

## Code:

Animal.java

```
public abstract class Animal {  
    3 usages  
    private String name;  
    3 usages  
    private int age;  
    3 usages  
    private int weight;|  
    3 usages  
    private String species;  
    1 usage  📌 daniel  
    public Animal(String name, int age, int weight, String species) {  
        this.name = name;  
        this.age = age;  
        this.weight = weight;  
        this.species = species;  
    }  
  
    1 usage  📌 daniel  
    public String getName() {  
        return name;  
    }  
  
    no usages  📌 daniel  
    public void setName(String name) {  
        this.name = name;  
    }  
  
    1 usage  📌 daniel  
    public int getAge() {  
        return age;  
    }  
  
    no usages  📌 daniel  
    public void setAge(int age) {  
        this.age = age;  
    }  
  
    1 usage  📌 daniel  
    public int getWeight() {  
        return weight;  
    }  
}
```

```

no usages  🧑 daniel
public void setWeight(int weight) {
    this.weight = weight;
}

1 usage  🧑 daniel
public String getSpecies() {
    return species;
}

no usages  🧑 daniel
public void setSpecies(String species) {
    this.species = species;
}

1 usage  1 implementation  🧑 daniel
public abstract void extinct();

```

## Lion.java

```

2 usages  🧑 daniel
public class Lion extends Animal {

    1 usage  🧑 daniel
    public Lion(String name, int age, int weight, String species) {
        super(name, age, weight, species);
    }

    1 usage  🧑 daniel
    @Override
    public void extinct() {
        System.out.println("This species has gone extinct due to overhunting, habitat destruction, and a fatal respiratory ailment.")
    }
}

```

## Main.java

```
public class Main {  
    @ daniel *  
    public static void main(String[] args) {  
  
        Lion lion = new Lion( name: "Initial Name", age: 0, weight: 0, species: "Initial Species");  
  
        lion.setName("Leo");  
        lion.setAge(100000);  
        lion.setWeight(300);  
        lion.setSpecies("Barbary lion");  
  
        System.out.println("Name: " + lion.getName());  
        System.out.println("Age: " + lion.getAge());  
        System.out.println("Weight: " + lion.getWeight() + " kg");  
        System.out.println("Species: " + lion.getSpecies());  
  
        lion.extinct();  
    }  
}
```

## Result:

```
"C:\Program Files\Java\jdk-20\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2023.3  
Name: Leo  
Age: 100000  
Weight: 300 kg  
Species: Barbary lion  
This species has gone extinct due to overhunting, habitat destruction, and a fatal respiratory ailment.  
  
Process finished with exit code 0
```

## Github repo link:

[https://github.com/daniellim27/Daniel\\_Exercise1\\_DSA\\_TA\\_2024](https://github.com/daniellim27/Daniel_Exercise1_DSA_TA_2024)