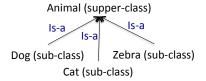# Static Classes

A class is static if all its fields and methods are static.

$\Rightarrow$ no point to creating <u>objects</u> of that class.

$\Rightarrow$ useful for grouping functions
(link Math.sin, Math.cos, ...)

Programms (in Java) are static classes!

Inheritance is <u>is-a</u> relation and <u>nothing else</u>.

Animal (supper-class)

Is-a   Is-a   Is-a

Dog (sub-class)   Zebra (sub-class)

Cat (sub-class)

- final classes cannot be sub classes.
- final methods cannot be over-written.

Inheritance - Cont.

```java
class Animal {
 String name;
 public void makeNoise() {System.out.println("Noises...");}}

class Dog extends Animal {
 String color;
 public void makeNoise() {System.out.println("Roaring:waag!");}}

class Cat extends Animal {
 public void makeNoise() {System.out.println("Roaring:miooo!");}}

class Zebra extends Animal {
 String type;
 public void makeNoise() {System.out.println("(Striped) neigh?");}
}
```