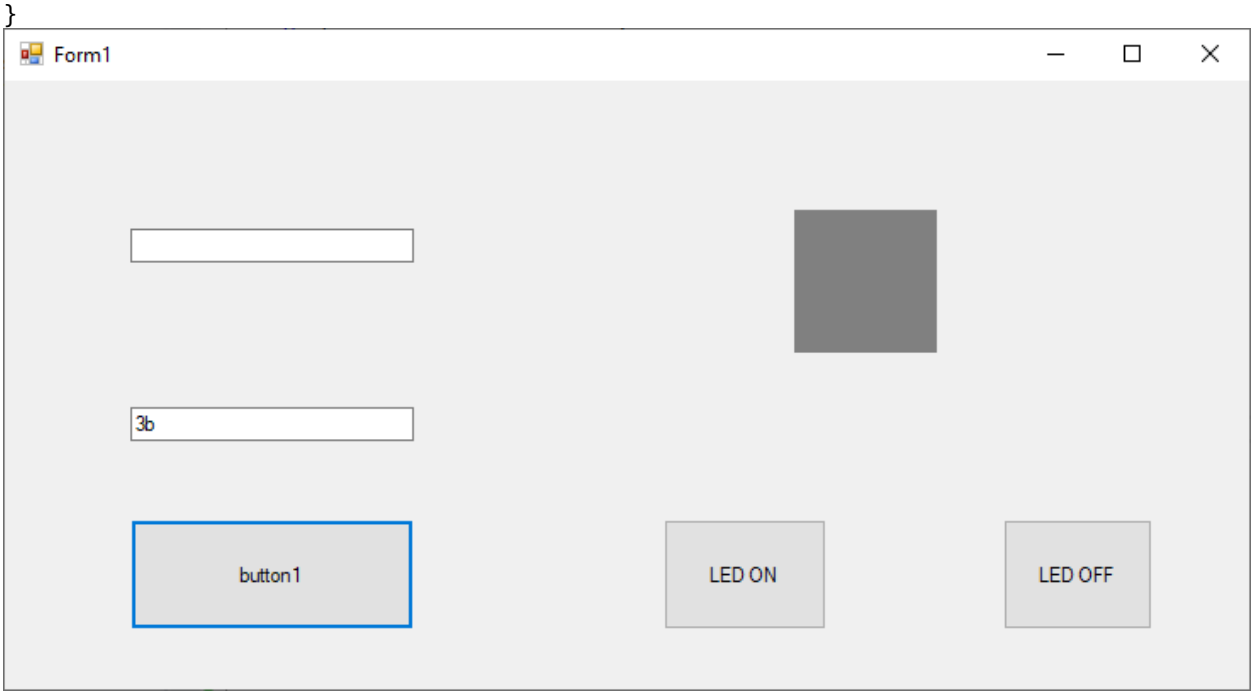
การสื่อสารผ่านพอร์ตอนุกรม

```
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 Boom_rs323
{
    public partial class Form1 : Form
    {
        string str1;
        public Form1()
        {
            InitializeComponent();
            timer1.Start();
            serialPort1.Open();
        }

        private void button1_Click(object sender, EventArgs e)
        {
            //serialPort1.Open();
            serialPort1.WriteLine(textBox2.Text);
            textBox1.Text = str1;

            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 textBox1_TextChanged(object sender, EventArgs e)
        {

        }

        private void timer1_Tick(object sender, EventArgs e)
        {
              serialPort1.WriteLine("3");
```

```
    textBox1.Text = str1;

    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;

    }

}

private void textBox2_TextChanged(object sender, EventArgs e)
{

}

private void button2_Click(object sender, EventArgs e)
{
   // serialPort1.Open();
    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();
}

private void SW1_Paint(object sender, PaintEventArgs e)
{
```

```
        }
    }
}
```


Form1
3b
button1
LED ON
LED OFF


Form1
3a
button1
LED ON
LED OFF

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');
   }
  }
  }
}
```