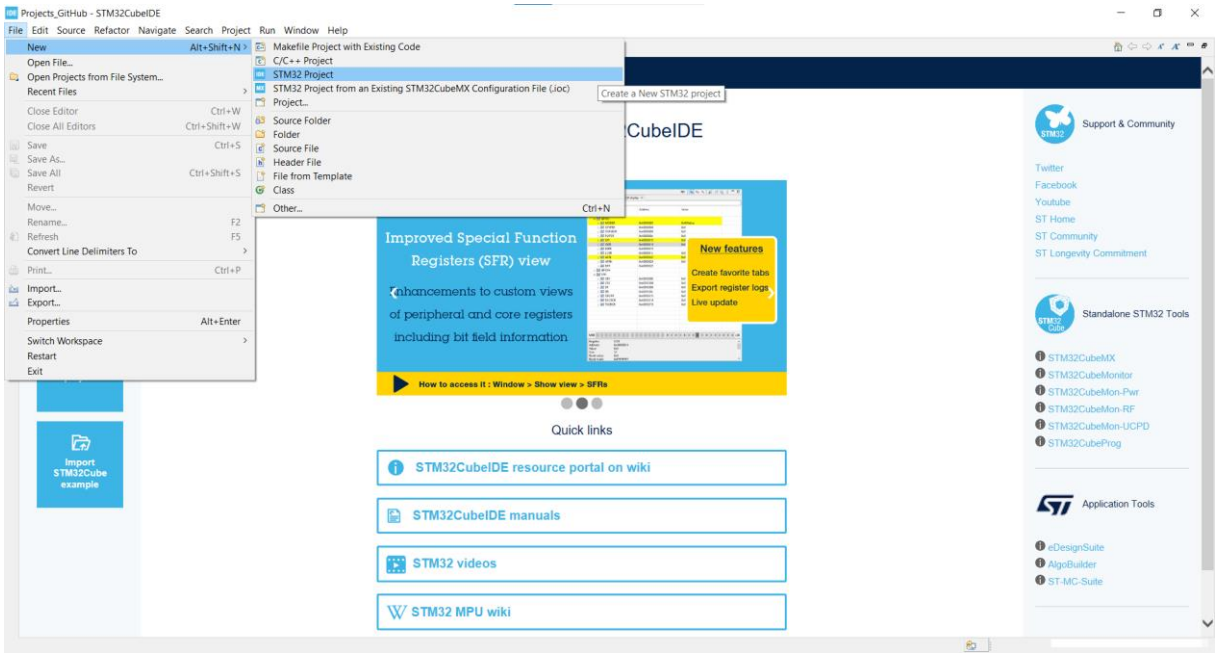
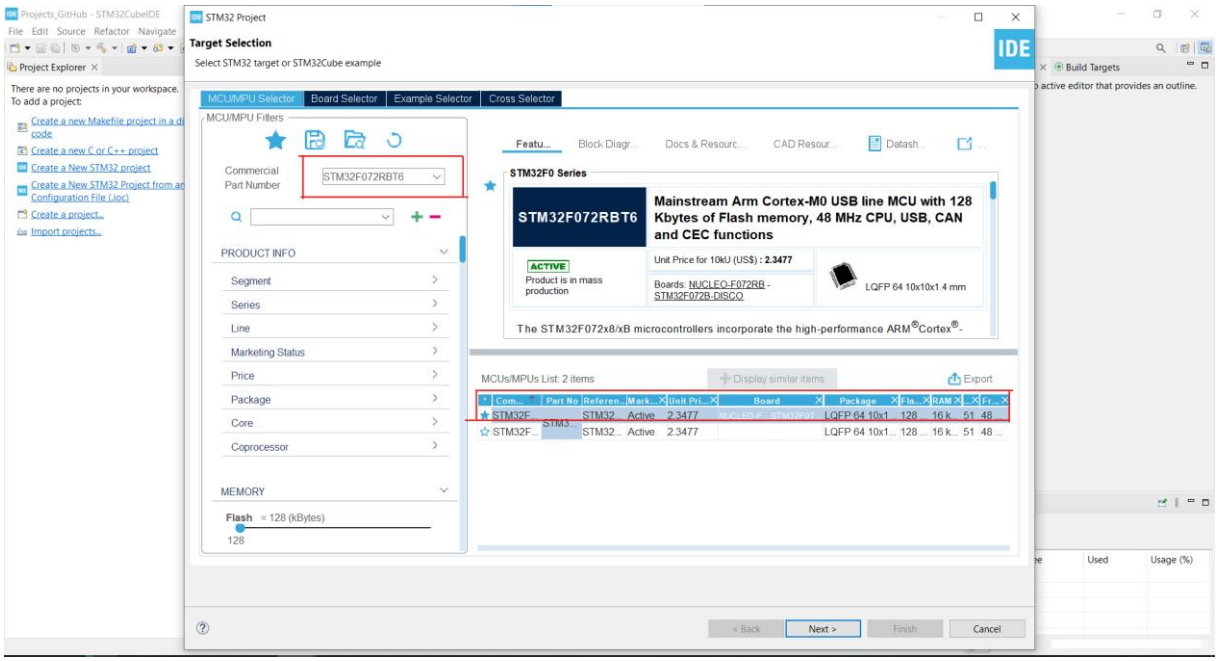
We are starting with the stm32 series with this project. I will share the projects I have done while learning from scratch.

In this project, we will set a GPIO pin for the output pin and make an LED blink.

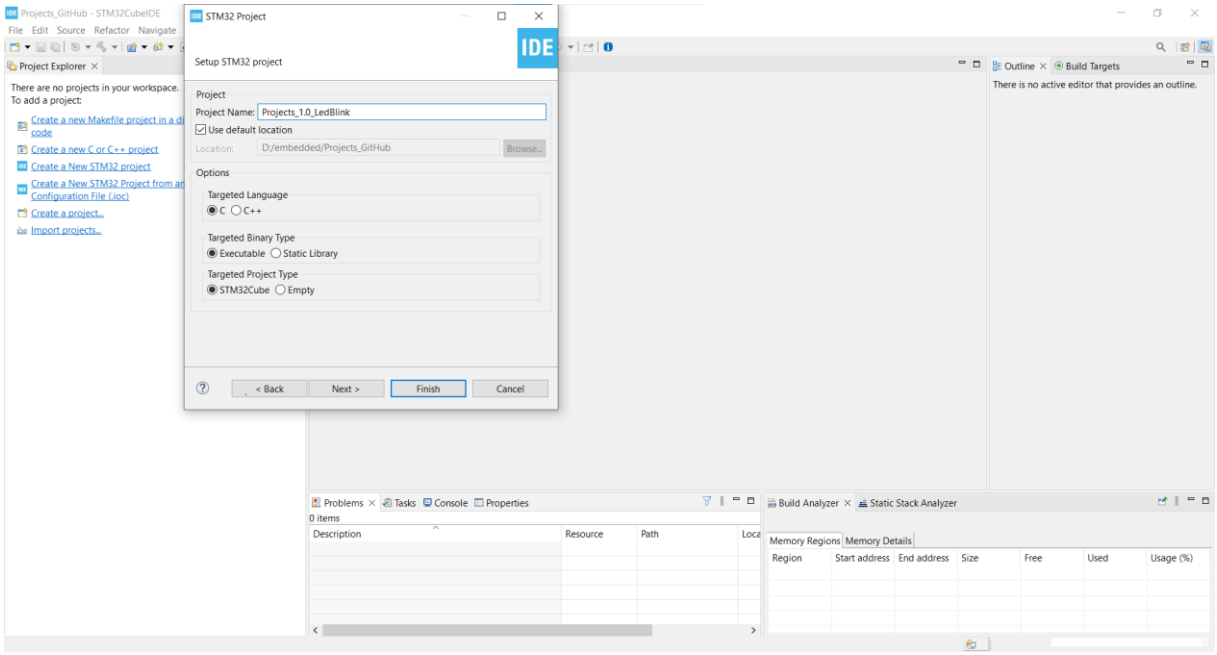
STEP 1 : Open STM32CubeIDE and Create New Project:



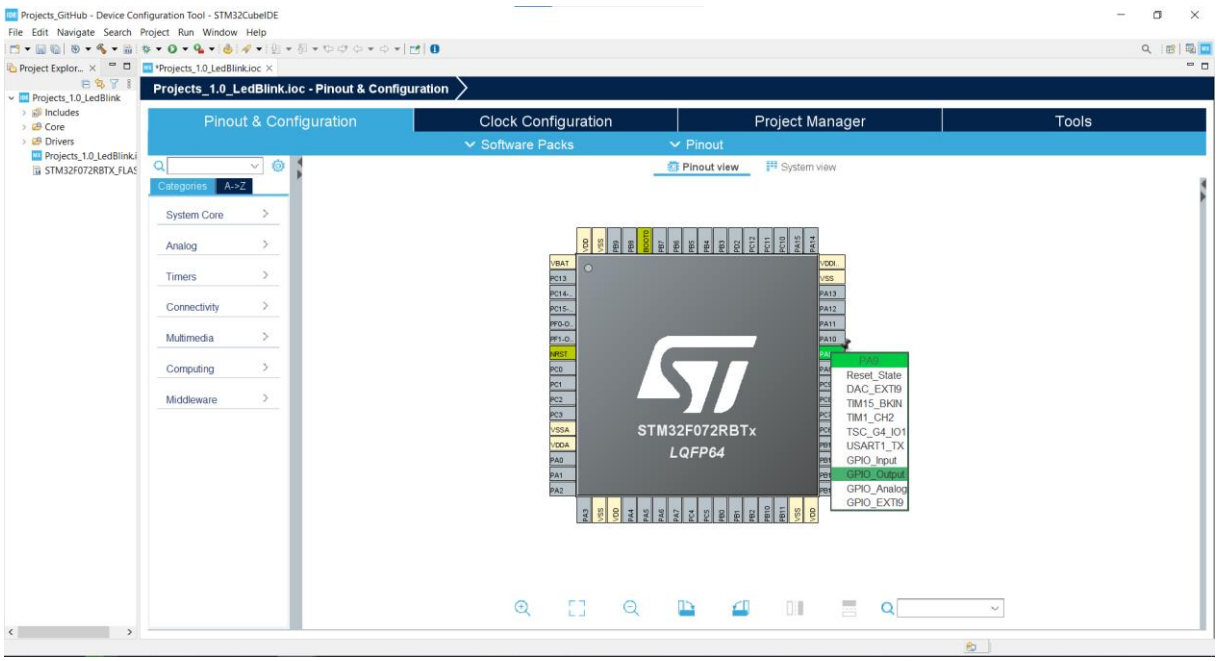
STEP 2 : Select Target microcontroller and double Click. My MCU is STM32F072RBT6:



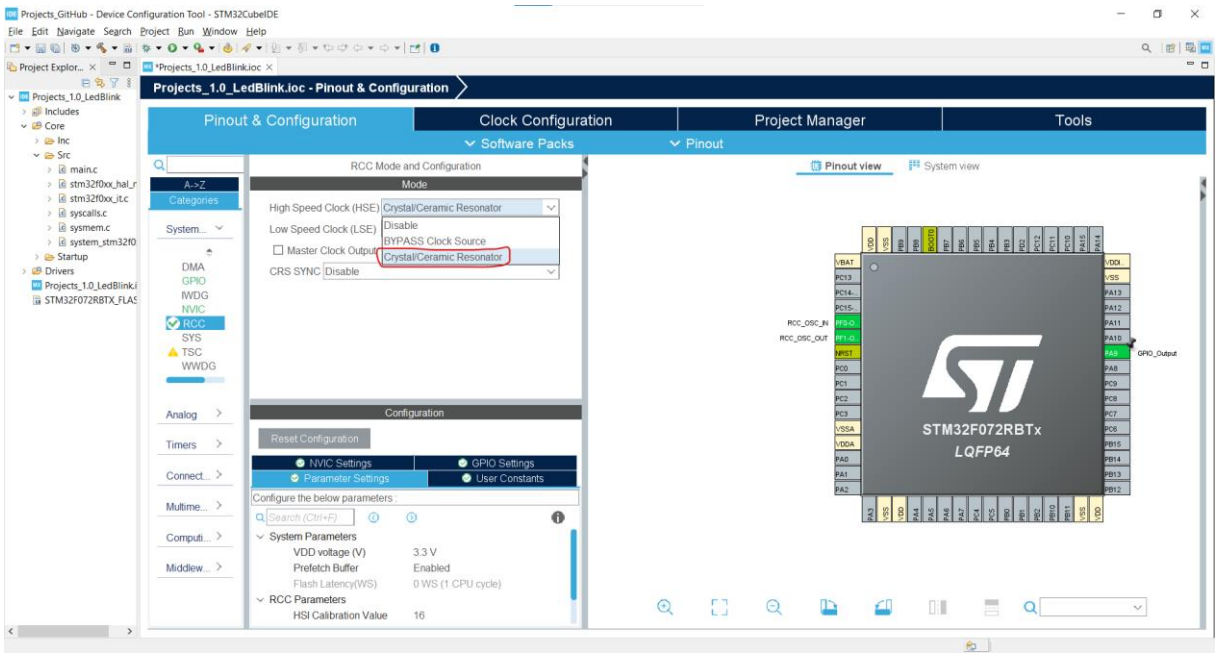
STEP3 : Enter the project name and finish :



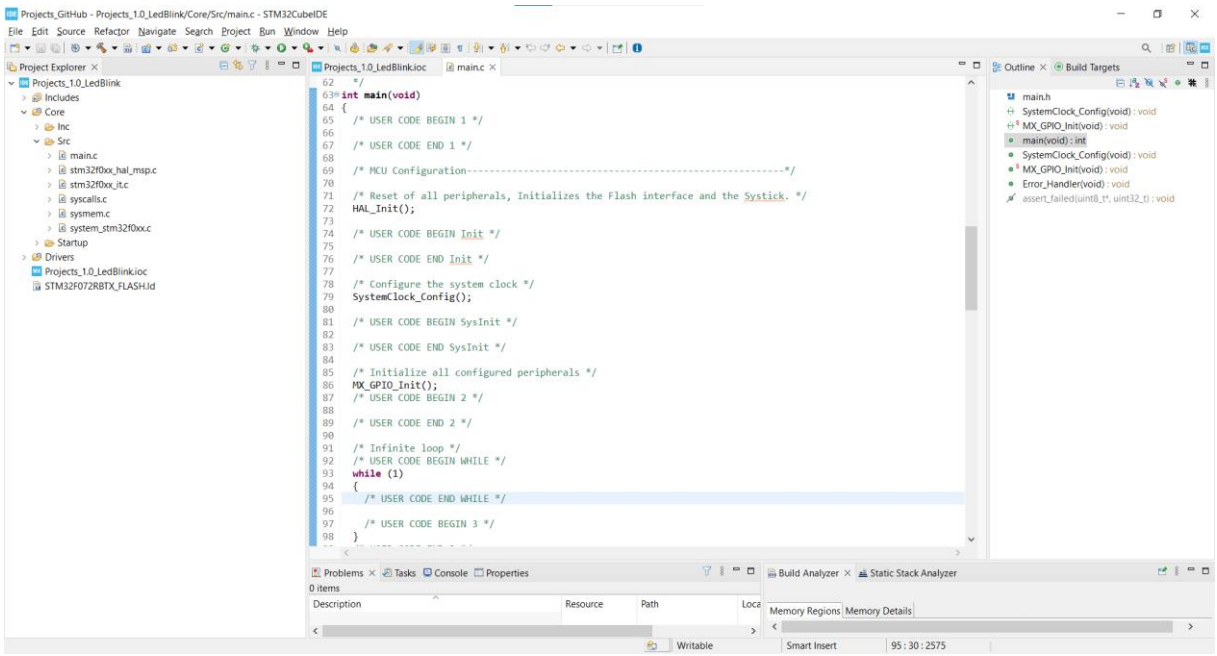
STEP 4 : Click the pin you want to set as output and select GPIO_Output. For example, in this project, I choose the A9 pin.



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.



Our project code was created with the settings we made on the interface above. We will write the codes between /*User Code Begin*/ and /* User Code End*/ in the Main.c file. The generated code is as follows.



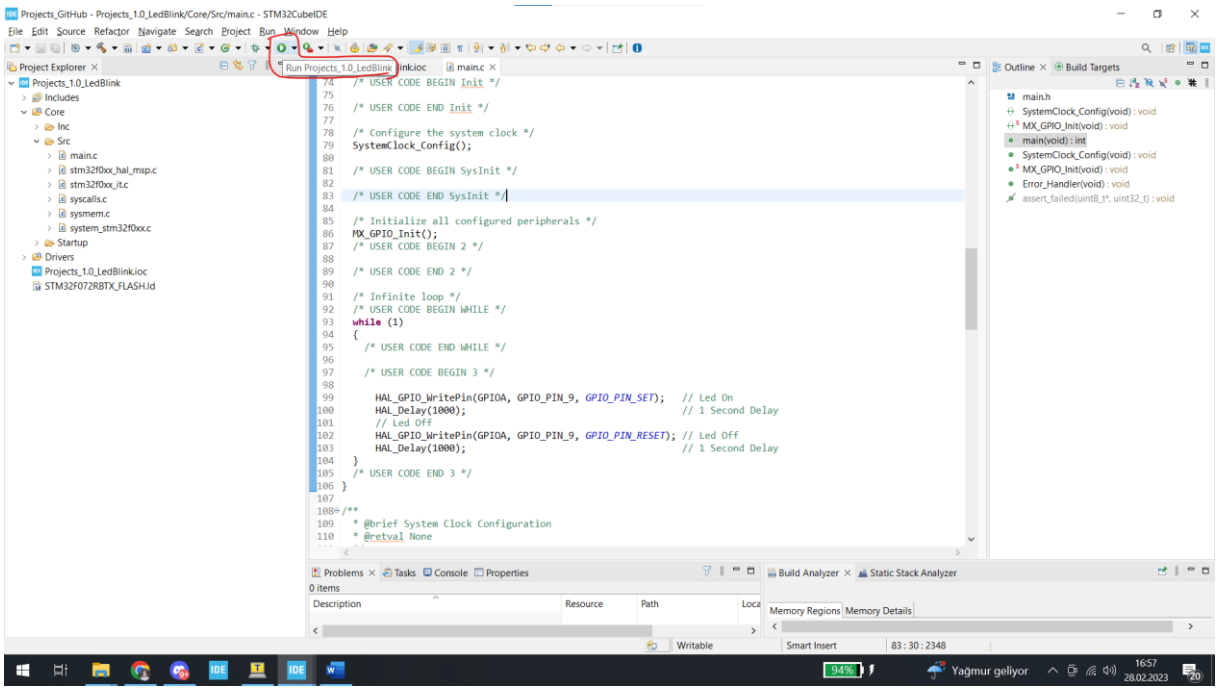
STEP 6 : We will use HAL libraries while writing our project. Two functions will help us to make LED Blink:

1- HAL_GPIO_WritePin() : This function helps us to Active and Passive the GPIO pin we entered as a parameter. In short, we will turn the led on and off with this function.

2-HAL_Delay() : We will have a wait with this function. It will help us to light my led, wait 1 second and turn it off.

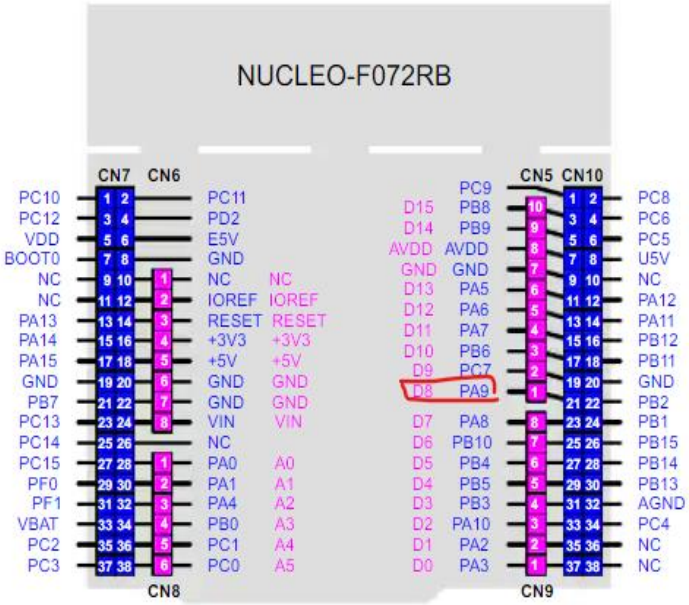
```
  /* USER CODE BEGIN WHILE */
  while (1)
  {
    /* USER CODE END WHILE */

    /* USER CODE BEGIN 3 */

      HAL_GPIO_WritePin(GPIOA, GPIO_PIN_9, GPIO_PIN_SET);   // Led On
      HAL_Delay(1000);                                      // 1 Second Delay
      // Led Off
      HAL_GPIO_WritePin(GPIOA, GPIO_PIN_9, GPIO_PIN_RESET); // Led Off
      HAL_Delay(1000);                                      // 1 Second Delay
  }
  /* USER CODE END 3 */
}
```

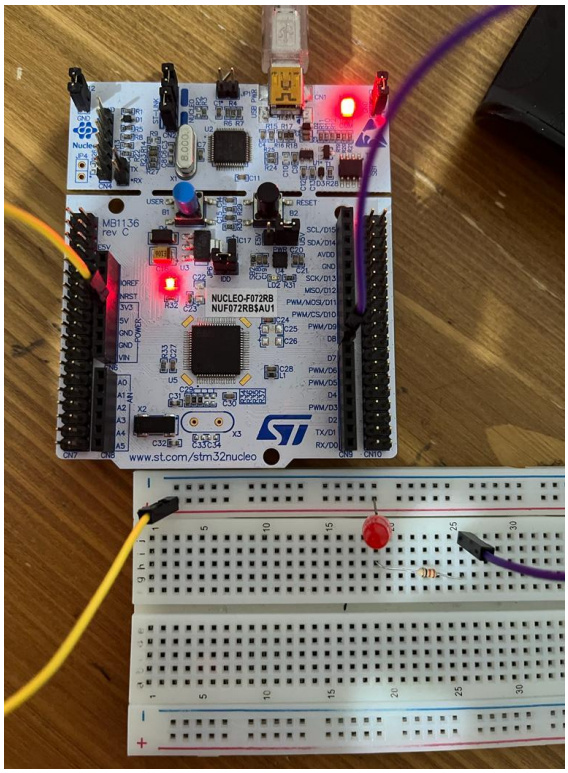
STEP 7 : We press RUN to compile the code and upload it to the board.



STEP 8 : Now it's time to connect the led to the board.

We look at the schematic of the board, find out which output the A9 pin is connected to, and connect it.





That's it.