

```
HAL_UART_Receive_IT(&huart2, &gelenVeri, 1);  
while (1)  
{  
    /* USER CODE END WHILE */  
  
    /* USER CODE BEGIN 3 */  
    if(HAL_GPIO_ReadPin(GPIOA, GPIO_PIN_0)==1)  
        gidenVeri=1;  
    else  
        gidenVeri=0;  
  
    HAL_UART_Transmit_IT(&huart2, &gidenVeri, 1);  
  
    HAL_Delay(200);  
}
```

```
HAL_UART_Receive_IT(&huart2, gidenVeri, 4);
```

```
while (1)
```

```
{
```

```
    /* USER CODE END WHILE */
```

```
    /* USER CODE BEGIN 3 */
```

```
    if(HAL_GPIO_ReadPin(GPIOA, GPIO_PIN_0)==1)
```

```
    {
```

```
        gidenVeri[0]++;
```

```
        gidenVeri[1]+=2;
```

```
        gidenVeri[2]+=3;
```

```
        gidenVeri[3]+=4;
```

```
        HAL_UART_Transmit_IT(&huart2, gidenVeri, 4);
```

```
    }
```

```
    HAL_Delay(200);
```

```
}
```

```
HAL_TIM_PWM_Start(&htim1, TIM_CHANNEL_1);  
while (1)  
{  
    /* USER CODE END WHILE */  
  
    /* USER CODE BEGIN 3 */  
    /*dutyCycle++;  
    if(dutyCycle==1001)  
        dutyCycle=0;  
    __HAL_TIM_SET_COMPARE(&htim1,TIM_CHANNEL_1,dutyCycle);  
    __HAL_TIM_SET_COMPARE(&htim1,TIM_CHANNEL_2,dutyCycle);  
    HAL_Delay(5);*/  
    HAL_ADC_Start(&hadc1);  
    HAL_ADC_PollForConversion(&hadc1, 100);  
    adc1=HAL_ADC_GetValue(&hadc1);  
    HAL_ADC_Stop(&hadc1);  
  
    dutyCycle=adc1*1000/4095;  
  
    __HAL_TIM_SET_COMPARE(&htim1,TIM_CHANNEL_1,dutyCycle);  
    __HAL_TIM_SET_COMPARE(&htim1,TIM_CHANNEL_2,dutyCycle);  
    HAL_Delay(200);  
}  
/* USER CODE END 3 */
```

```
HAL_ADC_Start(&hadc1);  
HAL_ADC_PollForConversion(&hadc1, 100);  
adc1=HAL_ADC_GetValue(&hadc1); //adc1= 0000 1010 1101 1100  
HAL_ADC_Stop(&hadc1);
```

```
USB_TX_Buffer[0]=adc1;           //[0]= 1101 1100  
USB_TX_Buffer[1]=adc1>>8;
```

```
USBD_CUSTOM_HID_SendReport(&hUsbDeviceFS, USB_TX_Buffer, 64);  
HAL_Delay(200);
```

```
/* USER CODE BEGIN 3 */
```

```
    if(HAL_GPIO_ReadPin(GPIOA, GPIO_PIN_0)==1)
        HAL_GPIO_WritePin(GPIOA, GPIO_PIN_3, 1);
    else
        HAL_GPIO_WritePin(GPIOA, GPIO_PIN_3, 0);

    HAL_GPIO_TogglePin(GPIOA, GPIO_PIN_2);
    HAL_Delay(200);
```

```
HAL_ADC_Start(&hadc1);  
HAL_ADC_PollForConversion(&hadc1, 100);  
adc1=HAL_ADC_GetValue(&hadc1);  
HAL_ADC_PollForConversion(&hadc1, 100);  
adc2=HAL_ADC_GetValue(&hadc1);  
HAL_ADC_Stop(&hadc1);
```

```
volt1=adc1*3.0/4095.0;  
volt2=adc2*3.0/4095.0;
```

```
HAL_ADC_Start(&hadc1);
HAL_ADC_PollForConversion(&hadc1, 100);
adc1=HAL_ADC_GetValue(&hadc1);
HAL_ADC_PollForConversion(&hadc1, 100);
adc2=HAL_ADC_GetValue(&hadc1);
HAL_ADC_Stop(&hadc1);

volt1=adc1*3.0/4095;          //volt1=2.76895412
volt2=adc2*3.0/4095;

tam  = volt1;                //tam=2
kesir = (volt1-tam)*100;
snprintf(snum,5,"%d.%d",tam,kesir);
lcd_put_cur(0, 0);
lcd_send_string("V1:");
lcd_send_string(snum);

tam  = volt2;                //tam=2
kesir = (volt2-tam)*100;
snprintf(snum,5,"%d.%d",tam,kesir);
lcd_put_cur(1, 0);
lcd_send_string("V2:");
lcd_send_string(snum);

HAL_Delay(200);
```

```
HAL_I2C_Master_Receive(&hi2c1, 0x93, i2cData, 2, 100);  
doc=i2cData[0]*256+i2cData[1];  
flow=200*((doc/16384.0)-0.1)/0.8;
```

```
char sflow[6];  
uint8_t tam,kesir;  
tam=flow;  
kesir=(flow-tam)*100;  
snprintf(sflow,6,"%d.%d",tam,kesir);  
lcd_put_cur(0, 0);  
lcd_send_string("Flow..: ");  
lcd_put_cur(1, 0);  
lcd_send_string(sflow);  
lcd_send_string("    ");
```

```
HAL_Delay(200);
```



```
/* USER CODE END WHILE */
```

```
/* USER CODE BEGIN 3 */
```

```
/*HAL_GPIO_WritePin(GPIOB, GPIO_PIN_0, 0);  
HAL_SPI_Transmit(&hspi1, &dataOut[0], 1, 100);  
HAL_GPIO_WritePin(GPIOB, GPIO_PIN_0, 1);  
HAL_Delay(500);  
HAL_GPIO_WritePin(GPIOB, GPIO_PIN_0, 0);  
HAL_SPI_Transmit(&hspi1, &dataOut[1], 1, 100);  
HAL_GPIO_WritePin(GPIOB, GPIO_PIN_0, 1);  
HAL_Delay(500);*/
```

```
/*dataOut[0]++;  
HAL_GPIO_WritePin(GPIOB, GPIO_PIN_0, 0);  
HAL_SPI_Transmit(&hspi1, &dataOut[0], 1, 100);  
HAL_GPIO_WritePin(GPIOB, GPIO_PIN_0, 1);  
HAL_Delay(1500);*/
```

```
HAL_GPIO_WritePin(GPIOB, GPIO_PIN_0, 0);  
HAL_SPI_Transmit(&hspi1, &dataOut[0], 1, 100);  
HAL_GPIO_WritePin(GPIOB, GPIO_PIN_0, 1);
```

```
sayac++;
```

```
if(sayac<8)
```

```
    dataOut[0]=dataOut[0]<<1;
```

```
else
```

```
    dataOut[0]=dataOut[0]>>1;
```

```
if(sayac==14)
```

```
    sayac=0;
```

```
HAL_Delay(50);
```

```
if(HAL_GPIO_ReadPin(GPIOA, GPIO_PIN_0)==1)
    HAL_GPIO_WritePin(GPIOD, GPIO_PIN_12, GPIO_PIN_SET);
else
    HAL_GPIO_WritePin(GPIOD, GPIO_PIN_12, GPIO_PIN_RESET);

HAL_Delay(200);
```

```
if(HAL_GPIO_ReadPin(GPIOB, btn_artir_Pin)==1)
{
    sayac++;
    HAL_GPIO_WritePin(GPIOB, led_artir_Pin, 1);
}
else
    HAL_GPIO_WritePin(GPIOB, led_artir_Pin, 0);
```

```
if(HAL_GPIO_ReadPin(GPIOB, btn_azalt_Pin)==1)
{
    sayac--;
    HAL_GPIO_WritePin(GPIOE, led_azalt_Pin, 1);
}
else
    HAL_GPIO_WritePin(GPIOE, led_azalt_Pin, 0);
HAL_Delay(200);
```