EE422C-assigment4

 We used JavaFX implementation in our code to provide a visual
representation of the CritterWorld. We use a Gridpane to create a GUI and
use colored shapes to represent the critters. There are buttons allowing
for user control of the simulated world. I think something which usually
works in our program is the animation functions which looks cool. One
problem we faced was creating a list of options which were all connected
to a single make button for choosing between different types of critters.
We solved this by using a choiceBox which contained the list of different
types of critters we have.

Class
  1. Critter

    a. Fields
      - myPackage : String
      - population : List<Critter>
      - babies : List<Critter>
      - rand : Random
      - energy : int
      - x_coord : int
      - y_coord : int
      - hasMoved : boolean
      - isFighting : boolean

    b. Methods
      - getRandomInt(int) : int
      - setSeed(long) : void
      - toString : String
      - getEnergy : int
      - moveX(int) : int
      - moveY(int) : int
      - walk(int) : void
      - run(int) : void
      - reproduce(Critter,int) : void
      - doTimeStep : void
      - fight(String) : boolean
      - makeCritter(String) : void
      - getInstances(String) : List<Critter>
      - runStats(List<Critter>) : void
      - clearWorld : void
      - worldTimeStep : void
      - displayWorld : void

  2. Main

    a. Fields
      - kb : Scanner
      - inputFile : String
      - testOutputString : ByteArrayOutputStream
      - myPackage : String

- DEBUG : boolean
- old : PrintStream

b. Methods
- main(String[]) : void
- runController(Scanner) : void
- printInvalidCommand(String[]) : void
- printError(String[]) : void
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3. ShivCritter1 & ShivCritter2

a. Fields
- direction : int
- numFights : int
- hasMoved : boolean

b. Methods
- ShivCritter1 : constructor
- ShivCritter2 : constructor
- doTimeStep : void
- fight(String) : boolean
- toString : String
- runStats(List<Critter>) : void

4. HamzaCritter & HamzaCritter1

a. Fields
- direction : int
- Fights_num : int
- hasMoved : boolean

b. Methods
- HamzaCritter : constructor
- HamzaCritter1 : constructor
- doTimeStep : void
- fight(String) : boolean
- toString : String
- runStats(List<Critter>) : void