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1 // Example 7.1 foi/examples/RumpelstiltskinDemo.java
2 //
3 //
4 // Copyright 2003 Bill Campbell and Ethan Bolker
5
6 // Practice with simple exceptions - some from the API, one declared here
7
8 public class RumpelstiltskinDemo
9 {
10     public static void main( String[] args )
11     {
12         Wizard rumpelstiltskin = new Wizard("Rumpelstiltskin");
13         Wizard aNullWizard
14             = null;
15
16         // see if the first command line argument ( args[0] )
17         // is the right name
18         try {
19             System.out.println("Is your name " + args[0] + "??");
20             rumpelstiltskin.guessName(args[0]);
21             System.out.println("Yes! How did you guess?");
22             System.exit(0);
23         }
24         // come here right away if there is no args[0]
25         catch (IndexOutOfBoundsException e) {
26             System.out.println( "usage: java RumpelstiltskinDemo guess" );
27             System.exit(0); // leave the program gracefully
28         }
29         // come here from guessName if exception thrown
30         catch (BadGuessException e) {
31             System.err.println("sorry - " + args[0] + " is not my name");
32         }
33
34         System.out.println(
35             "\nIntentionally generate a NullPointerException, \n" +
36             "see what the Exception's toString method returns");
37         try {
38             aNullWizard.guessName("who am I?");
39         }
40         catch (Exception e) {
41             System.out.println(e);
42         }
43
44         System.out.println(
45             "\nExperiment with the printStackTrace() method:");
46         try {
47             rumpelstiltskin.makeMischief();
48         }
49         catch (Exception e) {
50             e.printStackTrace();
51         }
52
53         // perhaps throw an uncaught IndexOutOfBoundsException
54         System.out.println(
55             "\nhook for a second command line argument, \n" +
56             "see what happens if it's not there:");
57         System.out.println(args[1]);

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57     }
58
59     // two inner classes, used only in this file
60     private static class Wizard
61     {
62         private String name;
63
64         public Wizard( String name )
65         {
66             this.name = name;
67         }
68
69         public void guessName( String name )
70         throws BadGuessException
71         {
72             if (!name.equals(this.name))
73                 throw new BadGuessException( );
74         }
75
76         public void makeMischief()
77         throws BadGuessException
78         {
79             this.guessName("??");
80         }
81     }
82
83     private static class BadGuessException extends Exception
84     {
85         // empty body
86     }
87

```