

Week6

การสื่อสารผ่านพอร์ตอนุกรม

```
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
using System.Windows.Forms;
using System.Threading;

namespace week_6rs232
{
    public partial class Form1 : Form
    {
        string str1;
        public Form1()
        {
            InitializeComponent();
            timer1.Start();
            serialPort1.Open();
        }

        private void button1_Click(object sender, EventArgs e)
        {
            serialPort1.WriteLine(textBox2.Text);

            Thread.Sleep(500);
            int n = serialPort1.BytesToRead;
            if (n > 0)
            {
                str1 = serialPort1.ReadLine();

                textBox1.Text = str1;
            }
            //serialPort1.Close();
        }

        private void serialPort1_DataReceived(object sender, System.IO.Ports.SerialDataReceivedEventArgs e)
        {
            //str1 = serialPort1.ReadLine();
        }

        private void timer1_Tick(object sender, EventArgs e)
        {

```

```
textBox1.Text = str1;
//serialPort1.Open();
serialPort1.WriteLine("3");
```

```
Thread.Sleep(500);
int n = serialPort1.BytesToRead;
if (n > 0)
{
    str1 = serialPort1.ReadLine();
```

```
textBox1.Text = str1;
if (str1 == "3a") sw1.BackColor = Color.Red;
if (str1 == "3b") sw1.BackColor = Color.Gray;
}
//serialPort1.Close();
}
```

```
private void button2_Click(object sender, EventArgs e)
{
```

```
serialPort1.WriteLine("1");
```

```
Thread.Sleep(500);
int n = serialPort1.BytesToRead;
if (n > 0)
{
    str1 = serialPort1.ReadLine();
```

```
textBox1.Text = str1;
}
//serialPort1.Close();
```

```
private void button3_Click(object sender, EventArgs e)
{
```

```
//serialPort1.Open();
serialPort1.WriteLine("0");
```

```
Thread.Sleep(500);
int n = serialPort1.BytesToRead;
if (n > 0)
{
    str1 = serialPort1.ReadLine();
```

```
textBox1.Text = str1;
}
//serialPort1.Close();
```

```
}
}
```

Arduino

```
void setup()
```

```
{
```

```
  Serial.begin(9600);
```

```
  pinMode(13,OUTPUT);
```

```
  pinMode(2,INPUT);
```

```
}
```

```
void loop()
```

```
{
```

```
  byte s;
```

```
  int n = Serial.available();
```

```
  if(n>0)
```

```
  {
```

```
    s = Serial.read();
```

```
    Serial.write(s);
```

```
    if(s=='1') digitalWrite(13,1);
```

```
    if(s=='0') digitalWrite(13,0);
```

```
    if(s=='3')
```

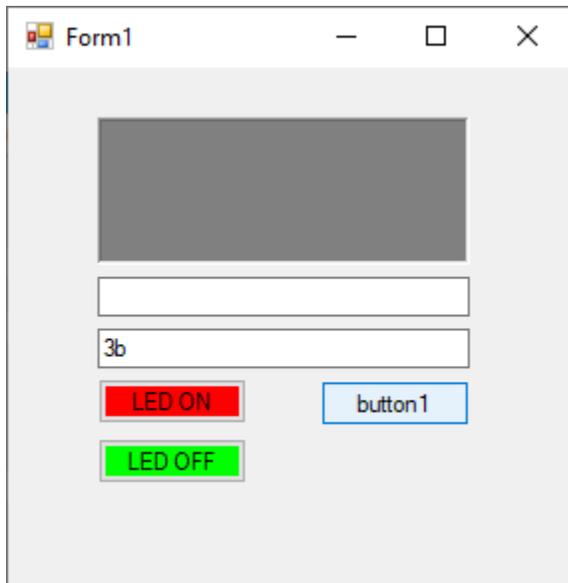
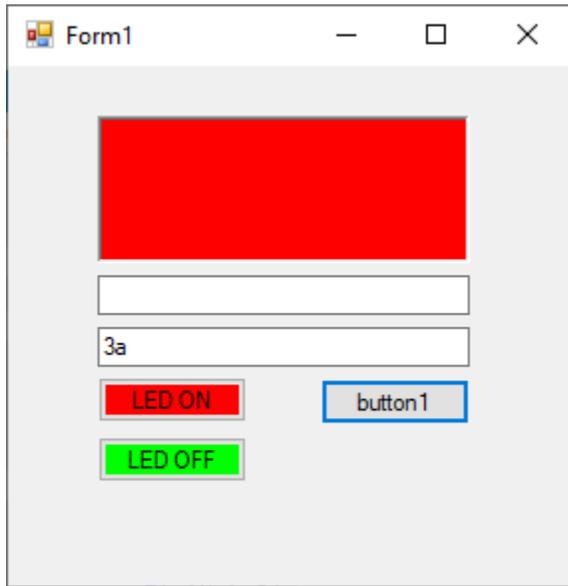
```
      if(digitalRead(2)==1)
```

```
      {
```

```
        Serial.write('a');
```

```
      }
```

```
else  
{  
    Serial.write('b');  
}  
}
```



}

