



**Universidad de las Fuerzas Armadas**

**CLASS NAME :OBJECT ORIENTED  
PROGRAMMING  
LASCANO**

**NRC: 14575**

**TOPIC: Polymorphism**

**TEACHER: EDISON**

**WORKSHOP #: 26**

## 1. DAVID GUSTAVO CEPEDA SALGUERO

```
public class Zoo {  
    public static void main(String[] args) {  
        System.out.println("POLYMORPHISM by DAVID CEPEDA");  
        Animal animal = new Animal(id: 0, scientificName: "platypus", new Date(), cageId: 1);  
        ArrayList<Animal> animals = new ArrayList<>();  
        animals.add(animal);  
        System.out.println("animal --> " + animal);  
        System.out.println("animal type" + animal.getClass());  
  
        animal = new Platypus(poissonness: true, poisonGlands: 0, numberOfMammaryGlands: 0, spine: "spine small", numberOfBones: 0, id: 0, scientificName: "platypus sci");  
        animals.add(animal);  
        System.out.println("animal --> " + animal);  
        System.out.println("animal type" + animal.getClass());  
  
        animal = new Giraffe(numberOfMammaryGlands: 0, spine: "big spine", numberOfBones: 0, id: 0, scientificName: "girafus", new Date(), cageId: 1);  
        System.out.println("animal --> " + animal);  
        System.out.println("animal type" + animal.getClass());  
        //animal.brushneck();  
  
        Giraffe giraffe = new Giraffe(numberOfMammaryGlands: 0, spine: "long", numberOfBones: 0, id: 0, scientificName: "giraffa", new Date(), cageId: 1);  
        animals.add(giraffe);  
        System.out.println("other giraffe --> " + giraffe);  
  
        giraffe.brushNeck();  
        giraffe.breastfeed();  
        giraffe.breastfeed(sat: 1);  
  
        System.out.println("\n ZOO ANIMALS");  
        System.out.println("animals");  
        System.out.println("total animals --> " + animals.size());  
    }  
}
```

The output window shows the following results:

```
run:  
POLYMORPHISM by DAVID CEPEDA  
animal -->  
- Animal(id=0, scientificName=platypus, bornDate=Sat Jan 13 07:52:34 ECT 2024, cageId=1)  
animal typeclass ec.edu.espe.zoo.model.Animal  
animal --> Platypus[Mammal|Vertebrate]  
- Animal(id=0, scientificName=platypus scientific, bornDate=Sat Jan 13 07:52:34 ECT 2024, cageId=0)spine=spine small, numberOfBones=0)numberOfMammaryGla  
animal typeclass ec.edu.espe.zoo.model.Platypus  
animal --> Giraffe[Mammal|Vertebrate]  
- Animal(id=0, scientificName=girafus, bornDate=Sat Jan 13 07:52:34 ECT 2024, cageId=1)spine=big spine, numberOfBones=0)numberOfMammaryGlands=0)  
animal typeclass ec.edu.espe.zoo.model.Giraffe  
other giraffe --> Giraffe[Mammal|Vertebrate]  
- Animal(id=0, scientificName=giraffa, bornDate=Thu Feb 01 00:00:00 ECT 3923, cageId=0)spine=long, numberOfBones=0)numberOfMammaryGlands=0)  
brushing the neck of the giraffe  
giraffe is breastfeeding  
giraffe is breastfeeding its babe number --> 1  
  
ZOO ANIMALS  
[  
- Animal(id=0, scientificName=platypus, bornDate=Sat Jan 13 07:52:34 ECT 2024, cageId=1), Platypus[Mammal|Vertebrate(  
- Animal(id=0, scientificName=platypus scientific, bornDate=Sat Jan 13 07:52:34 ECT 2024, cageId=0)spine=spine small, numberOfBones=0)numberOfMammaryGla  
- Animal(id=0, scientificName=giraffa, bornDate=Thu Feb 01 00:00:00 ECT 3923, cageId=0)spine=long, numberOfBones=0)numberOfMammaryGlands=0)]  
total animals --> 3  
BUILD SUCCESSFUL (total time: 8 seconds)
```