```
 1  using System;
 2  using System.Collections.Generic;
 3  using System.ComponentModel;
 4  using System.Data;
 5  using System.Drawing;
 6  using System.IO.Ports;
 7  using System.Linq;
 8  using System.Text;
 9  using System.Threading.Tasks;
10  using System.Windows.Forms;
11
12  namespace CIProjectTeamA5
13  {
14      public partial class Form1 : Form
15      {
16          string[] arr = { "", "", "" };
17          string distanse ;
18          SerialPort port = null;
19          delegate void serialCalback(string val);
20
21          public Form1()
22          {
23              InitializeComponent();
24              refresh_com();
25          }
26
27          private void button1_Click(object sender, EventArgs e)
28          {
29              Led_OFF();
30          }
31
32          private void BtnStop_Click(object sender, EventArgs e)
33          {
34              Stop();
35          }
36
37          private void Btnled_Click(object sender, EventArgs e)
38          {
39              Led_on();
40          }
41
42          private void BtnConnect_Click(object sender, EventArgs e)
43          {
44              connect();
45
46
47          }
48
49          private void BtnSensor_Click(object sender, EventArgs e)
```

```
50          {
51              //string sensorData = port.ReadExisting();
52              //LblResult.Text = sensorData;
53              distance();
54              textBox1.Text = distanse;
55              //distanse = "A";
56
57          }
58
59          private void DataReceived(object sender,
              SerialDataReceivedEventArgs e)
60          {
61              try
62              {
63                  SerialPort sp = (SerialPort)sender;
64                  //String temp = sp.ReadExisting();
65                  //arr[0] = temp;
66                  string incomSting = sp.ReadLine();
67                  setText(incomSting);
68              }
69              catch (Exception ex)
70              {
71                  MessageBox.Show(ex.Message);
72
73              }
74          }
75          private void setText(string val)
76          {
77              if (this.textBox1.InvokeRequired)
78              {
79                  serialCalback scb = new serialCalback(setText);
80                  this.Invoke(scb, new object[] { val });
81
82              }
83              else
84              {
85                  distanse = val;
86
87              }
88          }
89          private void refresh_com()
90          {
91              comboBox1.DataSource = SerialPort.GetPortNames();
92          }
93          private void connect()
94          {
95
96              port = new SerialPort(comboBox1.SelectedItem.ToString());
97              port.BaudRate = 9600;
```

```
 98              port.DataBits = 8;
 99              port.StopBits = StopBits.One;
100
101              try
102              {
103                  if (!port.IsOpen)
104                  {
105                      port.Open();
106                      label3.Text = "connected";
107                      label3.ForeColor = Color.Green;
108                      MessageBox.Show("Connected Successfully");
109                  }
110
111
112              }
113              catch (Exception ex)
114              {
115                  MessageBox.Show(ex.Message);
116              }
117              port.DataReceived += new
                   System.IO.Ports.SerialDataReceivedEventHandler
                   (DataReceived);
118          }
119          private void disconnect()
120          {
121              try
122              {
123                  if (port.IsOpen)
124                  {
125                      port.Close();
126                      label3.Text = "disconnected";
127                      label3.ForeColor = Color.Red;
128                      MessageBox.Show("Disconnected Successfully");
129                  }
130              }
131              catch (Exception ex)
132              {
133                  MessageBox.Show(ex.Message);
134              }
135          }
136          private void button2_Click(object sender, EventArgs e)
137          {
138              disconnect();
139          }
140          private void button3_Click(object sender, EventArgs e)
141          {
142              refresh_com();
143          }
144          private void comboBox1_SelectedIndexChanged(object sender,
```

```
              EventArgs e)
145         {
146
147         }
148         private void up()
149         {
150             try
151             {
152                 port.Write("F");
153             }
154             catch (Exception ex)
155             {
156                 MessageBox.Show(ex.Message);
157             }
158         }
159         private void back()
160         {
161             try
162             {
163                 port.Write("B");
164             }
165             catch (Exception ex) {
166                 MessageBox.Show(ex.Message);
167             }
168         }
169         private void right()
170         {
171             try
172             {
173                 port.Write("R");
174             }
175             catch (Exception ex) {
176                 MessageBox.Show(ex.Message);
177             }
178         }
179         private void left()
180         {
181             try
182             {
183                 port.Write("F");
184             }
185             catch (Exception ex) {
186                 MessageBox.Show(ex.Message);
187             }
188         }
189         private void Stop()
190         {
191             try
192             {
```

```
193                 port.Write("S");
194             }
195             catch (Exception ex) {
196                 MessageBox.Show(ex.Message);
197             }
198         }
199         private void Led_on()
200         {
201             try
202             {
203                 port.Write("X");
204             }
205             catch (Exception ex) {
206                 MessageBox.Show(ex.Message);
207             }
208         }
209         private void Led_OFF()
210         {
211             try
212             {
213                 port.Write("Z");
214             }
215             catch (Exception ex) {
216                 MessageBox.Show(ex.Message);
217             }
218         }
219         private void distance()
220         {
221             try
222             {
223                 port.Write("D");
224             }
225             catch (Exception ex)
226             {
227                 MessageBox.Show(ex.Message);
228             }
229         }
230 
231         private void button4_Click(object sender, EventArgs e)
232         {
233             up();
234         }
235 
236         private void button5_Click(object sender, EventArgs e)
237         {
238             left();
239         }
240 
241         private void BtnRight_Click_1(object sender, EventArgs e)
```

```
242         {
243             right();
244         }
245 
246         private void button6_Click(object sender, EventArgs e)
247         {
248             back();
249         }
250 
251         private void pictureBox1_Click(object sender, EventArgs e)
252         {
253 
254         }
255     }
256 }
257 
```