

Universidad de las Fuerzas Armadas ESPE

Object Oriented Programming

Teacher: Edison Lascano

Student: Revilla Antonio

Nrc: 14575

WorkShop # 27

Topic:Overriding and Overloading

```
@author Antonio Revilla
                                                 public class Zoo (
                                                              class Zoo (
lio static void main(String[] args) {
    System.out.printin(":"---> POLYMORPHISM by Antonio Revilla\n");
    Animal animal= new Animal(is: 0, scientificHame: "Platypus", new Date(), capete: 1);
    ArrayList<Animal> animal= new ArrayList<>();
    animals.add(e: animal);
    System.out.printin("animal --> " + animal);
    System.out.printin("animal type" + animal.getClass());
}
                                                               animal=new Platypus(poisoness: true, poisonGlands: 0, numberOffis
System.out.println("animal --> " + animal);
System.out.println("animal type" + animal.getClass());
                                                                                                                                    Clands: O, numberOfMammaryGlands: O, id: O, scientificName: "Platypus", new Date(), cageId: O, spine: "Spine small", numberOffSones: O);
                                                               animal=new Graffe(numberOffammaryGlands: 0, id: 0, scientificFame: "girafus", new Date(), captid: 0, spine: "big spine", numberOffames: 0);
System.out.println("animal -> " + animal);
System.out.println("animal type" + animal.getClass());
//animal.brushNeck();
                                                              Giraffe giraffe = new Giraffe(numberOfHammaryGlands: 4,id
animals.add(e: giraffe);
System.out.println("other Giraffe -->" + giraffe);
                                                                                                  EW Giraffe (numberofMammaryGlands: 4, id: 2, scientificName: "Giraffa", new Date (year: 2023, month: 1, date: 1), cageId: 3, spine: "long", numberofBones: 206);
                                                              giraffe.brushNeck();
                                                               animals.add(e: giraffe);
                                                             System.out.println(s: "\n ZOO ANIMALS");
System.out.println(s: animals);
System.out.println("total animals -->" + animals.size());
                                      H.
                                      *
                                              animal -->
- Animal(id=0), scientificHame=Platypus, bornDate=Sat Jan 13 07:40:52 ECT 1024, cageId=1)
animal typeclass ec.edu.espe.zoo.model.Animal
animal --> Platypus(Mammal(Wortebrate(

- Animal(id=0, scientificHame=Platypus, bornDate=Sat Jan 13 07:40:52 ECT 2024, cageId=0)spine=
                                      <u>پ</u>
import ec.edu.espe.zoo.model.Snake;
import java.util.ArrayList;
import java.util.Date;
                                               public static void main(String[] args) {
    System.out.println(x: "---> POLYMORPHISM by Antonio Revilla\n");
                                                               Animal animal= new Animal(id: 0, scientificFase: "Snake", ne ArrayList<Animal> animals = new ArrayList<>();
animals.add(: animal);
System.out.println("animal --> " + animal);
System.out.println("animal type" + animal.getClass());
                                                                                                                                               me: "Snake", new Date(), cageId: 1);
                                                               animal=new Snake (size: 5, scales: "If you have scales", coldBlooded:true, id: 1, system.out.println("animal --> " + animal);

System.out.println("animal type" + animal.getClass());
                                                               animal=new Snake(size:5, scales: "If you have scales", coldslooded:true, id: 1, sciensificSame: "Serpentes", new Date(), cageid: 1, spine: "Spine small", numberOfSones: 0); System.out.println("animal --> " + animal); System.out.println("animal type" + animal.getClass()); //animal.changeOfSkin();
                                                               Snake = new Snake = new Snake (size: 7, scales: "If you have scales", coldSlooded:true, id: 2, scientificFase: "Serpentes", new Date(), cagetd: 2, spine: "spine small", numberOfBone
                                                               animals.add(e: snake);
                                                               System.out.println("other Snake -->" + snake);
                                                              snake.changeOfSkin();
                                                               snake.expulsionOfPoison();
                                                               snake.expulsionOfPoison(amount: 3);
                                                               animals.add(e: snake);
                                                               System.out.println(*: "\n ZOO ANIMALS");
System.out.println(*: animals);
System.out.println("total animals -->" + animals.size());
```

```
Snake snake = new Snake (*ise: 7, *cales: "If you have scales", animals.add(e: snake);
                                                                                                                                          same: "Serpentes", new Date(), cageld: 2, spine: "spine small", numbe
                            System.out.println("other Snake -->" + snake);
                             snake.changeOfSkin();
                            animals.add(e: snake);
                            System.out.println(s: "\n ZOO ANIMALS");
System.out.println(s: animals);
System.out.println("total animals -->" + animals.size());
                                                               nDete-Sat Jan 13 12:41:51 ECT 2014, cageId-1), Snake[Reptile[Vertebrate]
bornDateSat Jan 13 12:41:51 ECT 2014, cageId-1), Snake[Reptile[Vertebrate]
bornDateSat Jan 13 12:41:51 ECT 2014, cageId-2) spinsespins small, numberOffones=0) scales=15 you have scales, coldSlooded=true|size=7], Snake[Reptile[WebDateSat] scales | 13:41:51 ECT 2014, cageId-2) spinsespins small, numberOffones=0) scales=15 you have scales, coldSlooded=true|size=7]]
                package ec.edu.espe.zoo.model;
☐ import java.util.Date;
                 * * @author revil
               public class Snake extends Reptile {
                     public Snake(int size, String scales, boolean coldBlooded, int id, String scientificName, Date bornDate, int cageId, String spine, int numberOfBones) {
    super(scales, coldBlooded, id, scientificName, bornDate, cageId, spine,
    this.size = size;
                    @Override
public String toString() {
    return "Snake{" + super.toString() + "size=" + size + '}';
}
                      @Override
                     public void expulsionOfPoison() {
                     System.out.println(x: "reptile expels poison");
}
                     public void expulsionOfPoison(int amount) {
    System.out.println("reptile expels: " + amount);
    System.out.println(s: "mL Posion \n");
}
                     public void changeOfSkin() {
    System.out.println(x: "Snake 1 changes its skin");
}
                     /**
* @return the size
                     public int getSize() {
                     return size;
                       * @param size the size to set
                     public void setSize(int size) {
   this.size = size;
                                                                                                                                                                                                                               ec.edu.espe.zoo.model
           Author: Antonio Revilla
                                                                                                                                                                                                                           Animal
                                                                                                                                                                                                            -id : String
-scientificName : String
                                                                                                                                                                                                            -bornDate : Date
                                                                                                                                                                                                             -cageld : int
                                                                                                                                                                                                             +feed()
                                                                                                                                            Vertebrate
                                                                                                                                                                                                             +computeAgeInMonths(): int
                                                                                                                                 -spine : String
                                                                                                                                                                                                            +assignCage(cageId : int)
                                                                                                                                 -numberOfBones : int
                                                                                                                                             4
                                                                             Reptile
                                                                     scales : String
                                                                     -coldBlooded : boolean
                                                                     expulsionOfPoison()
               Crocodile
                                                  Snake
                                                                                        Lizard
                                                                                                                              Turtle
                                                                                                                                                                  Chameleon
                                                                           -tailLength : double
            -toothCount : int
                                         -size : int
                                                                                                                       -shellHardness : int
                                                                                                                                                     -tongueLength : int
            -aquatic : boolean
                                                                           -camouflageAbility : boolean
                                                                                                                                                      -colorChangingAbility : boolean
                                                                                                                       -aquatic : boolean
                                         +expulsionOfPoison()
                                         +changeOfSkin()
                                                                           +crawl()
            +submerge()
                                                                                                                      +swim()
                                                                                                                                                     +changeColor()
```