AP Computer Science
GridWorld Case Study
Critter LAB Packet IV B

Turn in an extended Critter class and a runner class for each exercise.

1. Create a class MagnetCritter that extends Critter. A MagnetCritter looks at all of the neighbors within two steps of its current location. (For a MagnetCritter not near an edge, this includes 24 locations). All actors in that area that share the same color with the Magnet Critter will move toward it if they are able (if the location they would be drawn to is empty). Hint: Use getDirectionToward.

   A MagnetCritter must be instantiated with a specified color.

2. Create a class JumpingCrab that extends CrabCritter. A JumpingCrab prefers to jump over rocks. If there is a rock to its left or right and an empty location on the other side of the rock, it will move there. If there are rocks on both sides that it can jump over, it picks one at random. If there are no rocks to jump over, or it cannot jump over the rocks, it moves like a CrabCritter. A JumpingCrab processes the same actors that a CrabCritter does, but it also eats rocks, so the only thing it cannot eat is Critters.