```java
 1  import java.awt.GridLayout;
 2  import java.awt.event.ActionEvent;
 3  import java.awt.event.ActionListener;
 4
 5  import javax.swing.JButton;
 6  import javax.swing.JFrame;
 7  import javax.swing.JLabel;
 8  import javax.swing.JOptionPane;
 9  import javax.swing.JTextField;
10
11  /****************************************************************
12   * Dalton Nofs                                                 *
13   * Login ID: nofs5491                                          *
14   * CS-102, Summer 2017                                         *
15   * Programming Assignment 5                                    *
16   * UserInterface class:  user interface for program           *
17   ****************************************************************/
18  public class UserInterface extends JFrame implements EventHandler
19  {
20      static JFrame mainWindow;
21
22      /****************************************************************
23       * Method: UserInterface()                                     *
24       * Purpose: default constructor for ui class                   *
25       *                                                             *
26       * Parameters:                   N/A                           *
27       * Returns: void:                N/A                           *
28       ****************************************************************/
29      public UserInterface()
30      {
31          mainWindow = new JFrame();
32      }
33
34      /****************************************************************
35       * Method: UserInterface()                                     *
36       * Purpose: overriding constructor for ui class                *
37       *                                                             *
38       * Parameters: String:        The title of the window          *
39       * Returns: void:             N/A                              *
40       ****************************************************************/
41      public UserInterface(String windowTitle)
42      {
43          mainWindow = new JFrame(windowTitle);
44      }
45
46      /****************************************************************
47       * Method: getMainWindow()                                     *
48       * Purpose: returns the mainWindow JFrame()                    *
49       *                                                             *
50       * Parameters: Void:             N/A                           *
51       * Returns: JFrame:           The mainWindow                   *
52       ****************************************************************/
53      public static JFrame getMainWindow()
54      {
55          return mainWindow;
56      }
57
58      /****************************************************************
59       * Method: sendMessage()                                       *
60       * Purpose: for sending messages to user                       *
61       *                                                             *
62       * Parameters: String[2]:    the body of the message, window   *
63       *                               title                         *
64       * Returns: void:             N/A                              *
65       ****************************************************************/
66      public static void sendMessage(String messageBody, String messageTitle)
67      {
68          JOptionPane.showMessageDialog(null, messageBody, messageTitle, JOptionPane.INFORMATION_MESSAGE);
69      }
70
71      /****************************************************************
72       * Method: sendWarning()                                       *
```

```java
 73        * Purpose: for sending messages to user                            *
 74        *                                                                   *
 75        * Parameters: String[2]:    the body of the message, window  *
 76        *                              title                              *
 77        * Returns: void:          N/A                                     *
 78        *****************************************************************/
 79       public static void sendWarning(String messageBody, String messageTitle)
 80       {
 81           JOptionPane.showMessageDialog(null, messageBody, messageTitle, JOptionPane.ERROR_MESSAGE);
 82       }
 83
 84       /****************************************************************
 85        * Method: addMainWindow()                                       *
 86        * Purpose: makes mainWindow as below standards                  *
 87        *                                                               *
 88        * Parameters:                  N/A                              *
 89        * Returns: void:               N/A                              *
 90        *****************************************************************/
 91       public void addMainWindow()
 92       {
 93           mainWindow = new JFrame("Main Window"); // create a new frame
 94           mainWindow.setDefaultCloseOperation(EXIT_ON_CLOSE); // close pgrm when closed
 95           mainWindow.setSize(300,600); // set the size
 96           GridLayout aGrid = new GridLayout(0,1,0,5); // config the layout
 97           mainWindow.setLayout(aGrid); // set window layout
 98
 99           // create buttons
100           JButton crsSearch     = new JButton("Search for course number");
101           JButton titleSearch = new JButton("Search course titles");
102           JButton prntRecords = new JButton("Print all records");
103           JButton cpuGPA         = new JButton("Compute GPA");
104           JButton addCrs         = new JButton("Add Course");
105           JButton rmCrs          = new JButton("Remove Course");
106           JButton editCrs         = new JButton("Edit Course");
107           JButton strData     = new JButton("Store Database");
108           JButton ldData          = new JButton("Reload Database");
109           JButton exit          = new JButton("Exit");
110
111           // Add buttons to frame
112           mainWindow.add(crsSearch);
113           mainWindow.add(titleSearch);
114           mainWindow.add(prntRecords);
115           mainWindow.add(cpuGPA);
116           mainWindow.add(addCrs);
117           mainWindow.add(rmCrs);
118           mainWindow.add(editCrs);
119           mainWindow.add(strData);
120           mainWindow.add(ldData);
121           mainWindow.add(exit);
122
123           // config handler
124           MainWindowHandler mainWindowHandler = new MainWindowHandler();
125
126           // add listeners
127           crsSearch.addActionListener(mainWindowHandler);
128           titleSearch.addActionListener(mainWindowHandler);
129           prntRecords.addActionListener(mainWindowHandler);
130           cpuGPA.addActionListener(mainWindowHandler);
131           addCrs.addActionListener(mainWindowHandler);
132           rmCrs.addActionListener(mainWindowHandler);
133           editCrs.addActionListener(mainWindowHandler);
134           strData.addActionListener(mainWindowHandler);
135           ldData.addActionListener(mainWindowHandler);
136           exit.addActionListener(mainWindowHandler);
137
138           // make the window visable
139           mainWindow.setVisible(true);
140       }
141
142 }
```