

HlavneOkno.java

```

1 package robot;
2
3 import java.awt.Color;
4 import java.awt.EventQueue;
5 import java.awt.event.ActionEvent;
6 import java.awt.event.ActionListener;
7 import java.io.FileWriter;
8 import java.io.IOException;
9 import java.io.PrintWriter;
10
11 import javax.swing.ButtonGroup;
12 import javax.swing.DefaultListModel;
13 import javax.swing.JButton;
14 import javax.swing.JCheckBox;
15 import javax.swing.JFrame;
16 import javax.swing.JLabel;
17 import javax.swing.JList;
18 import javax.swing.JRadioButton;
19 import javax.swing.JScrollBar;
20 import javax.swing.JScrollPane;
21 import javax.swing.JSlider;
22 import javax.swing.JTextField;
23 import javax.swing.event.ChangeEvent;
24 import javax.swing.event.ChangeListener;
25
26 import bluetooth.Bluetooth;
27
28 public class HlavneOkno {
29
30     private Bluetooth bluetooth = Bluetooth.priprav();
31     private JFrame frmOvladacRobota;
32     private JTextField textVzdialenost;
33     private DefaultListModel listModelSpravy;
34     private JList listSpravy;
35     private JScrollPane scrollPaneSpravy;
36     private JCheckBox chckbxZastavRolovanie;
37     private JCheckBox chckbxZastavPrimanie;
38     private JSlider sliderCitlivostLightAssist;
39     private JSlider sliderKedyZastat;
40     private JSlider sliderRychlostMerania;
41     private JCheckBox chckbxStretavacieSvetla;
42     private JCheckBox chckbxDialkoveSvetla;
43     private JCheckBox chckbxLightAssist;
44     private JCheckBox chckbxDiagnostickeVypisy;
45
46     public static void main(String[] args) {
47         EventQueue.invokeLater(new Runnable() {
48             public void run() {
49                 try {
50                     HlavneOkno window = new HlavneOkno();
51                     window.frmOvladacRobota.setVisible(true);
52                 } catch (Exception e) {
53                     e.printStackTrace();
54                 }
55             }
56         });
57     }
58
59     public HlavneOkno() {
60         initialize();
61         Zobrazovac zobrazovac = new Zobrazovac(bluetooth, this);
62         Thread thread = new Thread(zobrazovac);

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63     thread.setDaemon(true);
64     thread.start();
65 }
66
67 private void initialize() {
68     frmOvladacRobota = new JFrame();
69     frmOvladacRobota.setTitle("Ovl\u00E1da\u010D robota");
70     frmOvladacRobota.setForeground(Color.WHITE);
71     frmOvladacRobota.setBounds(100, 100, 1009, 650);
72     frmOvladacRobota.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
73
74     JButton btnNewButton = new JButton("STOP");
75     btnNewButton.setToolTipText("zastavit robota");
76     btnNewButton.setBounds(835, 501, 78, 44);
77     btnNewButton.setBackground(Color.RED);
78     btnNewButton.addActionListener(new ActionListener() {
79         public void actionPerformed(ActionEvent e) {
80             bluetooth.posli("E");
81         }
82     });
83     frmOvladacRobota.getContentPane().setLayout(null);
84     frmOvladacRobota.getContentPane().add(btnNewButton);
85
86     JButton btnVl = new JButton("vl");
87     btnVl.setToolTipText("vlavo");
88     btnVl.setBounds(761, 501, 64, 44);
89     btnVl.addActionListener(new ActionListener() {
90         public void actionPerformed(ActionEvent e) {
91             bluetooth.posli("B");
92         }
93     });
94     btnVl.setBackground(Color.YELLOW);
95     frmOvladacRobota.getContentPane().add(btnVl);
96
97     JButton btnVp = new JButton("vp");
98     btnVp.addActionListener(new ActionListener() {
99         public void actionPerformed(ActionEvent e) {
100             bluetooth.posli("C");
101         }
102     });
103     btnVp.setToolTipText("vpravo");
104     btnVp.setBounds(923, 501, 64, 44);
105     btnVp.setBackground(Color.YELLOW);
106     frmOvladacRobota.getContentPane().add(btnVp);
107
108     JButton btnDz = new JButton("dz");
109     btnDz.addActionListener(new ActionListener() {
110         public void actionPerformed(ActionEvent e) {
111             bluetooth.posli("D");
112         }
113     });
114     btnDz.setToolTipText("dozadu");
115     btnDz.setBounds(845, 556, 64, 44);
116     btnDz.setBackground(Color.YELLOW);
117     frmOvladacRobota.getContentPane().add(btnDz);
118
119     JButton btnDp = new JButton("dp");
120     btnDp.addActionListener(new ActionListener() {
121         public void actionPerformed(ActionEvent e) {
122             bluetooth.posli("A");
123         }
124     });

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125     btnDp.setToolTipText("dopredu");
126     btnDp.setBounds(845, 446, 64, 44);
127     btnDp.setBackground(Color.YELLOW);
128     frmOvladacRobota.getContentPane().add(btnDp);
129
130     textVzdialenost = new JTextField();
131     textVzdialenost.setBounds(176, 577, 599, 23);
132     textVzdialenost.setEditable(false);
133     frmOvladacRobota.getContentPane().add(textVzdialenost);
134     textVzdialenost.setColumns(10);
135
136     JLabel lblVzdialenostOdPrekazky = new JLabel("Vzdialenos\u0165 od
137     prek\u00E1\u017Eky:");
138     lblVzdialenostOdPrekazky.setBounds(10, 578, 165, 21);
139     frmOvladacRobota.getContentPane().add(lblVzdialenostOdPrekazky);
140
141     final JRadioButton rdbtnR1 = new JRadioButton("najr\u00FDchlej\u0161ie");
142     rdbtnR1.addActionListener(new ActionListener() {
143         public void actionPerformed(ActionEvent e) {
144             if (rdbtnR1.isSelected()) {
145                 bluetooth.posli("H");
146             }
147         });
148     rdbtnR1.setToolTipText("zapnut rychlost \"najrychlejsie\"");
149     rdbtnR1.setBounds(10, 257, 150, 37);
150     frmOvladacRobota.getContentPane().add(rdbtnR1);
151
152     final JRadioButton rdbtnR2 = new JRadioButton("ve\u013Emi r\u00FDchlo");
153     rdbtnR2.addActionListener(new ActionListener() {
154         public void actionPerformed(ActionEvent e) {
155             if (rdbtnR2.isSelected()) {
156                 bluetooth.posli("I");
157             } else {
158             }
159         });
160     rdbtnR2.setToolTipText("zapn\u00FA\u0165 r\u00FDchlos\u0165 \"ve\u013Emi
161     r\u00FDchlo\"");
162     rdbtnR2.setBounds(162, 257, 140, 37);
163     frmOvladacRobota.getContentPane().add(rdbtnR2);
164
165     final JRadioButton rdbtnR3 = new JRadioButton("r\u00FDchlo");
166     rdbtnR3.addActionListener(new ActionListener() {
167         public void actionPerformed(ActionEvent e) {
168             if (rdbtnR3.isSelected()) {
169                 bluetooth.posli("J");
170             } else {
171             }
172         });
173     rdbtnR3.setToolTipText("zapn\u00FA\u0165 r\u00FDchlos\u0165 \"r\u00FDchlo\"");
174     rdbtnR3.setBounds(304, 257, 119, 37);
175     frmOvladacRobota.getContentPane().add(rdbtnR3);
176
177     final JRadioButton rdbtnR4 = new JRadioButton("viac ne\u017E stredne");
178     rdbtnR4.addActionListener(new ActionListener() {
179         public void actionPerformed(ActionEvent e) {
180             if (rdbtnR4.isSelected()) {
181                 bluetooth.posli("K");
182             } else {

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185         }
186     }
187 });
188 rdbtnR4.setToolTipText("zapn\u00FA\u0165 r\u00FDchlos\u0165 \u0022viac ne\u017E stredne
r\u00FDchlo\u0022");
189 rdbtnR4.setBounds(425, 257, 165, 37);
190 frmOvladacRobota.getContentPane().add(rdbtnR4);
191
192 final JRadioButton rdbtnR5 = new JRadioButton("stredne");
193 rdbtnR5.addActionListener(new ActionListener() {
194     public void actionPerformed(ActionEvent e) {
195         if (rdbtnR5.isSelected()) {
196             bluetooth.posli("L");
197         } else {
198         }
199     }
200 });
201 rdbtnR5.setToolTipText("zapnut rychlost \u0022stredne\u0022");
202 rdbtnR5.setBounds(10, 301, 126, 37);
203 frmOvladacRobota.getContentPane().add(rdbtnR5);
204
205 final JRadioButton rdbtnR6 = new JRadioButton("menej ne\u017E stredne");
206 rdbtnR6.addActionListener(new ActionListener() {
207     public void actionPerformed(ActionEvent e) {
208         if (rdbtnR6.isSelected()) {
209             bluetooth.posli("M");
210         } else {
211         }
212     }
213 });
214 rdbtnR6.setToolTipText("zapn\u00FA\u0165 r\u00FDchlos\u0165 \u0022menej ne\u017E
stredne\u0022");
215 rdbtnR6.setBounds(138, 301, 182, 37);
216 frmOvladacRobota.getContentPane().add(rdbtnR6);
217
218 final JRadioButton rdbtnR7 = new JRadioButton("pomaly");
219 rdbtnR7.addActionListener(new ActionListener() {
220     public void actionPerformed(ActionEvent e) {
221         if (rdbtnR7.isSelected()) {
222             bluetooth.posli("N");
223         } else {
224         }
225     }
226 });
227 rdbtnR7.setToolTipText("zapn\u00FA\u0165 r\u00FDchlos\u0165 \u0022pomaly\u0022");
228 rdbtnR7.setBounds(322, 301, 119, 37);
229 frmOvladacRobota.getContentPane().add(rdbtnR7);
230
231 final JRadioButton rdbtnR8 = new JRadioButton("najpomal\u0161ie");
232 rdbtnR8.addActionListener(new ActionListener() {
233     public void actionPerformed(ActionEvent e) {
234         if (rdbtnR8.isSelected()) {
235             bluetooth.posli("O");
236         } else {
237         }
238     }
239 });
240 rdbtnR8.setToolTipText("zapn\u00FA\u0165 r\u00FDchlos\u0165 \u0022najpomal\u0161ie\u0022");
241 rdbtnR8.setBounds(443, 297, 147, 37);
242 frmOvladacRobota.getContentPane().add(rdbtnR8);
243
244 final JRadioButton rdbtnAcp = new JRadioButton("Vyh\u00FDbanie sa

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    prek\u00E1\u017Ekam doprava");
245     rdbtnAcp.addActionListener(new ActionListener() {
246         public void actionPerformed(ActionEvent e) {
247             if (rdbtnAcp.isSelected()) {
248                 bluetooth.posli("P");
249             } else {
250             }
251         }
252     });
253     rdbtnAcp.setToolTipText("");
254     rdbtnAcp.setBounds(18, 404, 416, 23);
255     frmOvladacRobota.getContentPane().add(rdbtnAcp);
256
257     final JRadioButton rdbtnAcl = new JRadioButton("Vyh\u00FDbanie sa
    prek\u00E1\u017Ekam do\u013Eava");
258     rdbtnAcl.addActionListener(new ActionListener() {
259         public void actionPerformed(ActionEvent e) {
260             if (rdbtnAcl.isSelected()) {
261                 bluetooth.posli("Q");
262             } else {
263             }
264         }
265     });
266     rdbtnAcl.setToolTipText("zapnut Acc dolava");
267     rdbtnAcl.setBounds(18, 430, 423, 23);
268     frmOvladacRobota.getContentPane().add(rdbtnAcl);
269
270     final JRadioButton rdbtnAcof = new JRadioButton("Vypn\u00FA\u0165 vyh\u00FDbanie sa
    prek\u00E1\u017Ekam");
271     rdbtnAcof.addActionListener(new ActionListener() {
272         public void actionPerformed(ActionEvent e) {
273             if (rdbtnAcof.isSelected()) {
274                 bluetooth.posli("R");
275             } else {
276             }
277         }
278     });
279     rdbtnAcof.setToolTipText("");
280     rdbtnAcof.setBounds(19, 456, 404, 23);
281     frmOvladacRobota.getContentPane().add(rdbtnAcof);
282
283     ButtonGroup group3 = new ButtonGroup();
284     group3.add(rdbtnAcl);
285     group3.add(rdbtnAcp);
286     group3.add(rdbtnAcof);
287
288     final JCheckBox chckbxUltzSenzor = new JCheckBox("ultrazvukov\u00FD senzor");
289     chckbxUltzSenzor.setSelected(true);
290     chckbxUltzSenzor.addActionListener(new ActionListener() {
291         public void actionPerformed(ActionEvent e) {
292             if (chckbxUltzSenzor.isSelected()) {
293                 bluetooth.posli("F");
294             } else {
295                 bluetooth.posli("G");
296             }
297         }
298     });
299     chckbxUltzSenzor.setBounds(10, 231, 165, 23);
300     frmOvladacRobota.getContentPane().add(chckbxUltzSenzor);
301
302     scrollPaneSpravy = new JScrollPane();
303     scrollPaneSpravy.setBounds(10, 10, 973, 214);

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304
305 frmOvladacRobota.getContentPane().add(scrollPaneSpravy);
306
307 listModelSpravy = new DefaultListModel();
308 listSpravy = new JList(listModelSpravy);
309 scrollPaneSpravy.setViewportViewView(listSpravy);
310
311 chckbxZastavRolovanie = new JCheckBox("zastav rolovanie");
312 chckbxZastavRolovanie.setBounds(871, 231, 112, 23);
313 frmOvladacRobota.getContentPane().add(chckbxZastavRolovanie);
314
315 chckbxZastavPrimanie = new JCheckBox("zastav prij\u00EDmanie");
316 chckbxZastavPrimanie.setBounds(734, 231, 135, 23);
317 frmOvladacRobota.getContentPane().add(chckbxZastavPrimanie);
318
319 ButtonGroup group2 = new ButtonGroup();
320 group2.add(rdbtnR1);
321 group2.add(rdbtnR2);
322 group2.add(rdbtnR5);
323 group2.add(rdbtnR6);
324 group2.add(rdbtnR8);
325 group2.add(rdbtnR4);
326 group2.add(rdbtnR7);
327 group2.add(rdbtnR3);
328
329 chckbxStretavacieSvetla = new JCheckBox("stret\u00E1vacie svetl\u00E1");
330 chckbxStretavacieSvetla.addActionListener(new ActionListener() {
331     public void actionPerformed(ActionEvent e) {
332         if (chckbxStretavacieSvetla.isSelected()) {
333             bluetooth.posli("S");
334             chckbxLightAssist.setSelected(false);
335         } else {
336             bluetooth.posli("T");
337         }
338     }
339 });
340 chckbxStretavacieSvetla.setBounds(734, 250, 135, 50);
341 frmOvladacRobota.getContentPane().add(chckbxStretavacieSvetla);
342
343 chckbxDialkoveSvetla = new JCheckBox("dia\u013Ekov\u00E9 svetl\u00E1");
344 chckbxDialkoveSvetla.addActionListener(new ActionListener() {
345     public void actionPerformed(ActionEvent e) {
346         if (chckbxDialkoveSvetla.isSelected()) {
347             bluetooth.posli("U");
348             chckbxStretavacieSvetla.setSelected(true);
349             chckbxLightAssist.setSelected(false);
350         } else {
351             bluetooth.posli("V");
352         }
353     }
354 });
355 chckbxDialkoveSvetla.setBounds(871, 250, 112, 50);
356 frmOvladacRobota.getContentPane().add(chckbxDialkoveSvetla);
357
358 chckbxLightAssist = new JCheckBox("Light assist");
359 chckbxLightAssist.addActionListener(new ActionListener() {
360     public void actionPerformed(ActionEvent e) {
361         if (chckbxLightAssist.isSelected()) {
362             posliLightAssist();
363             chckbxStretavacieSvetla.setSelected(false);
364             chckbxDialkoveSvetla.setSelected(false);
365         } else {

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366         bluetooth.posli("X");
367     }
368 }
369 });
370 chckbxLightAssist.setBounds(592, 250, 140, 50);
371 frmOvladacRobota.getContentPane().add(chckbxLightAssist);
372
373 sliderCitlivostLightAssist = new JSlider();
374 sliderCitlivostLightAssist.addChangeListener(new ChangeListener() {
375     public void stateChanged(ChangeEvent e) {
376         if (chckbxLightAssist.isSelected()) {
377             posliLightAssist();
378         }
379     }
380 });
381 sliderCitlivostLightAssist.setMinimum(0);
382 sliderCitlivostLightAssist.setMaximum(9);
383 sliderCitlivostLightAssist.setBounds(703, 307, 147, 31);
384 frmOvladacRobota.getContentPane().add(sliderCitlivostLightAssist);
385
386 chckbxDiagnostickeVypisy = new JCheckBox("diagnostick\u00E9 v\u00FDpisy");
387 chckbxDiagnostickeVypisy.setSelected(true);
388 chckbxDiagnostickeVypisy.setBounds(592, 231, 140, 23);
389 frmOvladacRobota.getContentPane().add(chckbxDiagnostickeVypisy);
390
391 sliderKedyZastat = new JSlider();
392 sliderKedyZastat.addChangeListener(new ChangeListener() {
393     public void stateChanged(ChangeEvent e) {
394         if (chckbxUltzSenzor.isSelected()) {
395             posliKedyZastat();
396         }
397     }
398 });
399 sliderKedyZastat.setValue(50);
400 sliderKedyZastat.setToolTipText("kedy brzdi\u0165");
401 sliderKedyZastat.setMinimum(0);
402 sliderKedyZastat.setMaximum(51);
403 sliderKedyZastat.setBounds(199, 231, 147, 31);
404 frmOvladacRobota.getContentPane().add(sliderKedyZastat);
405
406 sliderRychlostMerania = new JSlider();
407 sliderRychlostMerania.addChangeListener(new ChangeListener() {
408     public void stateChanged(ChangeEvent e) {
409         if (chckbxUltzSenzor.isSelected()) {
410             posliRychlostMerania();
411         }
412     }
413 });
414 sliderRychlostMerania.setValue(141);
415 sliderRychlostMerania.setToolTipText("rychlost merania");
416 sliderRychlostMerania.setMinimum(10);
417 sliderRychlostMerania.setMaximum(33);
418 sliderRychlostMerania.setBounds(408, 231, 147, 31);
419 frmOvladacRobota.getContentPane().add(sliderRychlostMerania);
420
421 }
422
423 private void posliLightAssist() {
424     char citlivost = (char) ('0' + sliderCitlivostLightAssist.getValue());
425     bluetooth.posli("W" + Character.valueOf(citlivost));
426 }
427 private void posliKedyZastat() {

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428     char vzdialenost = (char) ('0' + sliderKedyZastat.getValue());
429     bluetooth.posli("Y" + Character.valueOf(vzdialenost));
430 }
431 private void posliRychlostMerania() {
432     char rychlostMerania = (char) ('0' + sliderRychlostMerania.getValue());
433     bluetooth.posli("Z" + Character.valueOf(rychlostMerania));
434 }
435
436 public void prisielRiadok(String riadok) {
437     String x = null;
438     int i = riadok.indexOf("[D=");
439     if (i >= 0) {
440         int j = riadok.indexOf(" ");
441         if (j >= 0) {
442             x = riadok.substring(i+3, j);
443             textVzdialenost.setText(x + " cm");
444         }
445
446         try {
447             PrintWriter pw = new PrintWriter(new FileWriter("xyz15.csv", true));
448             pw.println(riadok);
449             pw.close();
450         } catch (IOException e) {
451             System.out.println("Chyba: " + e);
452         }
453     }
454
455     if (!chckbxZastavPrimanie.isSelected() &&
456         (chckbxDiagnostickeVypisy.isSelected() || !riadok.startsWith("["))) {
457         listModelSpravy.addElement(riadok);
458         if (!chckbxZastavRolovanie.isSelected()) {
459             JScrollBar sb = scrollPaneSpravy.getVerticalScrollBar();
460             sb.setValue(sb.getMaximum());
461         }
462     }
463 }
464 }
465

```