

## **Instruction 20 :**

To simplify the management of animals in our zoos, we identify 2 main families of animals: **Aquatic and Terrestrial**.

- An aquatic animal is characterized by a "habitat" (String), which indicates where it lives.
- A terrestrial animal is characterized by "nbrLegs" (int), which indicates the number of its legs.

An aquatic animal can be:

- A dolphin (Dolphin) is characterized by the attribute "swimmingSpeed" (float), which indicates its swimming speed.
- A penguin (Penguin) is characterized by the attribute "swimmingDepth" (float) describing the depth to which it can swim underwater.

Create these classes by declaring only the attributes.

## **Instruction 21 :**

Create, in the main method, an instance of each class previously declared using the default constructors.

## **Instruction 22 :**

Create parameterized constructors in all the child classes.

Nb: Don't forget to protect previously declared attributes.

What do you notice about the main method ?

Correct any errors you find.

### **Instruction 23 :**

Redefine the "**toString()**" method in the subclasses, to include common and specific attributes.

Display the previously created objects in the main method.

### **Instruction 24 :**

Create the "**public void swim()**" method in the :

- Aquatic class, which displays the message "This aquatic animal is swimming".
- Dolphin class, which displays the message "This dolphin is swimming".

Call this method using the 3 objects of type **Aquatic, Dolphin and Penguin**.

What do you notice?