







```
public class eleven {
    public static void main(String[] args) {
        QuizApplication a = new QuizApplication();
        a.setVisible(true);
    }
}
```

```
1⊝ import java.awt.*;
 2 import java.awt.event.ActionEvent;
   import java.awt.event.ActionListener;
   import java.awt.event.ItemEvent;
   import java.awt.event.ItemListener;
 7
   import javax.swing.*;
   public class QuizApplication extends JFrame
10 implements ActionListener, ItemListener{
        final int FRAME WIDTH = 350;
11
        final int FRAME HEIGHT = 360;
12
13
14
        JLabel heading;
15
        JLabel questionOne;
16
        JCheckBox range;
17
       JCheckBox space;
18
       JCheckBox domain;
19
       JCheckBox scope;
20
21
        JLabel questionTwo;
22
        JCheckBox privAns;
23
        JCheckBox pubAns;
24
        JCheckBox staticAns;
25
        JCheckBox nonStaticAns;
26
27
        JLabel questionThree;
28
        boolean qThreeBugFix = false;
29
        String[] quesThreeTF = {"Select An Option", "False", "True"};
        JComboBox quesThreeDropDown = new JComboBox(quesThreeTF);
30
31
32
33
        JLabel questionFour;
34
        JCheckBox packetAns;
35
        JCheckBox packageAns;
36
        JCheckBox bundleAns;
37
        JCheckBox gaggleAns;
38
39
        JButton submission;
40
        JLabel totalScore;
41
42
        int score = 0;
43
44
45⊕
       public QuizApplication() {
            super("JAVA QUIZ");
47
48
            heading = new JLabel("223J Quiz Application");
49
            questionOne = new JLabel("1) A variable can be referenced from its");
50
            range = new JCheckBox("Range", false);
51
            space = new JCheckBox("Space", false);
52
            domain = new JCheckBox("Domain", false);
            scope = new JCheckBox("Scope", false);
53
55
            questionTwo = new JLabel("2) Methods referenced with individual objects are");
56
            privAns = new JCheckBox("Private", false);
57
            pubAns = new JCheckBox("Public", false);
58
59
            staticAns = new JCheckBox("Static", false);
60
            nonStaticAns = new JCheckBox("NonStatic", false);
61
62
            questionThree = new JLabel("3) Most Class Data Fields are Private");
63
```

```
64
             questionFour = new JLabel("4) Java classes are stored in a folder or");
 65
 66
             packetAns = new JCheckBox("Packet", false);
             packageAns = new JCheckBox("Package", false);
 67
             bundleAns = new JCheckBox("Bundle", false);
 68
 69
             gaggleAns = new JCheckBox("Gaggle", false);
 70
 71
             ButtonGroup quesOneGroup = new ButtonGroup();
 72
             ButtonGroup quesTwoGroup = new ButtonGroup();
 73
             ButtonGroup quesFourGroup = new ButtonGroup();
 74
 75
             submission = new JButton("Submit");
 76
             totalScore = new JLabel("Score : /20");
 77
 78
 79
             heading.setFont(new Font("Arial", Font.BOLD, 24));
 80
 81
             questionOne.setFont(new Font("Arial", Font.ITALIC, 16));
             questionTwo.setFont(new Font("Arial", Font.ITALIC, 14));
 82
             questionThree.setFont(new Font("Arial", Font.ITALIC, 16));
 83
 84
             questionFour.setFont(new Font("Arial", Font.ITALIC,17));
 85
             totalScore.setFont(new Font("Arial", Font.BOLD,28));
 86
 87
             setSize(FRAME WIDTH, FRAME HEIGHT);
 88
             setDefaultCloseOperation(JFrame.EXIT ON CLOSE);
 89
             submission.addActionListener(this);
 91
             //auestion 1
             range.addItemListener(this);
             space.addItemListener(this);
 94
             domain.addItemListener(this);
 95
             scope.addItemListener(this);
 96
             //question 2
 97
             privAns.addItemListener(this);
             pubAns.addItemListener(this);
98
99
             staticAns.addItemListener(this);
100
             nonStaticAns.addItemListener(this);
101
             //question 3
102
             quesThreeDropDown.addItemListener(this);
103
             //question 4
104
             packetAns.addItemListener(this);
105
             packageAns.addItemListener(this);
106
             bundleAns.addItemListener(this);
107
             gaggleAns.addItemListener(this);
108
109
             quesOneGroup.add(range);
110
             quesOneGroup.add(space);
111
             quesOneGroup.add(domain);
             quesOneGroup.add(scope);
112
113
114
             quesTwoGroup.add(privAns);
115
             quesTwoGroup.add(pubAns);
116
             quesTwoGroup.add(staticAns);
117
             quesTwoGroup.add(nonStaticAns);
118
             quesFourGroup.add(packetAns);
119
             quesFourGroup.add(packageAns);
120
121
             quesFourGroup.add(bundleAns);
122
             quesFourGroup.add(gaggleAns);
123
124
             setLayout(new FlowLayout());
125
             add(heading);
```

```
126
             //question 1
127
             add(questionOne);
128
             add(range);
129
             add(space);
130
             add(domain);
131
             add(scope);
132
133
             //question 2
134
             add(questionTwo);
135
             add(privAns);
             add(pubAns);
136
137
             add(staticAns);
138
             add(nonStaticAns);
139
140
             //question 3
141
             add(questionThree);
142
             add(quesThreeDropDown);
143
144
             //question 4
145
             add(questionFour);
             add(packetAns);
146
147
             add(packageAns);
148
             add(bundleAns);
149
             add(gaggleAns);
150
151
             add(submission);
152
             add(totalScore);
153
154
155⊜
        @Override
156
        public void itemStateChanged(ItemEvent e) {
157
             Object source = e.getItem();
158
             int select = e.getStateChange();
159
160
             //Question 1
             if(source == range) {
161
162
                 if(select == ItemEvent.SELECTED) {
163
                     score += 0;
164
                 }
165
                 else {
166
                     score -= 0;
167
168
             else if(source == space) {
169
170
                 if(select == ItemEvent.SELECTED) {
171
                     score += 0;
172
                 else {
173
174
                     score -= 0;
175
176
             else if(source == domain) {
177
                 if(select == ItemEvent.SELECTED) {
178
179
                     score += 0;
180
181
                 else {
182
                     score -= 0;
183
184
185
             else if(source == scope) {
186
                 if(select == ItemEvent.SELECTED) {
187
                     score += 5;
188
                 }
```

```
189
                 else {
190
                     score -= 5;
191
192
193
194
             //Question 2
             else if(source == privAns) {
195
196
                 if(select == ItemEvent.SELECTED) {
197
                     score += 0;
198
                 else {
199
200
                     score -= 0;
201
202
             else if(source == pubAns) {
203
204
                 if(select == ItemEvent.SELECTED) {
205
                     score += 0;
206
                 else {
207
208
                     score -= 0;
209
210
             else if(source == staticAns) {
211
212
                 if(select == ItemEvent.SELECTED) {
213
                     score += 0;
214
                 else {
215
216
                     score -= 0;
217
218
219
             else if(source == nonStaticAns) {
                 if(select == ItemEvent.SELECTED) {
220
221
                     score += 5;
222
223
                 else {
224
                     score -= 5;
225
226
             //question 4
227
             else if(source == packetAns) {
228
229
                 if(select == ItemEvent.SELECTED) {
230
                     score += 0;
231
                 else {
232
233
                     score -= 0;
234
235
236
             else if(source == packageAns) {
237
                 if(select == ItemEvent.SELECTED) {
                     score += 5;
238
239
240
                 else {
241
                     score -= 5;
242
243
             else if(source == bundleAns) {
244
245
                 if(select == ItemEvent.SELECTED) {
246
                     score += 0;
247
248
                 else {
249
                     score -= 0;
250
251
             }
```

```
252
             else if(source == gaggleAns) {
253
                 if(select == ItemEvent.SELECTED) {
254
                     score += 0;
255
256
                 else {
257
                     score -= 0;
258
259
             }
260
             //question 3
261
262
             Object source1 = e.getSource();
263
             if(source1 == quesThreeDropDown) {
                 if(select == ItemEvent.SELECTED) {
264
265
                     int positionOfSelection = quesThreeDropDown.getSelectedIndex();
                     if(positionOfSelection == 0) {
267
                         if(qThreeBugFix) {
268
                             score -= 5;
269
                             qThreeBugFix = false;
270
271
272
                     else if(positionOfSelection == 1) {
273
                         if(qThreeBugFix) {
274
                             score -= 5;
275
                             qThreeBugFix = false;
                         }
276
277
                     else if(positionOfSelection == 2) {
278
                         if(!qThreeBugFix) {
279
280
                             score += 5;
281
                             qThreeBugFix = true;
282
                         }
283
                     }
                 }
284
285
             }
286
         }
287
288⊖
         @Override
289
        public void actionPerformed(ActionEvent e) {
290
             totalScore.setText("Score : " + score + "/20");
291
292
293
294 }
```