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1 // Class TestEmployee.java
2 // Copyright 2001 ASR Strategic Resources
3 // AITP NCC 2001 Java Competition Event
4 // Java Contest Solution
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6 // Code: Eugene Wasserman & Don Baldwin
7
8 package test;
9 import hr.Boss;
10 import hr.Employee;
11 import hr.HourlyWorker;
12 import javax.swing.*;
13 import java.awt.BorderLayout;
14 import java.awt.event.*;
15
16 public class TestEmployee extends JFrame implements ActionListener {
17
18     JButton btRun = new JButton("Run Tests");
19     JTextArea jta = new JTextArea();
20
21     public TestEmployee() {
22         super("TestEmployee");
23         addWindowListener(new MainFrameWindowListener());
24         setBounds(100, 100, 600, 400);
25         getContentPane().setLayout(new BorderLayout());
26         getContentPane().add(new JScrollPane(jta), BorderLayout.CENTER);
27         btRun.addActionListener(this);
28         getContentPane().add(btRun, BorderLayout.SOUTH);
29         setVisible(true);
30     }
31
32     public void actionPerformed(ActionEvent ae) {
33         if(ae.getSource() == btRun)
34             runTest();
35     }
36
37     public static void main(String argv[]) {
38         TestEmployee te = new TestEmployee();
39     }
40
41     private void runTest() {
42         jta.append("Running tests on hr package...\n");
43
44
45         jta.append("\nTesting Boss class\n");
46         Boss boss = new Boss();
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47
48     boss = new Boss(25, "Yankee", "Doodle", 12.34);
49
50     if(boss.getFirstName().equals("Yankee") && boss.getLastName().equals("Doodle") &&
51        boss.getId() == 25 && boss.getWeeklySalary() == 12.34 && boss.earnings() == 12.34)
52         jta.append("Passed: parameterized constructor" + "\n");
53     else
54         jta.append("Failed: parameterized constructor" + "\n");
55
56     // Test getter methods
57     if(boss.getFirstName().equals("Yankee"))
58         jta.append("Passed: getFirstName method" + "\n");
59     else
60         jta.append("Failed: getFirstName method" + "\n");
61
62     if(boss.getLastName().equals("Doodle"))
63         jta.append("Passed: getLastName method" + "\n");
64     else
65         jta.append("Failed: getLastName method" + "\n");
66
67     if(boss.getId() == 25)
68         jta.append("Passed: getId method" + "\n");
69     else
70         jta.append("Failed: getId method" + "\n");
71
72     if(boss.getWeeklySalary() == 12.34)
73         jta.append("Passed: getWeeklySalary method" + "\n");
74     else
75         jta.append("Failed: getWeeklySalary method" + "\n");
76
77     if(boss.earnings() == 12.34)
78         jta.append("Passed: earnings method" + "\n");
79     else
80         jta.append("Failed: earnings method" + "\n");
81
82     // Test setter methods
83     boss.setFirstName("Fats");
84     if(boss.getFirstName().equals("Fats"))
85         jta.append("Passed: setFirstName method" + "\n");
86     else
87         jta.append("Failed: setFirstName method" + "\n");
88
89     boss.setLastName("Waller");
90     if(boss.getLastName().equals("Waller"))
91         jta.append("Passed: setLastName method" + "\n");
92     else
```

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93         jta.append("Failed: setLastName method" + "\n");
94
95     boss.setWeeklySalary(56.78);
96     if(boss.getWeeklySalary() == 56.78)
97         jta.append("Passed: setWeeklySalary method" + "\n");
98     else
99         jta.append("Failed: setWeeklySalary method" + "\n");
100
101
102
103     jta.append("\nTesting HourlyWorker class" + "\n");
104
105     HourlyWorker hourlyWorker = new HourlyWorker();
106
107     hourlyWorker = new HourlyWorker(25, "Yankee", "Doodle", 20, 40);
108
109     if(hourlyWorker.getFirstName().equals("Yankee") && hourlyWorker.getLastName().equals("Doodle")
110        &&
111        hourlyWorker.getId() == 25 && hourlyWorker.getWage() == 20 && hourlyWorker.getHours() == 40
112        &&
113        hourlyWorker.earnings() == 800)
114         jta.append("Passed: parameterized constructor" + "\n");
115     else
116         jta.append("Failed: parameterized constructor" + "\n");
117
118     // Test getter methods
119     if(hourlyWorker.getFirstName().equals("Yankee"))
120         jta.append("Passed: getFirstName method" + "\n");
121     else
122         jta.append("Failed: getFirstName method" + "\n");
123
124     if(hourlyWorker.getLastName().equals("Doodle"))
125         jta.append("Passed: getLastName method" + "\n");
126     else
127         jta.append("Failed: getLastName method" + "\n");
128
129     if(hourlyWorker.getId() == 25)
130         jta.append("Passed: getId method" + "\n");
131     else
132         jta.append("Failed: getId method" + "\n");
133
134     if(hourlyWorker.getWage() == 20)
135         jta.append("Passed: getWage method" + "\n");
136     else
137         jta.append("Failed: getWage method" + "\n");
```

```
137         if(hourlyWorker.getHours() == 40)
138             jta.append("Passed: getHours method" + "\n");
139         else
140             jta.append("Failed: getHours method" + "\n");
141
142         if(hourlyWorker.earnings() == 800)
143             jta.append("Passed: earnings method" + "\n");
144         else
145             jta.append("Failed: earnings method" + "\n");
146
147
148         // Test setter methods
149         hourlyWorker.setFirstName("Fats");
150         if(hourlyWorker.getFirstName().equals("Fats"))
151             jta.append("Passed: setFirstName method" + "\n");
152         else
153             jta.append("Failed: setFirstName method" + "\n");
154
155         hourlyWorker.setLastName("Waller");
156         if(hourlyWorker.getLastName().equals("Waller"))
157             jta.append("Passed: setLastName method" + "\n");
158         else
159             jta.append("Failed: setLastName method" + "\n");
160
161         hourlyWorker.setWage(30);
162         if(hourlyWorker.getWage() == 30)
163             jta.append("Passed: setWage method" + "\n");
164         else
165             jta.append("Failed: setWage method" + "\n");
166
167         hourlyWorker.setHours(50);
168         if(hourlyWorker.getHours() == 50)
169             jta.append("Passed: setHours method" + "\n");
170         else
171             jta.append("Failed: setHours method" + "\n");
172
173
174         jta.append("\nFinished running tests on hr package.");
175     }
176
177     /*
178     * The inner listener class for the window's actions.
179     */
180     private class MainFrameWindowListener implements WindowListener {
181         public void windowOpened(WindowEvent e){}
182         public void windowClosed(WindowEvent e){}
```

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183     public void windowIconified(WindowEvent e){}
184     public void windowDeiconified(WindowEvent e){}
185     public void windowActivated(WindowEvent e){}
186     public void windowDeactivated(WindowEvent e){}
187
188     /**
189     * Called if the user clicks on the close window button or
190     * closes the window in another way.
191     */
192     public void windowClosing(WindowEvent e) {
193         dispose();
194         System.exit(0);
195     }
196 }
197 } // END Class TestEmployee.java
```