```
 1  unit Unit1;
 2
 3  {$mode objfpc}{$H+}
 4
 5  interface
 6
 7  uses
 8    SysUtils, Forms, StdCtrls, ExtCtrls, MaskEdit, ComCtrls, Synaser, Classes;
 9
10  // http://delphi.wikia.com/wiki/FreePascal_detection_and_versioning
11  {$ifdef Windows}
12  const
13    JMENO_PORTU = 'COM6';
14  {$endif}
15  {$ifdef Linux}
16  const
17    JMENO_PORTU = '/dev/ttyUSB0';
18  {$endif}
19
20
21  type
22
23    { TForm1 }
24
25    TForm1 = class(TForm)
26      Button1: TButton;
27      cervenaTlacitko: TCheckBox;
28      Image1: TImage;
29      PWMHodnota: TLabel;
30      PWMSkupina: TGroupBox;
31      zobrazeniPWM: TProgressBar;
32      Shape1: TShape;
33      nastaveniPWM: TTrackBar;
34      zelenaTlacitko: TCheckBox;
35      zlutaTlacitko: TCheckBox;
36      seriovyPortSkupina: TGroupBox;
37      Label2: TLabel;
38      Label3: TLabel;
39      prijatyPrikaz: TLabel;
40      odeslanyPrikaz: TLabel;
41      zhasnoutVseTlacitko: TButton;
42      rozsvititVseTlacitko: TButton;
43      jmenoPortu: TEdit;
44      ovladaniLEDSkupina: TGroupBox;
45      Label1: TLabel;
46      procedure Button1Click(Sender: TObject);
47      procedure cervenaTlacitkoChange(Sender: TObject);
48      procedure FormCreate(Sender: TObject);
49      procedure FormEnd(Sender: TObject);
50      procedure nastaveniPWMChange(Sender: TObject);
51      procedure rozsvititVseTlacitkoClick(Sender: TObject);
52      procedure zapsatDoPortuChar(prikaz : char);
53      procedure zapsatDoPortuInt(prikaz: integer);
54      procedure zelenaTlacitkoChange(Sender: TObject);
55      procedure zhasnoutVseTlacitkoClick(Sender: TObject);
56      procedure zlutaTlacitkoChange(Sender: TObject);
57      procedure zavritPort;
58      procedure otevritPort;
59      function cistZPortu : String;
60    private
61      { private declarations }
62    public
63      { public declarations }
64    end;
65
66  const
67    SERIAL_PORT_TIMEOUT = 100;    // [ms]
68    RYCHLOST = 57600;
69
70  var
71    Form1: TForm1;
72
73    ser: TBlockSerial;
```

```
 74
 75    CERVENA_ON : char;
 76    CERVENA_OFF : char;
 77
 78    ZELENA_ON : char;
 79    ZELENA_OFF : char;
 80
 81    ZLUTA_ON : char;
 82    ZLUTA_OFF : char;
 83
 84    VSE_ON : char;
 85    VSE_OFF : char;
 86
 87    PWM : char;
 88
 89 implementation
 90
 91 {$R *.lfm}
 92
 93 { TForm1 }
 94
 95 function TForm1.cistZPortu : String;
 96 var
 97    nacteno: String;
 98 begin
 99    try
100      if (ser.CanRead(SERIAL_PORT_TIMEOUT) = True) then
101      begin
102        nacteno := ser.Recvstring(SERIAL_PORT_TIMEOUT);
103      end;
104    finally
105    end;
106    exit(nacteno);
107 end;
108
109 procedure TForm1.zapsatDoPortuChar(prikaz: char);
110 begin
111    ser.SendString(prikaz);
112    odeslanyPrikaz.Caption := prikaz;
113 end;
114
115 procedure TForm1.zapsatDoPortuInt(prikaz: integer);
116 begin
117    ser.SendInteger(prikaz);
118 end;
119
120 procedure TForm1.zavritPort;
121 begin
122    try
123      ser.free;
124    finally
125    end;
126 end;
127
128 procedure TForm1.otevritPort;
129 begin
130    // http://synapse.ararat.cz/doc/help/synaser.TBlockSerial.html
131    zavritPort;
132    try
133      ser:=TBlockSerial.Create;
134      ser.Connect(jmenoPortu.Text); //   COM1
135      ser.config(RYCHLOST, 8, 'N', SB1, False, False);
136         // 9600 8 N 1 = baud bits - parity - stop - softflow - hardflow
137         // SB1 = 0 = 1 stop bit !!!
138    finally
139    end;
140 end;
141
142 procedure TForm1.zelenaTlacitkoChange(Sender: TObject);
143 var
144    nacteno: String;
145 begin
146    ser.Purge;
147    if (zelenaTlacitko.Checked = True) then
```

```pascal
148   begin
149     zapsatDoPortuChar(ZELENA_ON);
150   end
151   else
152   begin
153     zapsatDoPortuChar(ZELENA_OFF);
154   end;
155   nacteno := cistZPortu;
156   prijatyPrikaz.Caption := nacteno;
157 end;
158
159 procedure TForm1.zhasnoutVseTlacitkoClick(Sender: TObject);
160 var
161   nacteno: String;
162 begin
163   ser.Purge;
164   cervenaTlacitko.Checked := False;
165   zelenaTlacitko.Checked := False;
166   zlutaTlacitko.Checked := False;
167   zapsatDoPortuChar(VSE_OFF);
168   nacteno := cistZPortu;
169   prijatyPrikaz.Caption := nacteno;
170 end;
171
172 procedure TForm1.zlutaTlacitkoChange(Sender: TObject);
173 var
174   nacteno: String;
175 begin
176   ser.Purge;
177   if (zlutaTlacitko.Checked = True) then
178   begin
179     zapsatDoPortuChar(ZLUTA_ON);
180   end
181   else
182   begin
183     zapsatDoPortuChar(ZLUTA_OFF);
184   end;
185   nacteno := cistZPortu;
186   prijatyPrikaz.Caption := nacteno;
187 end;
188
189 procedure TForm1.cervenaTlacitkoChange(Sender: TObject);
190 var
191   nacteno: String;
192 begin
193   ser.Purge;
194   if (cervenaTlacitko.Checked = True) then
195   begin
196     zapsatDoPortuChar(CERVENA_ON);
197   end
198   else
199   begin
200     zapsatDoPortuChar(CERVENA_OFF);
201   end;
202   nacteno := cistZPortu;
203   prijatyPrikaz.Caption := nacteno;
204 end;
205
206 procedure TForm1.Button1Click(Sender: TObject);
207 begin
208   otevritPort;
209   zapsatDoPortuChar(#13);
210   zapsatDoPortuChar(#10);
211   ser.Purge;
212   ser.Flush;
213   ovladaniLEDSkupina.Enabled := True;
214 end;
215
216 procedure TForm1.FormCreate(Sender: TObject);
217 begin
218   jmenoPortu.Text := JMENO_PORTU;
219   CERVENA_ON    := 'a';
220   CERVENA_OFF   := 'b';
221   ZELENA_ON     := 'c';
```

```pascal
222    ZELENA_OFF    := 'd';
223    ZLUTA_ON      := 'e';
224    ZLUTA_OFF     := 'f';
225    VSE_ON        := 'g';
226    VSE_OFF       := 'h';
227    PWM           := 'i';
228  end;
229
230  procedure TForm1.FormEnd(Sender: TObject);
231  begin
232    zavritPort;
233  end;
234
235  procedure TForm1.rozsvititVseTlacitkoClick(Sender: TObject);
236  var
237    nacteno: String;
238  begin
239    ser.Purge;
240    cervenaTlacitko.Checked := True;
241    zelenaTlacitko.Checked := True;
242    zlutaTlacitko.Checked := True;
243    zapsatDoPortuChar(VSE_ON);
244    nacteno := cistZPortu;
245    prijatyPrikaz.Caption := nacteno;
246  end;
247
248  procedure TForm1.nastaveniPWMChange(Sender: TObject);
249  var
250    nacteno: String;
251  begin
252    sleep(2);  // [ms]
253    zobrazeniPWM.Position := nastaveniPWM.Position;
254    PWMHodnota.Caption := IntToStr(nastaveniPWM.Position);
255    zapsatDoPortuChar(PWM);
256    zapsatDoPortuInt(nastaveniPWM.Position);
257    prijatyPrikaz.Caption := '';
258    odeslanyPrikaz.Caption := '';
259    ser.Purge;
260  end;
261
262  end.
```

syntax highlighted by Code2HTML, v. 0.9.1