

Lab sheet 4: Java Interfaces

Setter: Idris Skloul Ibrahim

Please use the code in lab3/**foxesAndRabbits2** for the following exercises.

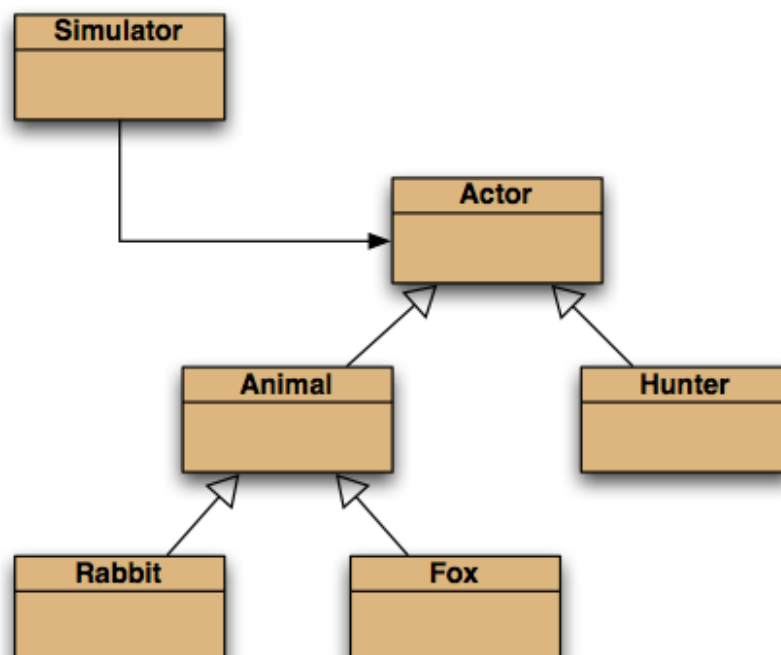
Note: This lab is optional (0 Mark)!

Deadline:

No deadline, please just try Lab 4 yourself to understand multi inheritance (Java interface).

Task 4A: 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?



Task 4B: 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.

