

```

1 1/*
2 2 * AP(r) Computer Science GridWorld Case Study:
3 3 * Copyright(c) 2005-2006 Cay S. Horstmann (http://horstmann.com)
4 4 *
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10 10 * but WITHOUT ANY WARRANTY; without even the implied warranty of
11 11 * MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
12 12 * GNU General Public License for more details.
13 13 *
14 14 * @author Chris Nevison
15 15 * @author Barbara Cloud Wells
16 16 * @author Cay Horstmann
17 17 */
18 18
19 19 import info.gridworld.actor.Actor;
20 20 import info.gridworld.actor.Critter;
21 21 import info.gridworld.grid.Location;
22 22
23 23 import java.util.ArrayList;
24 24
25 25 /**
26 26  * A <code>ChameleonCritter</code> takes on the color of neighboring actors as
27 27  * it moves through the grid. <br />
28 28  * The implementation of this class is testable on the AP CS A and AB exams.
29 29  */
30 30 public class ChameleonCritter extends Critter
31 31 {
32 32     /**
33 33      * Randomly selects a neighbor and changes this critter's color to be the
34 34      * same as that neighbor's. If there are no neighbors, no action is taken.
35 35      */
36 36     public void processActors(ArrayList<Actor> actors)
37 37     {
38 38         int n = actors.size();
39 39
40 40         if (n == 0)
41 41             return;
42 42         int r = (int) (Math.random() * n);
43 43
44 44         Actor other = actors.get(r);
45 45         setColor(other.getColor());
46 46     }
47 47     /**
48 48      * Turns towards the new location as it moves.
49 49      */
50 50     public void makeMove(Location loc)
51 51     {
52 52         setDirection(getLocation().getDirectionToward(loc));
53 53         super.makeMove(loc);
54 54     }
55 55 }
56 56

```