



**Universidad de las Fuerzas Armadas ESPE**

## **Object Oriented Programming**

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WorkShop # 26

Topic: Polymorphism

```

23 System.out.println("animal --> " + animal);
24 System.out.println("animal type" + animal.getClass());
25
26 animal=new Giraffe(numberOfMammaryGlands: 0, id: 0, scientificName: "girafus", new Date(), cageId: 0, spine: "big spine", numberOfBones: 0);
27 System.out.println("animal --> " + animal);
28 System.out.println("animal type" + animal.getClass());
29 //animal.brushNeck();
30
31 Giraffe giraffe = new Giraffe(numberOfMammaryGlands: 4, id: 2, scientificName: "Giraffa", new Date(year: 2023, month: 1, date: 1), cageId: 3, spine: "long", numberOfBones: 206);
32 animals.add(= giraffe);
33 System.out.println("other Giraffe --> " + giraffe);
34
35 giraffe.brushNeck();
36
37 giraffe.breastfeed();
38 giraffe.breastfeed(= 1);
39
40 animals.add(= giraffe);
41
42 System.out.println(= "\n ZOO ANIMALS");
43 System.out.println(= animals);
44 System.out.println("total animals --> " + animals.size());
45

```

Output-Zoo (run) X

```

run:
--> POLYMORPHISM by Antonio Revilla

animal -->
- Animal(id=0, scientificName=Platypus, bornDate=Sat Jan 13 07:40:52 ECT 2024, cageId=1)
animal typeclass ec.edu.espe.zoo.model.Animal
animal --> Platypus(Mammal|Vertebrate{
- Animal(id=0, scientificName=Platypus, bornDate=Sat Jan 13 07:40:52 ECT 2024, cageId=0)spine=spine small, numberOfBones=0)numberOfMammaryGlands=0)poisonous=true, poisonGlands=0)
animal typeclass ec.edu.espe.zoo.model.Platypus
animal --> Giraffe(Mammal|Vertebrate{
- Animal(id=0, scientificName=girafus, bornDate=Sat Jan 13 07:40:52 ECT 2024, cageId=0)spine=big spine, numberOfBones=0)numberOfMammaryGlands=0)
animal typeclass ec.edu.espe.zoo.model.Giraffe
other Giraffe --> Giraffe(Mammal|Vertebrate{
- Animal(id=2, scientificName=Giraffa, bornDate=Thu Feb 01 00:00:00 ECT 3523, cageId=3)spine=long, numberOfBones=206)numberOfMammaryGlands=4}
brush the neck of the giraffe
giraffe is breastfeeding
giraffe is breast feeding it's calf number -->1

ZOO ANIMALS
[
- Animal(id=0, scientificName=Platypus, bornDate=Sat Jan 13 07:40:52 ECT 2024, cageId=1), Giraffe(Mammal|Vertebrate{
- Animal(id=0, scientificName=Giraffa, bornDate=Thu Feb 01 00:00:00 ECT 3523, cageId=3)spine=long, numberOfBones=206)numberOfMammaryGlands=4}), Giraffe(Mammal|Vertebrate{
- Animal(id=2, scientificName=Giraffa, bornDate=Thu Feb 01 00:00:00 ECT 3523, cageId=3)spine=long, numberOfBones=206)numberOfMammaryGlands=4}]]
total animals -->3
total execution time: 0 seconds

```

