

Class Exercise - Critters

In this exercise you will implement a Critter class such as the ones you will implement on assignment 11.

To get started download the CritterMain, Critter, Stone, and RollingStone classes from the website. Set up a project with these classes in it.

Implement a complete Grasshopper class per the following specification:

Grasshopper:

constructor	<pre>public Grasshopper(int val)</pre> <p>Take the remainder of the parameter 4 when divided by 4. (%4). If the remainder is 0 make this a grasshopper that moves NORTH. Likewise a remainder of 1 indicates a SOUTH bound grasshopper, 2 for EAST, and 3 for WEST.</p>
fight behavior	each time a Grasshopper fights it picks a random attack. Recall the three attacks are ROAR, POUNCE, and SCRATCH.
color	Color.GREEN
movement behavior	The first time a Grasshopper is asked to move it moves in the direction chosen in the constructor. The next time a Grasshopper is asked to move it stays put, in other words CENTER. The next time the Grasshopper is asked to move it again returns the chosen direction. The time after that CENTER. And so forth.
eating behavior	always returns true
toString	"G" - the percent sign

Test your Grasshopper's movement behavior in the simulator with a single Grasshopper. When you are sure it works, try a world with lots of Stones, RollingStones, and Grasshoppers. How well does the Grasshopper do?

If you finish the Grasshopper start implementing other Critters from assignment 11.