

EE 422C - Project4 Critters

This project simulates the life of various critters in Java.

Getting Started

These instructions will get you a copy of the project up and running on your local machine for development and testing purposes.

Prerequisites

Java SE

Installing

Linux

1. Navigate to where you want the project
2. Clone repository: `git clone https://github.com/atchisonbrent/EE422C-Project4.git`
3. Move to source folder: `cd EE422C-Project4/src/`
4. Compile: `javac assignment4/*.java`
5. Run: `java assignment4.Main`

Class List

- Main.java
 - Fields:
 - kb : Scanner
 - inputFile : String
 - testOutputString : ByteArrayOutputStream
 - myPackage : String
 - old : PrintStream
 - Methods:
 - main(String[]) : void
- Input.java
 - Fields:
 - myPackage : String
 - Methods:
 - takeInput(Scanner) : void
 - printError(String[]) : void
 - printInvalid(String[]) : void
- Critter.java
 - Fields:
 - myPackage : String
 - population : List
 - babies : List

- rand : Random
- energy : int
- x_coord : int
- y_coord : int
- hasMoved : boolean
- fighting : boolean
- Methods:
 - getRandomInt(int) : int
 - setSeed(long) : void
 - toString() : String
 - getEnergy() : int
 - walk(int) : void
 - run(int) : void
 - move(int, int) : void
 - reproduce(Critter, int) : void
 - doTimeStep() : void
 - fight(String) : boolean
 - makeCritter(String) : void
 - getInstances(String) : List
 - runStats(List) : void
 - clearWorld() : void
 - worldTimeStep() : void
 - displayWorld() : void
 - printEdge() : void
 - printMiddle() : void
- Critter1.java
 - Fields:
 - dir : int
 - Methods:
 - Critter1()
 - toString() : String
 - fight(String) : boolean
 - doTimeStep() : void
- Critter2.java
 - Fields:
 - dir : int
 - Methods:
 - Critter2()
 - toString() : String
 - fight(String) : boolean
 - doTimeStep() : void
- Critter3.java
 - Fields:
 - dir : int
 - Methods:
 - Critter3()
 - toString() : String
 - fight(String) : boolean
 - doTimeStep() : void

- Critter4.java
 - Fields:
 - dir : int
 - Methods:
 - Critter4()
 - toString() : String
 - fight(String) : boolean
 - doTimeStep() : void
- Craig.java
 - Fields:
 - GENE_TOTAL : int
 - genes : int[]
 - dir : int
 - Methods:
 - toString() : String
 - Craig()
 - fight(String) : boolean
 - doTimeStep() : void
 - runStats(List) : void
- Algae.java
 - Methods:
 - toString() : String
 - fight(String) : boolean
 - doTimeStep : void
- Params.java
 - Fields:
 - world_width : int
 - world_height : int
 - walk_energy_cost : int
 - run_energy_cost : int
 - rest_energy_cost : int
 - min_reproduce_energy : int
 - refresh_algae_count : int
 - photosynthesis_energy_amount : int
 - start_energy : int
- InvalidCritterException.java
 - Fields:
 - offending_class : String
 - Methods:
 - InvalidCritterException(String)
 - toString() : String

Critter Object

- Fields:
 - population : ArrayList()
 - babies : List
 - energy : int
 - x_coord : int
 - y_coord : int

- hasMoved : boolean
- fighting : boolean
- Methods:
 - getRandomInt(int) : int
 - setSeed(long) : void
 - toString() : String
 - getEnergy() : int
 - walk(int) : void
 - run(int) : void
 - move(int, int) : void
 - reproduce(Critter, int) : void
 - doTimeStep() : void
 - fight(String) : boolean
 - makeCritter(String) : void
 - getInstances(String) : List
 - runStats(List) : void

Authors

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