

LAB S13 – THE THREE LITTLE CRITTERS

Using the GridWorld framework provided, create the three Critters described below; these Critters are loosely based on characters from X-Men. At your option, you may complete this as a partner lab; partner labs only need to be submitted by one human.

Mystique

Mystique is a Critter that randomly selects one of its neighbors and becomes that color. It does not eat any of its neighbors. It then moves to an empty adjacent location, if possible. It ends its act by facing a random direction.

Nightcrawler

Nightcrawler processes its neighbors just like a regular Critter. It then moves to a random empty location on the grid and leaves behind a Smoke object.

Smoke

A Smoke object is a pink Rock that appears for ten turns and then disappears.

Magneto

On each turn, Magneto pulls all rocks on the grid one spot closer to it, as long as the Rock moves into an empty location. Magneto does not eat. If a Magneto Critter is unable to move in any turn, it dies.

Criteria

- 1) **You may not override the act method for any of your Critters.** *Note: You will have to override the act method for the Smoke object.* All adjustments to Critter behavior must be by overriding some of the “Big 5” Critter methods: `getActors`, `processActors`, `getMoveLocations`, `selectMoveLocation`, `makeMove`.
- 2) You may work individually or in pairs for this lab assignment.

Submission

- 1) You must show your completed program to Holm before 11:59 pm on Friday, April 3, by sharing a screen over Google Meet or recording a video of your code being executed.