Project_5.3_Timer_PWM_mode

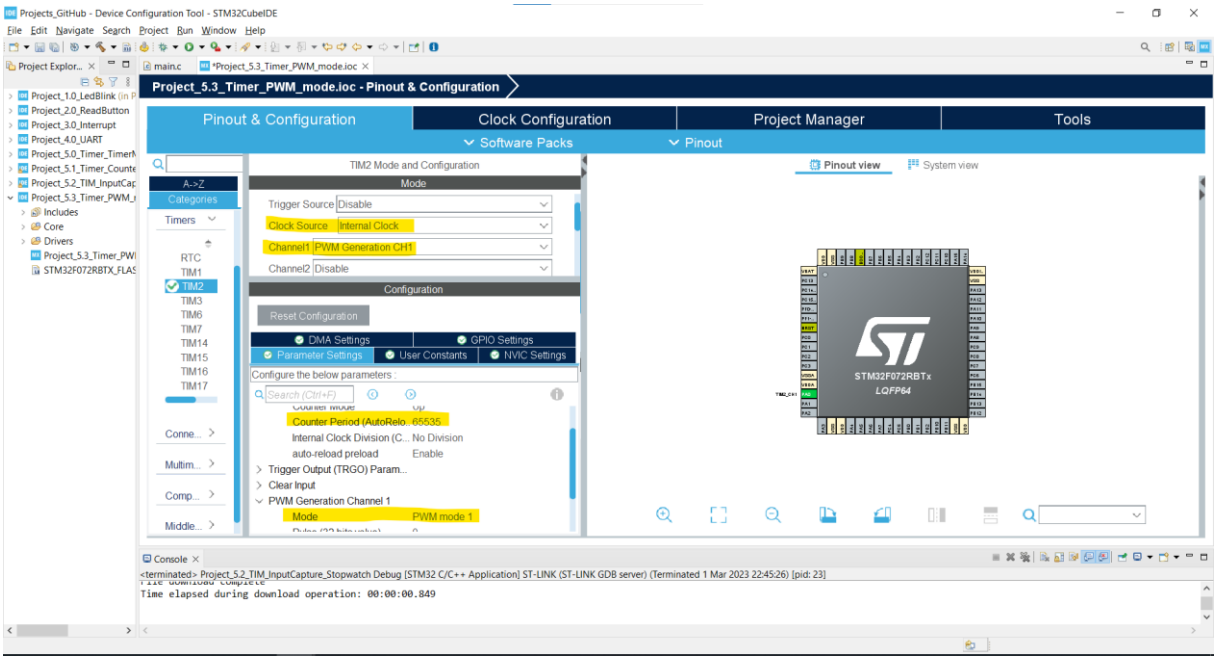
Bu projede timer ı pwm modunda kullanarak LED'i kontrol edeceğiz.

STEP 1 : Open STM32CubeIDE and Create New Project.

STEP 2 : Select Target microcontroller and double Click. My MCU is STM32F072RBT6.

STEP3 : Enter the project name and finish .

Step 4 : Configure Timer 2:



STEP 5 : Set the RCC External Clock Source and then CTRL + S to generate the project code. And we open our main.c file in the project files.

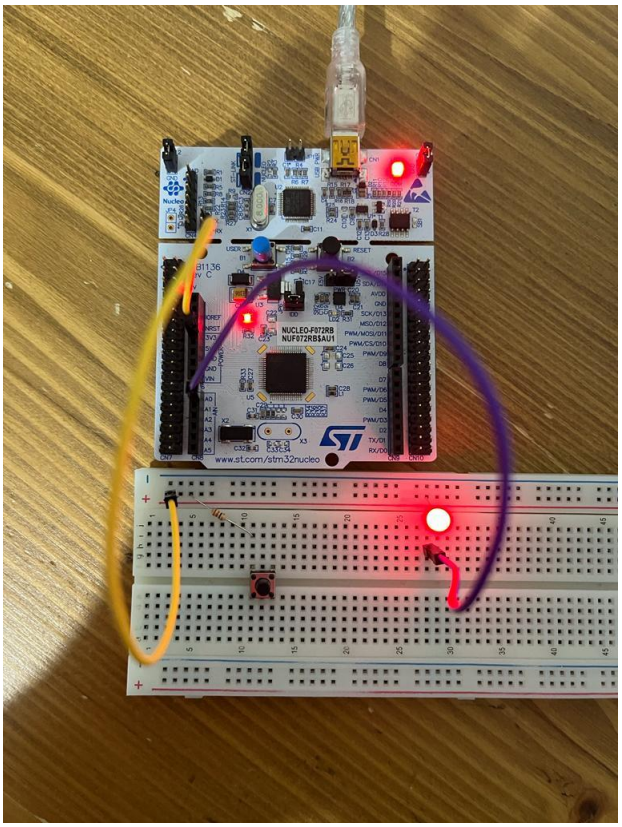
STEP 6: Code :

```c
int main(void)
{
  /* USER CODE BEGIN 1 */
    int32_t CH1_frequency = 0;
  /* USER CODE END 1 */
```

```c
  MX_GPIO_Init();
  MX_TIM2_Init();
  /* USER CODE BEGIN 2 */
  HAL_TIM_PWM_Start(&htim2, TIM_CHANNEL_1);
  /* USER CODE END 2 */

  /* Infinite loop */
  /* USER CODE BEGIN WHILE */
  while (1)
  {
    /* USER CODE END WHILE */

    /* USER CODE BEGIN 3 */
      while(CH1_frequency < 65535)
      {
          TIM2->CCR1 = CH1_frequency;
          CH1_frequency += 100;
          HAL_Delay(1);
      }
      while(CH1_frequency > 0)
      {
          TIM2->CCR1 = CH1_frequency;
          CH1_frequency -= 100;
          HAL_Delay(1);
      }
  }
  /* USER CODE END 3 */
}
```



That’s it.