Use the [GridWorld Quick Reference](https://secure-media.collegeboard.org/apc/ap_comp_sci_a_quick_reference.pdf) if needed.Test the code out during and after each step to make sure it is error free

**\*\*\* Critters will NEVER override the ACT method \*\*\***

**Description:**

“There can only be one!”

A Highlander critter is a critter that processes other actors, destroying all the actors that are in adjacent locations and using them for energy. The Highlander critter can only move if it has at least one energy stored. Each time it moves it uses an energy that it has stored. If it gets close to another actor it will destroy it and store it for energy to use later. The HighlanderCritter will move like any other Critter, randomly.

**/\*~~~~~~~~~~~~~~~~ HighlanderCritterRunner.java ~~~~~~~~~~~~~~~~\*/**

**Part 0:**

Create a new Class named HighlanderCritterRunner w/ a main method

In the main method create a new world that uses the code below.

Code to use in the main:

ActorWorld world = new ActorWorld( );

// add actors to the world here

world.show();

**\*\* Test part 0 out before moving on to part 1 \*\***

**/\*~~~~~~~~~~~~~~~~ HighlanderCritter.java ~~~~~~~~~~~~~~~~\*/**

**Part 1:**

Create a new Class named HighlanderCritter. Create an int instance variable named energy, that will store the energy sources. Write a constructor that takes the amount of energy to start with. The maximum number of energy that a HighlanderCritter can store is 5. If the HighlanderCritter has energy, its color needs to be yellow, otherwise it is black.

***Hint***: Make sure to initialize the list before you try to add things to it, you must also take into account that a HighlanderCritter can be initialized to have no energy and the maximum is 5.

New Classes/Methods to use:

setColor( Color color )

**\*\* Test Part 1 out before moving on to part 2 \*\***

**Part 2:**

Write a getEnergy method for the Highlander critter that returns the amount of energy.

***Hint***: This must not return a number larger than 5.

New Classes/Methods to use:

public int getEnergy()

**\*\* Test Part 2 out before moving on to part 3 \*\***

**Part 3:**

In the HighlanderCritterRunner, instantiate 3 new HighlanderCritters. Make one start with 0 energy, another one start with 3 energy, and another one start with 13 energy. Add each one to the world in different places & then print the amount of energy by calling the getEnergy method for each of the HighlanderCritters.

New Classes/Methods to use:

new HighlanderCritter( int energy )

getEnergy()

**\*\* Test Part 3 out before moving on to part 4 \*\***

**Part 4:**

Override the processActors method from the Critter class. Loop through each actor in the list.

Remove each of the actors from the world and add energy. If you reach the maximum of 5 energy then it cannot destroy any more actors. ***Hint:*** To test this you need to add other Actors to the world as well as use a print statement inside the process actors that prints the energy each time so you can see if it is working correctly.

New Classes/Methods to use:

public void processActors( ArrayList<Actor> actors )

**\*\* Test Part 4 out before moving on to part 5 \*\***

**Part 5:**

Override the makeMove method from the Critter class and make it where it can only move if it has energy left. After it moves, it decreases its energy. Also, if it runs out of energy after it moves then the color needs to change to black.

New Classes/Methods to use:

public void processActors( ArrayList<Actor> actors )

**\*\* Test part 3 out before turning it in \*\***