

Optional Lab Sheet: Java Interfaces

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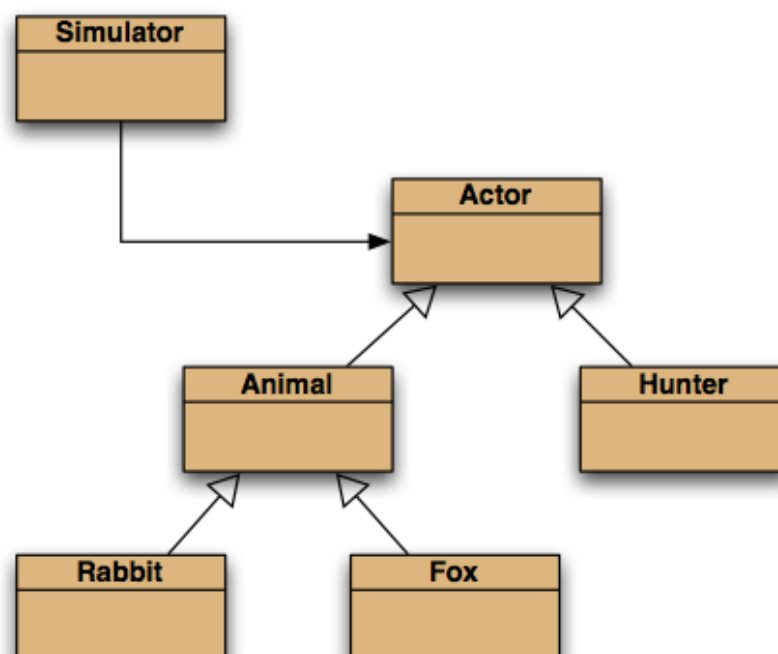
Attempt both tasks in the lab. There is NO tutorial. Don't forget to commit your code before you leave the lab!

Please use the code in lab7/foxesAndRabbits2 for the following exercises.

Introduce an Actor Interface

- Implement the Actor Interface (see your lecture notes or Chapter 10).
- Add the abstract method `act` and **`isActive`**, which replaces the method **`isAlive`** in `Animal`. The abstract class `Animal` should implement `Actor`.
- Don't forget to make the appropriate changes in `Simulator`, `Fox` and `Rabbit`.
- Discuss: Which classes override the **`act`** method and when is it actually implemented?

(1 mark)



Add a Hunter class

Add a class called Hunter, which implements the Actor Interface. Hunter should have the following properties:

- Hunters have no maximum age and neither feed nor breed.
- At each step of the simulation, a hunter moves to a random location and fires a fixed number of gun shots into random target locations.
- An animal in the target location is killed.

(1 mark)