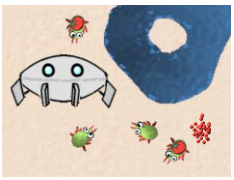
Greeps

Some rules — for clarification — ask!

Rule 1



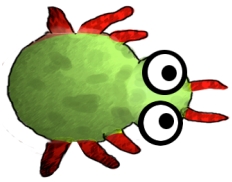
Only change the Greep class. No other classes may be modified or created.

Rule 2

You cannot extend the Greep's memory. That is: you are not allowed to add fields or variables to the class. One general-purpose integer field and two boolean flags are provided for your use.

Rule 3

Greeps do not communicate directly. They do not invoke each other's methods or access each other's fields.



Rule 4

No long vision. You are allowed to look at the world only at the immediate location of the Greep. Greeps are almost blind, and cannot look any further.

Rule 5

No creation of objects. You are not allowed to create any scenario objects (instances of user-defined classes, such as Greep or Paint). Greeps have no magic powers – they cannot create things out of nothing.

Rule 6

No tele-porting. Methods from Actor that cheat normal movement (such as setLocation) may not be used.

Greep invasion

The Greeps have come to Earth! And they like tomatoes. As soon as the Greeps have landed, they walk all over the place, always on the lookout for tomato deposits. But time is running out...

Welcome to the Greenfoot programming competition. Write your own Greep class and win the top prize!

Programming in Greenfoot is easy. You should be able to find out what you need to write a Greep class and enter the competition quite easily. In this competition, you task is to help the Greeps on their quest to collect as many tomatoes as they can in limited time. Write an implementation for class Greep, submit it to us, and we'll see how you score.

How to participate

Get Greenfoot from greenfoot.org and the Greeps project from the Moodle website. Install Greenfoot, open the project, and improve the Greeps class.

Tomatoes. Greeps love tomatoes. They eat tomatoes. In fact, they eat nothing else but tomatoes. Since there is an acute tomato shortage on their home planet they have to collect as many as they can on Earth.

You should edit only the Greep class. You cannot change any of the other classes. You can add any methods you need to the Greep class. Program some intelligence into the little critters and make them carry the tomatoes to their space ship quicker than ever before.

When done, submit your class (only the file Greep.java) for scoring. To submit your entry, upload it to the Moodle website or bring it to class on a USB drive.

Anyone can enter – individuals and teams of two persons – and you can submit as often as you like.

You will see that Greep is a subclass of *Creature* and of *Actor*. You can make use of any of the inherited methods (use of some Actor methods is restricted – see Rule 6 above).

Greeps can only communicate by spitting drops of paint (in three colors!) onto the ground. These paint drops can serve as markers to convey messages to other Greeps. Greeps do not communicate directly!

Greeps cannot load tomatoes on their own – a Greep can only load a tomato onto another Greep. Greeps have some limited memory: one integer and two Boolean flags. You can make use of this for whatever you like, but you cannot extend it. Also, the only part of the World that Greeps can see is their own immediate location. (Greenfoot provides methods to see further around you, but for the purpose of this competition, use of those methods is not allowed).

Scoring

At the start of every class during the competition, we will run each entry twice and keep track of the highest scores. The final time to enter is at 11:00am on Tuesday, April 18. We will then hold the grand final: The top three scorers at close of entries will be run against each other. The highest score out of three runs each wins!