

EE422C Project 5 (Critter JavaFX) README

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Git : https://github.com/ee312-zl4685/EE422C_Project5.git

This JavaFX project is an extension of the last project (Critter part 1).

For our program, the controller section and display section both built under a single AnchorPane. The overlay of the program were designed by using Java Scene Builder, then we created a controller class to handle all the events that will cause by pressing the buttons or input informations into the text field.

To create critters, the user will first select one of the critter types from the drop box, then enter an integer into the corresponding text field to indicate the number of critters that user wants to create. Similarly, the user can input any number timestep into the text field and perform timestep by clicking the “Step” button. For both make critter and timestep, if the buttons are pressed without number input, the default number of critters to be make will be 1, and the default timestep to be performed will also be 1.

Runstats will be trigger every time “Make”, “Step” and “Confirm” button is pressed. Then the runstats information will be display in a text area at the bottom of the controller. The runstats type will be determine by the drop box above.

The slider bar is used for selecting animation speed, from 1 to 100, the user can pick a number of timestep per frame. Then by pressing the Animation radio button, the animation will start and animation speed will not be allowed to change. During animation, makecritter, runstats, and timestep section will all be disable.




On top left of the controller, there are two menu options. Under the “file” section, user can choose to set seed for randomization or quit the program. Also, user can read information of the program by clicking “about” under “help” section.




Our program will have default craig and algae critters that are provided, and 4 other custom critters.

The following are descriptions on our custom critters:

- Critter1
 - Weak critters, who only moves every 3 turns.
 - Will lose fights against other critters except algae.
- Critter2
 - Critter2 will be divided into age groups.
 - Baby Critter2 do not walk, run, and fight
 - Teenager Critter2 walk but do not fight
 - Adult Critter2 run and fight, 25% of them can reproduce
 - Middle age Critter2 walk and fight
 - Elder Critter2 do not walk, run and fight
- Critter3
 - These critters are afraid to explore and only run in circle. These are very honorable critters, and if they encounter another of their species, they refuse to fight.
- Critter4
 - Theses critters have two extreme status based on their energy. If their energy is below 50, they are near dead and choose to see as much of the world as possible. If the energy is above 150, they are elite and choose to reproduce as much possible. Having elite status also enables them to flee from fights more often.

Following are keys for each types of Critter

Image Representation	Type
	Algae
	Craig
	Critter1

	Critter2
	Critter3
	Critter4