick_IRQn 0 */
}

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    HAL_IncTick();
    /* USER CODE BEGIN SysTick_IRQn 1 */

    /* USER CODE END SysTick_IRQn 1 */
}

/*****
/* STM32F0xx Peripheral Interrupt Handlers
/* Add here the Interrupt Handlers for the used peripherals.
/* For the available peripheral interrupt handler names,
/* please refer to the startup file (startup_stm32f0xx.s).
*****/

/* USER CODE BEGIN 1 */

/* USER CODE END 1 */

```