

DriversAide.java

```
1 package for_ch_17_exercises;
2
3
4
5 import java.awt.*; // for AWT components and containers
6
7
8 /**
9  * Java Program to implement Sample Problem 3.1, the Driver's Aide Program.
10 * Gives the appropriate action corresponding to the color of a traffic signal.
11 *
12 * @author Amrita Dhaliwal
13 */
14
15 public class DriversAide extends JFrame {
16     /**
17      * labels the JButtons that represent the possible colors for traffic signals
18      */
19     private JLabel signalL;
20
21     /**
22      * labels the text field where appropriate action is displayed
23      */
24     private JLabel actionL;
25
26     /**
27      * User clicks this button to simulate a red light.
28      */
29     private JButton redB;
30
31     /**
32      * User clicks this button to simulate a yellow light.
33      */
34     private JButton yellowB;
35
36     /**
37      * uUser clicks this button to simulate a green light.
38      */
39     private JButton greenB;
40
41     /**
42      * where the action message is displayed
43      */
44     private JTextField instructionsTF;
45
46     /**
47      * This variable holds a reference to the content pane so that
48      * getContentPane() needs to be called only once.
49      */
50
51     private Container myCP; // to hold a reference to the content pane of the JFrame
52
53     /**
54      * This is the constructor of this application.
55      */
56     public DriversAide() { // Constructor for class DriversAide
57         super("Driver's Aide");
```

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58     myCP = getContentPane();
59     myCP.setLayout(new FlowLayout());
60     setSize(325,100);
61     setLocation(100,100);
62     signalL = new JLabel("Signal");
63     myCP.add(signalL);
64     redB = new JButton("Red");           // Command the button redB to set its
foreground color to red.
65     redB.setForeground(Color.red);
66     redB.addActionListener((ActionEvent e) ->instructionsTF.setText("Stop!"));
67     myCP.add(redB);
68     yellowB = new JButton("Yellow");
69     yellowB.setForeground(Color.yellow);
70     yellowB.addActionListener((ActionEvent e) ->instructionsTF.setText("Slow
down..."));
71     myCP.add(yellowB);
72     greenB = new JButton("Green");
73     greenB.setForeground(Color.green);
74     greenB.addActionListener((ActionEvent e) ->instructionsTF.setText("Go!"));
75     myCP.add(greenB);
76     actionL = new JLabel("Action!");
77     myCP.add(actionL);
78     // Construct a JTextField 8 characters wide where message will be displayed
79     instructionsTF = new JTextField (8);
80     instructionsTF.setEditable(false);
81     myCP.add(instructionsTF);
82     setVisible(true);
83     addWindowListener(new WindowAdapter() {
84         public void windowClosing(WindowEvent e) {
85             System.exit(0);
86         } //windowClosing
87     }); //end of definition of WindowAdapter and semicolon to end the line
88 } // close constructor for class DriversAide
89
90 /**
91  * ActionListener for the red JButton
92  */
93
94 // public class RedBHandler implements ActionListener {
95 //     /**
96 //      * action to be performed when the red button is clicked
97 //      */
98 //     public void actionPerformed(ActionEvent e) {
99 //         instructionsTF.setText("Stop!");
100 //     } // actionPerformed
101 // } // RedBHandler
102
103
104 /**
105  * ActionListener for the yellow JButton
106  */
107 // public class YellowBHandler implements ActionListener {
108 //     /**
109 //      * action to be performed when the yellow button is clicked
110 //      */

```

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```
111 //      public void actionPerformed(ActionEvent e) {
112 //          instructionsTF.setText("Slow down...");
113 //      }// actionPerformed
114 // }// YellowBHandler
115
116 /**
117  * ActionListener for the green JButton
118  */
119 // public class GreenBHandler implements ActionListener {
120 //     /**
121 //         * action to be performed when the green button is clicked
122 //         */
123 //     public void actionPerformed(ActionEvent e) {
124 //         instructionsTF.setText("Go!");
125 //     }// actionPerformed
126 // }// GreenBHandler
127
128 /**
129  * The main method is where execution begins.
130  * @param args parameter is not used since we are not
131  * working at the command line
132  */
133 public static void main(String[] args) {
134     DriversAide myAppF = new DriversAide();
135 }// main
136 }// class DriversAide
137
```