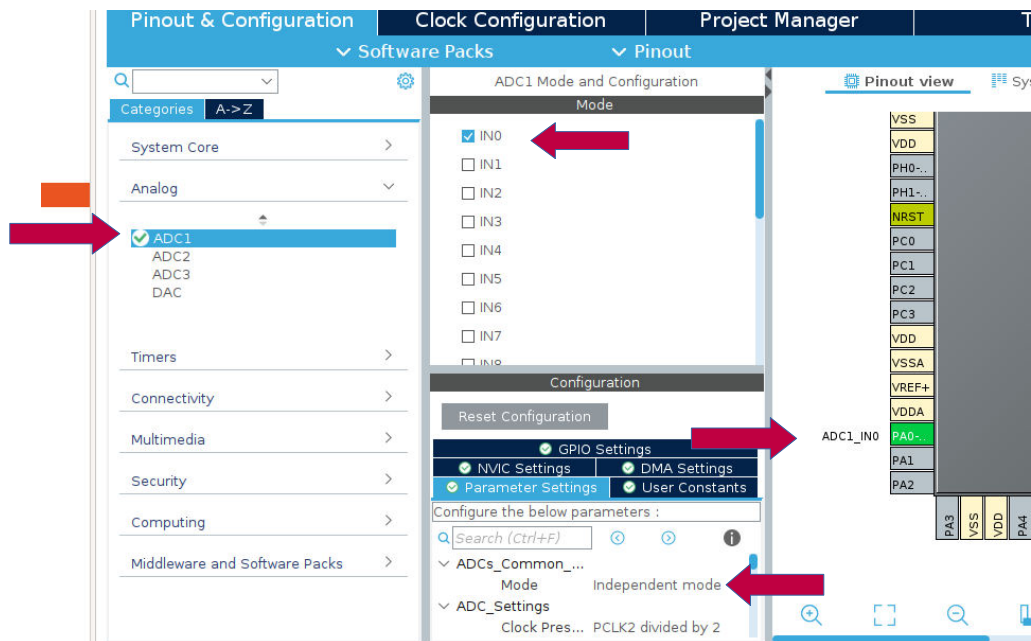


INTERFACING GAS SENSOR (MQ 2) WITH STM32



Object : In this project we are interfacing with GAS Sensor (MQ 2) so there is essential step for this which has been given below

Step 1 : Take a project on stm32 and in ioc file take adc1



Step 2 : build and configure this project then change in the main.c file as below

```
=====
/* USER CODE BEGIN PV */
uint16_t adcValue;
float voltage;
/* USER CODE END PV */
=====
```

```

=====
/* USER CODE BEGIN 0 */
uint16_t Read_ADC_Value(void)
{
    HAL_ADC_Start(&hadc1);
    if (HAL_ADC_PollForConversion(&hadc1, 1000) == HAL_OK)
    {
        return HAL_ADC_GetValue(&hadc1);
    }
    return 0;
}
float Convert_ADC_to_Voltage(uint16_t adcValue)
{
    return (adcValue * 3.3) / 4096; // Assuming Vref+ is 3.3V and ADC
resolution is 12 bits
}
/* USER CODE END 0 */
=====

```

```

=====
/* USER CODE BEGIN WHILE */
while (1)
{
    adcValue = Read_ADC_Value();

    // Convert ADC value to voltage or percentage
    voltage = Convert_ADC_to_Voltage(adcValue);

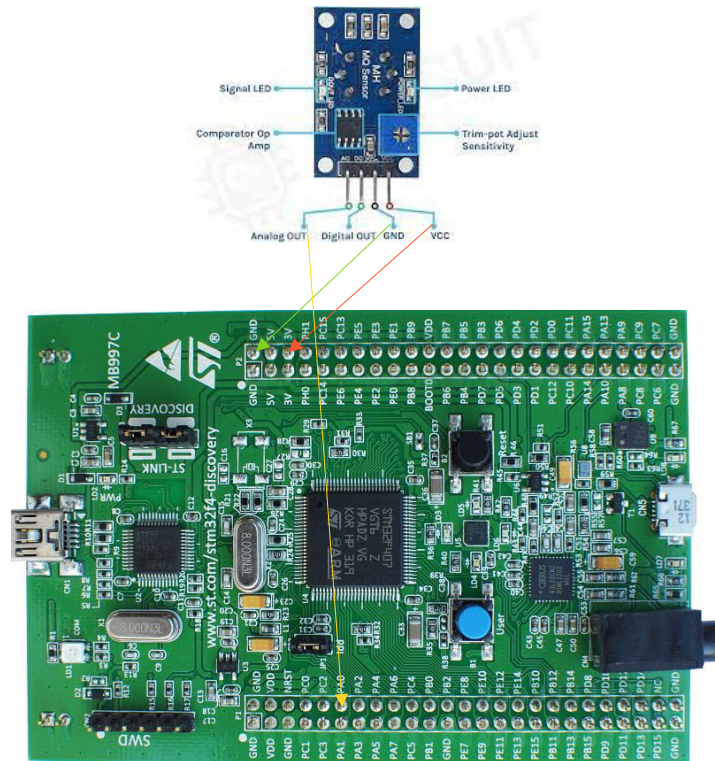
    /* USER CODE END WHILE */

    /* USER CODE BEGIN 3 */
}
/* USER CODE END 3 */
}
=====

```

=====NO further changes=====

Step 4: Make sure your connection must be as you pin selection the proper connection has given below. Digital output you can use as per your requirement



Step 5 : After proper connection take two global variable for observe the output .

Expression	Type	Value
→ (x)= adcValue	uint16_t	929
→ (x)= voltage	float	0.748461902
+ Add new expression		

