# UNIVERSIDAD DE LAS FUERZAS ARMADAS ESPE

**CLASS NAME:** OBJECT ORIENTED PROGRAMMING

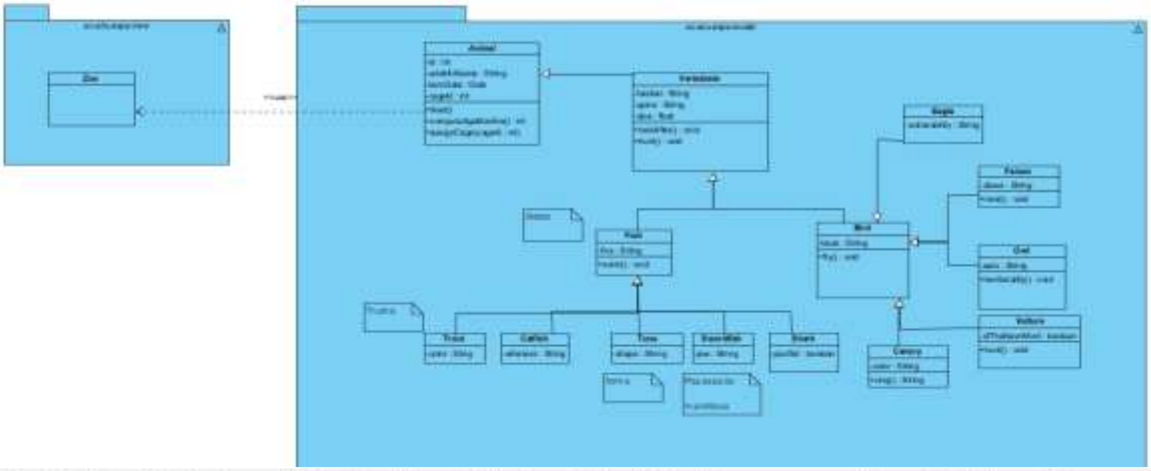
**TEACHER:** EDISON LASCANO

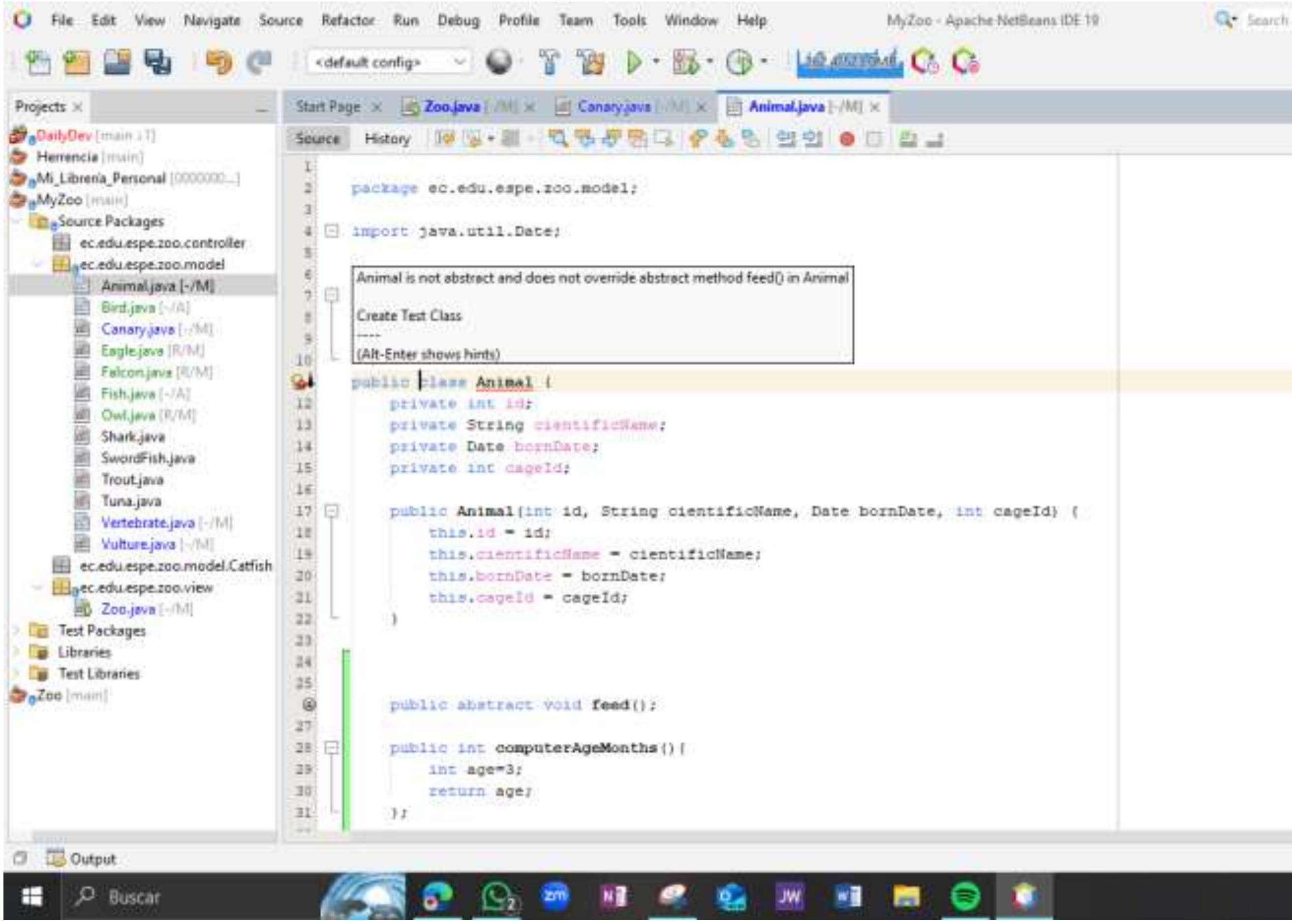
NRC:14575

**HOME WORK # 15**

**TOPIC:** Abstraction_override_functions

**NAME:** CARLOS ÑATO



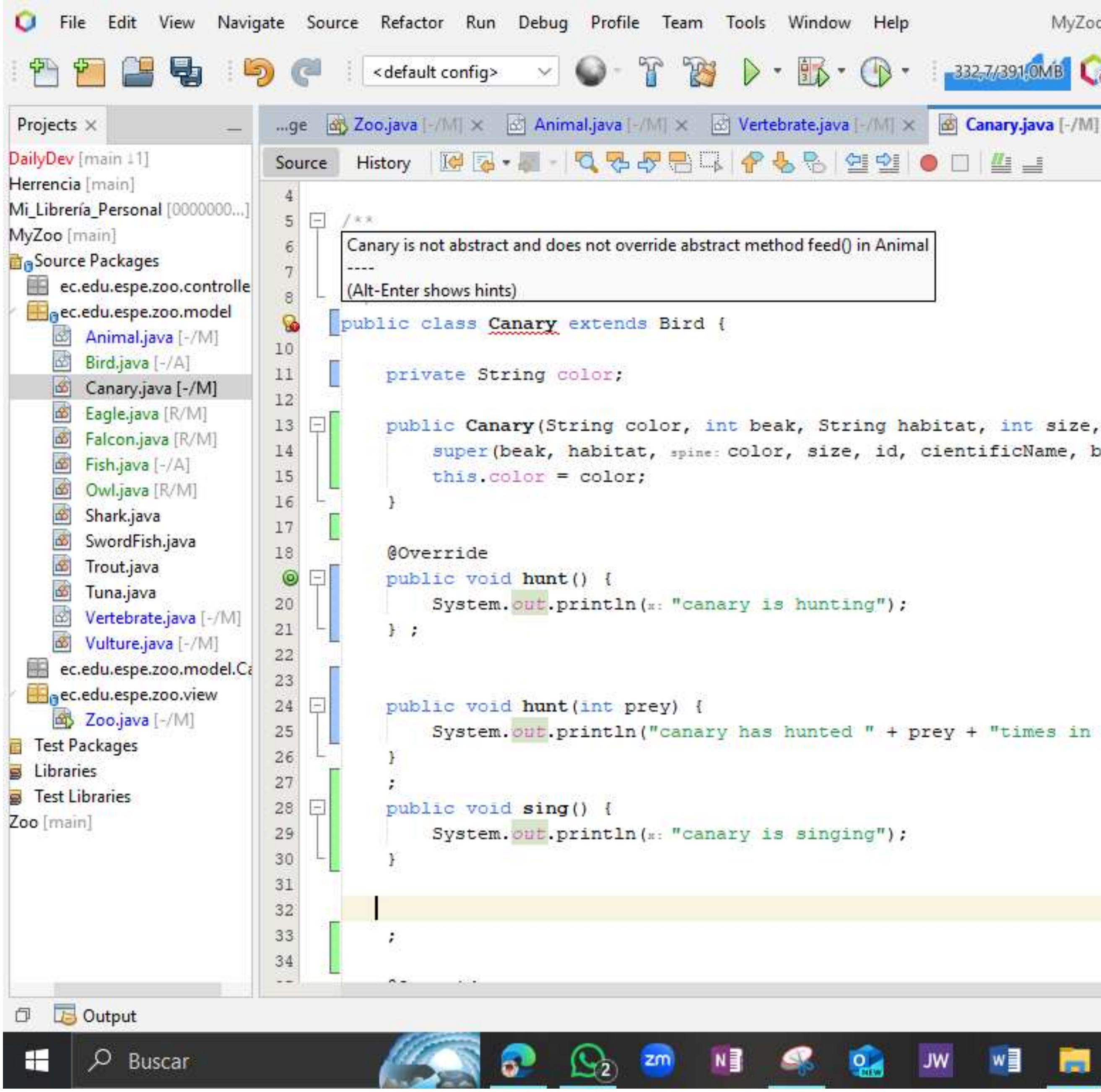


```
package ec.edu.espe.zoo.model;

import java.util.Date;
```

Animal is not abstract and does not override abstract method feed() in Animal

Create Test Class
----
(Alt-Enter shows hints)

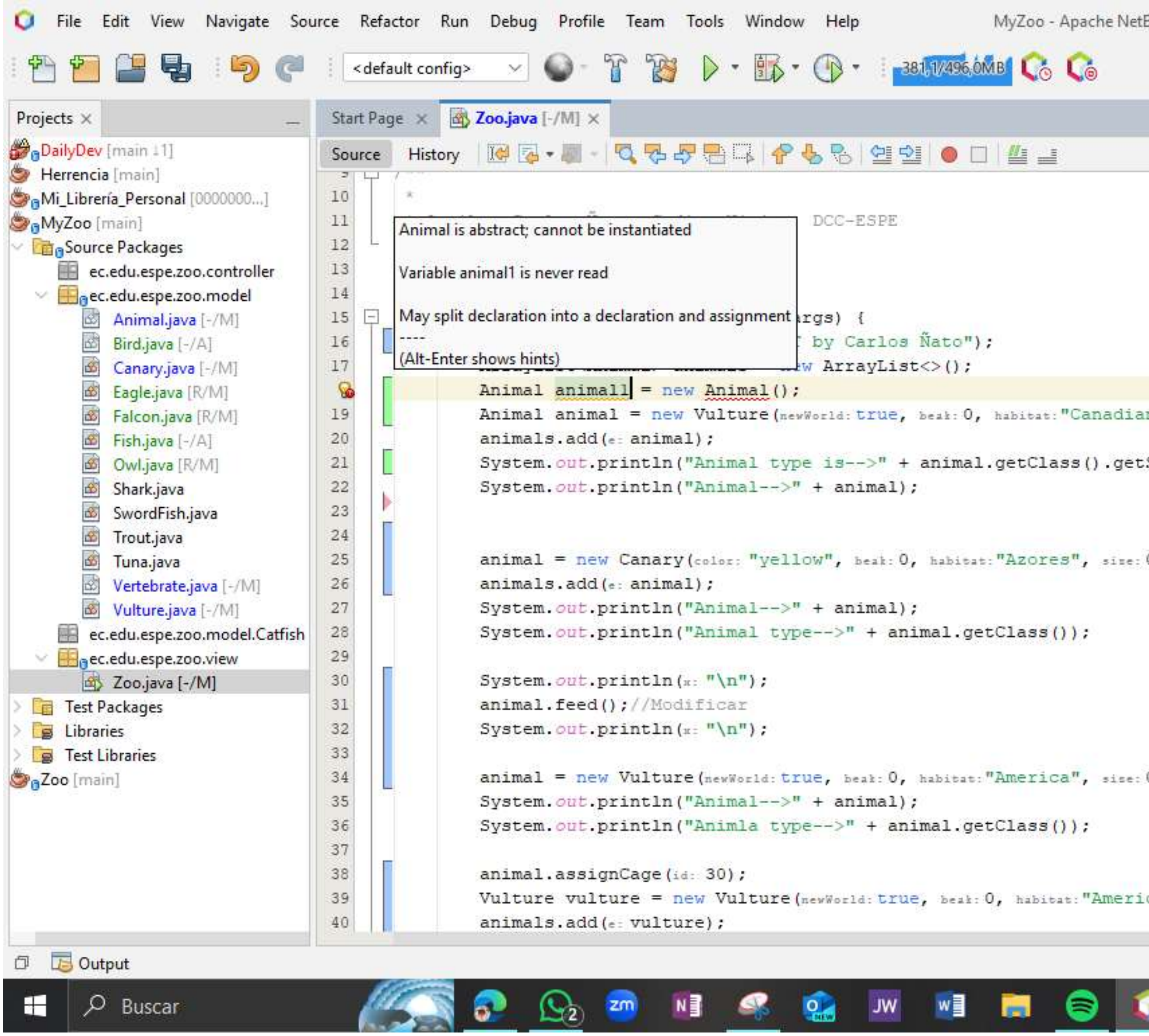
```
public class Animal {
    private int id;
    private String cientificName;
    private Date bornDate;
    private int cageId;

    public Animal(int id, String cientificName, Date bornDate, int cageId) {
        this.id = id;
        this.cientificName = cientificName;
        this.bornDate = bornDate;
        this.cageId = cageId;
    }



    public abstract void feed();

    public int computerAgeMonths() {
        int age=3;
        return age;
    };
```



```

/**
```

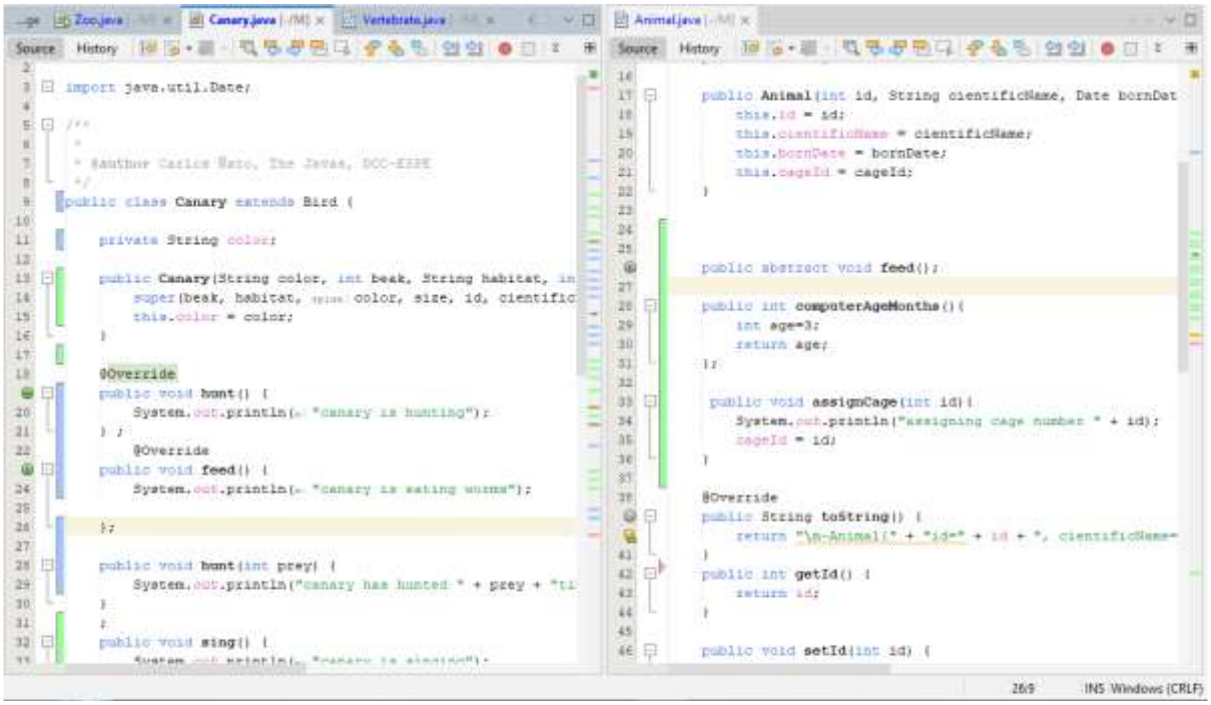
Canary is not abstract and does not override abstract method feed() in Animal
----
(Alt-Enter shows hints)

```
public class Canary extends Bird {

    private String color;

    public Canary(String color, int beak, String habitat, int size,
        super(beak, habitat, spine: color, size, id, cientificName, b
        this.color = color;
    }

    @Override
    public void hunt() {
        System.out.println(x: "canary is hunting");
    } ;


    public void hunt(int prey) {
        System.out.println("canary has hunted " + prey + "times in
    }
    ;
    public void sing() {
        System.out.println(x: "canary is singing");
    }


    ;
```



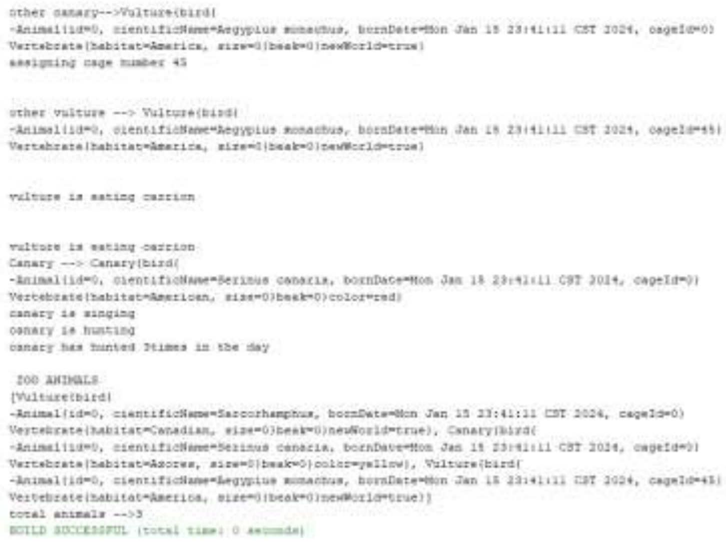
```
Animal is abstract; cannot be instantiated

Variable animal1 is never read

May split declaration into a declaration and assignment
----
(Alt-Enter shows hints)
```

```
 *
                                       DCC-ESPE



                                     rgs) {
                                      by Carlos Ñato");
                                    w ArrayList<>();
        Animal animal1 = new Animal();
        Animal animal = new Vulture(newWorld: true, beak: 0, habitat:"Canadiar
        animals.add(e: animal);
        System.out.println("Animal type is-->" + animal.getClass().getS
        System.out.println("Animal-->" + animal);


        animal = new Canary(color: "yellow", beak: 0, habitat:"Azores", size:
        animals.add(e: animal);
        System.out.println("Animal-->" + animal);
        System.out.println("Animal type-->" + animal.getClass());

        System.out.println(x: "\n");
        animal.feed();//Modificar
        System.out.println(x: "\n");

        animal = new Vulture(newWorld: true, beak: 0, habitat:"America", size:
        System.out.println("Animal-->" + animal);
        System.out.println("Animla type-->" + animal.getClass());

        animal.assignCage(id: 30);
        Vulture vulture = new Vulture(newWorld: true, beak: 0, habitat:"Americ
        animals.add(e: vulture);
```



```java

import java.util.Date;

/**
 *
 * @author Carlos Nato, The Javas, DCC-ESPE
 */
public class Canary extends Bird {

    private String color;

    public Canary(String color, int beak, String habitat, in
        super(beak, habitat, color, size, id, cientific
        this.color = color;
    }

    @Override
    public void hunt() {
        System.out.println("canary is hunting");
    } ;
        @Override
    public void feed() {
        System.out.println("canary is eating worms");

    };

    public void hunt(int prey) {
        System.out.println("canary has hunted " + prey + "ti
    }
    ;
    public void sing() {
        System.out.println("canary is singing");
```

```java

    public Animal(int id, String cientificName, Date bornDat
        this.id = id;
        this.cientificName = cientificName;
        this.bornDate = bornDate;
        this.cageId = cageId;
    }



    public abstract void feed();

    public int computerAgeMonths(){
        int age=3;
        return age;
    };

     public void assignCage(int id){
        System.out.println("assigning cage number " + id);
        cageId = id;
    }

    @Override
    public String toString() {
        return "\n-Animal{" + "id=" + id + ", cientificName=
    }
    public int getId() {
        return id;
    }

    public void setId(int id) {
```



```
other canary-->Vulture{bird{
-Animal{id=0, cientificName=Aegypius monachus, bornDate=Mon Jan 15 23:41:11 CST 2024, cageId=0}
Vertebrate{habitat=America, size=0}beak=0}newWorld=true}
assigning cage number 45


other vulture --> Vulture{bird{
-Animal{id=0, cientificName=Aegypius monachus, bornDate=Mon Jan 15 23:41:11 CST 2024, cageId=45}
Vertebrate{habitat=America, size=0}beak=0}newWorld=true}


vulture is eating carrion


vulture is eating carrion
Canary --> Canary{bird{
-Animal{id=0, cientificName=Serinus canaria, bornDate=Mon Jan 15 23:41:11 CST 2024, cageId=0}
Vertebrate{habitat=American, size=0}beak=0}color=red}
canary is singing
canary is hunting
canary has hunted 3times in the day

 ZOO ANIMALS
[Vulture{bird{
-Animal{id=0, cientificName=Sarcorhamphus, bornDate=Mon Jan 15 23:41:11 CST 2024, cageId=0}
Vertebrate{habitat=Canadian, size=0}beak=0}newWorld=true}, Canary{bird{
-Animal{id=0, cientificName=Serinus canaria, bornDate=Mon Jan 15 23:41:11 CST 2024, cageId=0}
Vertebrate{habitat=Azores, size=0}beak=0}color=yellow}, Vulture{bird{
-Animal{id=0, cientificName=Aegypius monachus, bornDate=Mon Jan 15 23:41:11 CST 2024, cageId=45}
Vertebrate{habitat=America, size=0}beak=0}newWorld=true}]
total animals -->3
BUILD SUCCESSFUL (total time: 0 seconds)
```