CLASS AND OBJECT IN JAVA

What is Class and Object in Java OOP

- **Class** are a blueprint or a set of instructions to build a specific type of object. It is a basic concept of Object-Oriented Programming which revolve around the real-life entities. Class in Java determines how an object will behave and what the object will contain.

Syntax of Class in Java

```
class <class_name>{
    field;
    method;
  }
```

- **Object** is an instance of a class. An object in OOPS is nothing but a self-contained component which consists of methods and properties to make a particular type of data useful.

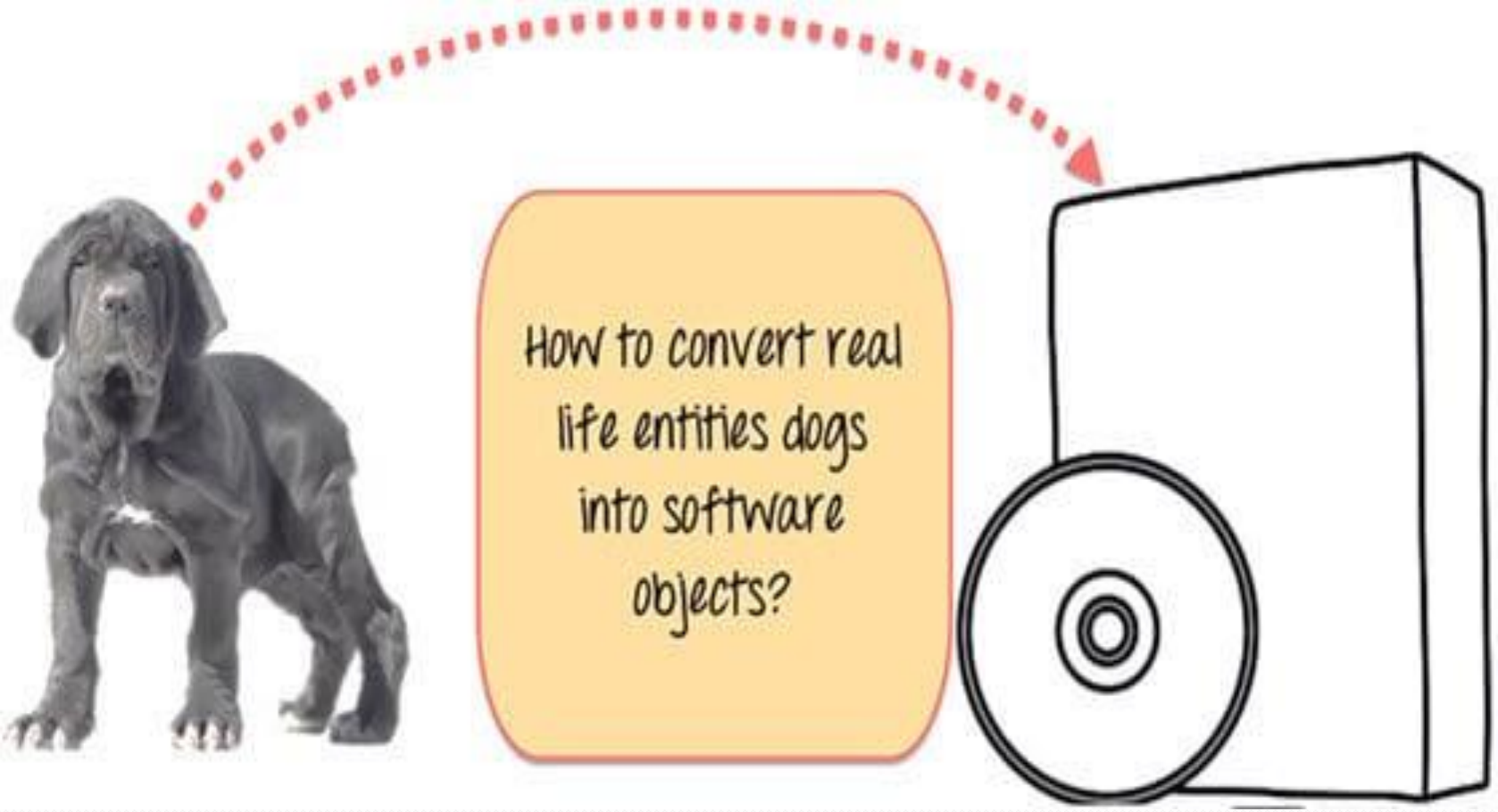
Object Syntax in Java

```
ClassName ReferenceVariable = new ClassName();
```

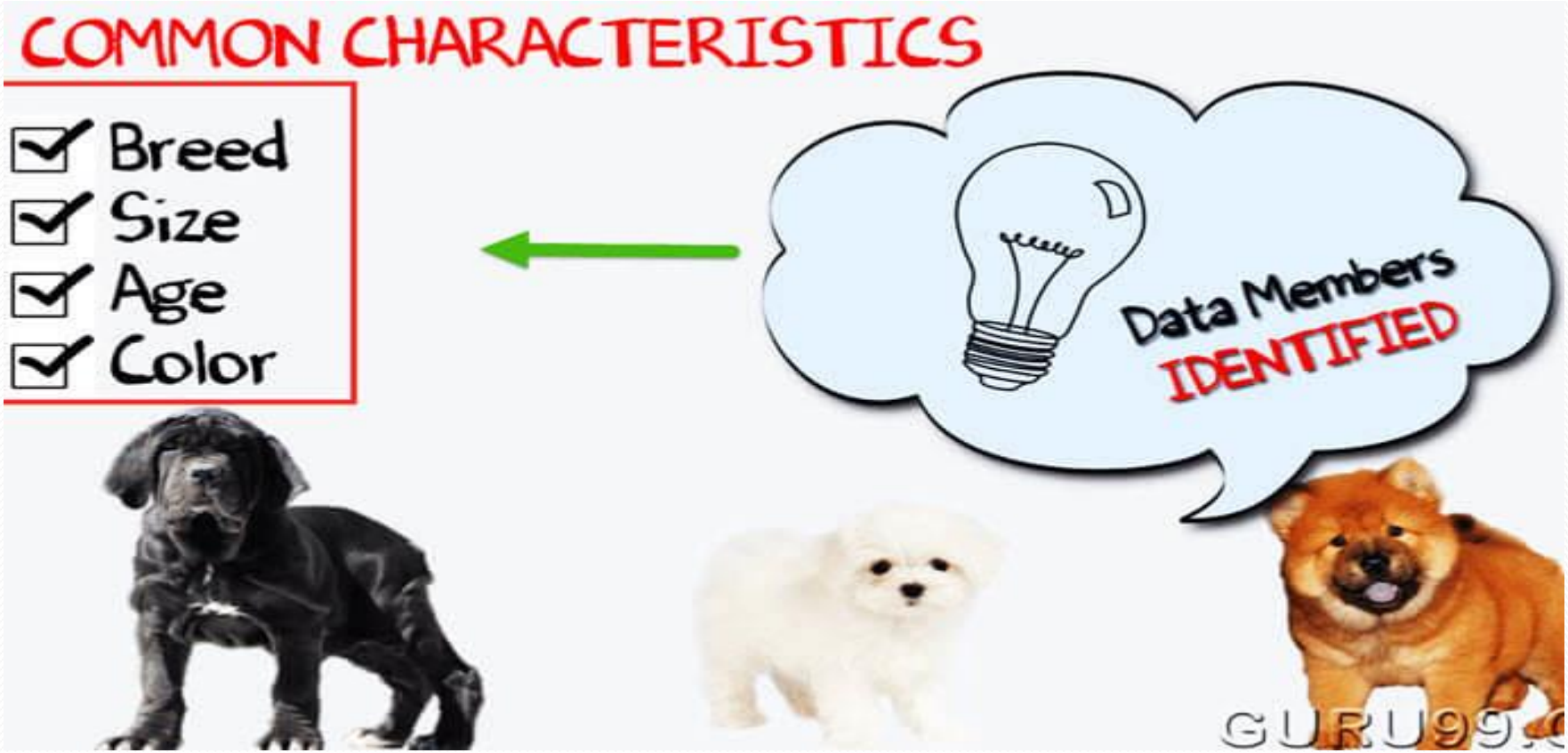
What is the Difference Between Object and Class in Java?

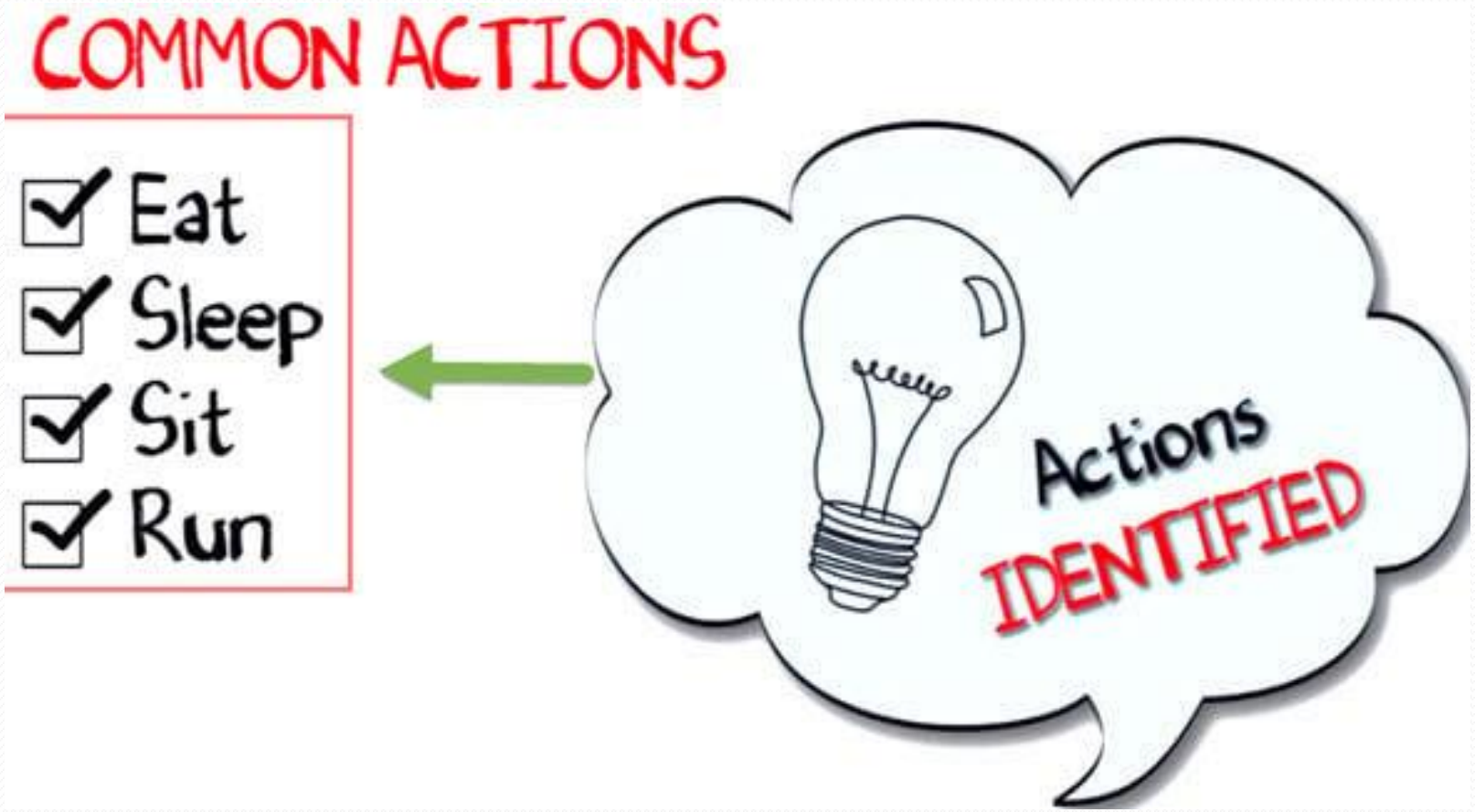
- A **Class** in object oriented programming is a blueprint or prototype that defines the variables and the methods (functions) common to all Java Objects of a certain kind.
- An **object** in OOPS is a specimen of a class. Software objects are often used to model real-world objects you find in everyday life.

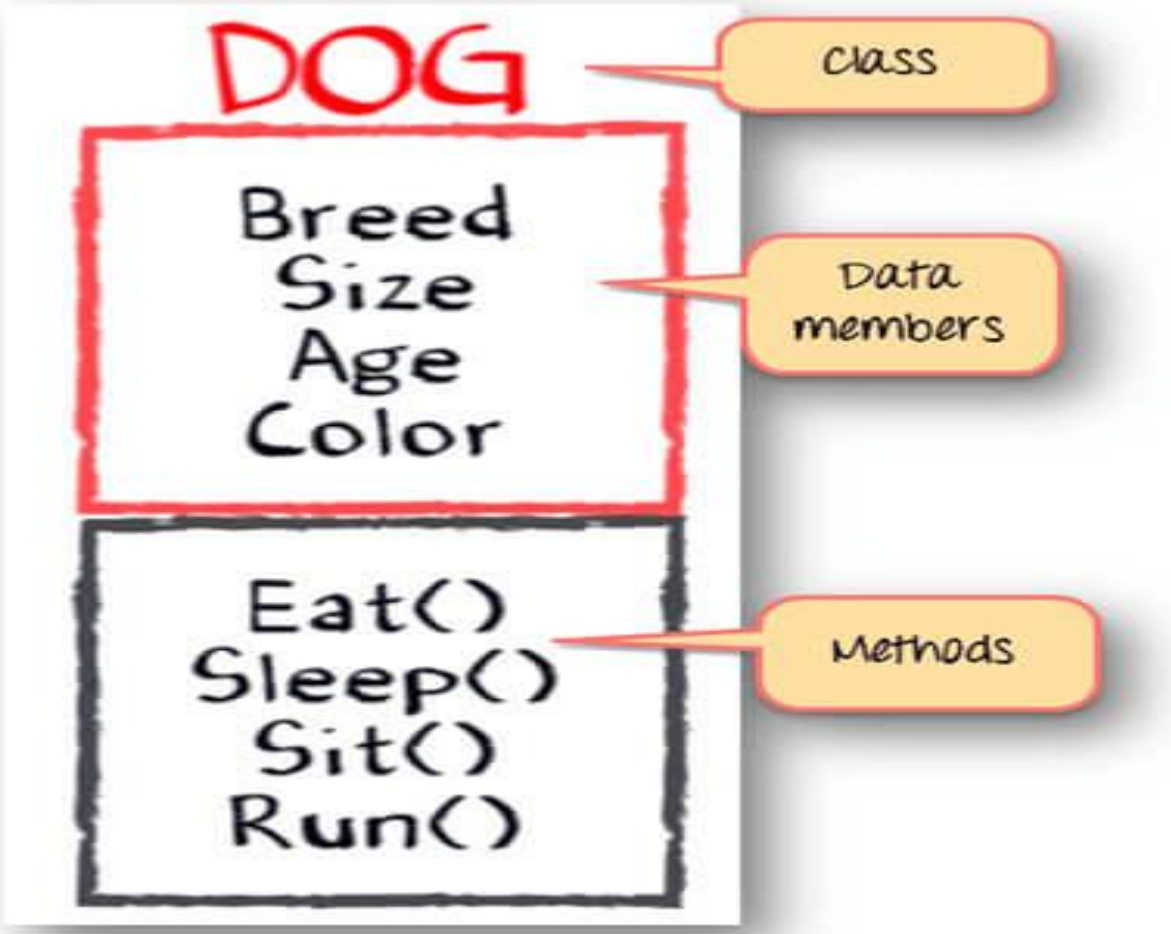
Understand the concept of Java Classes and Objects with an example.

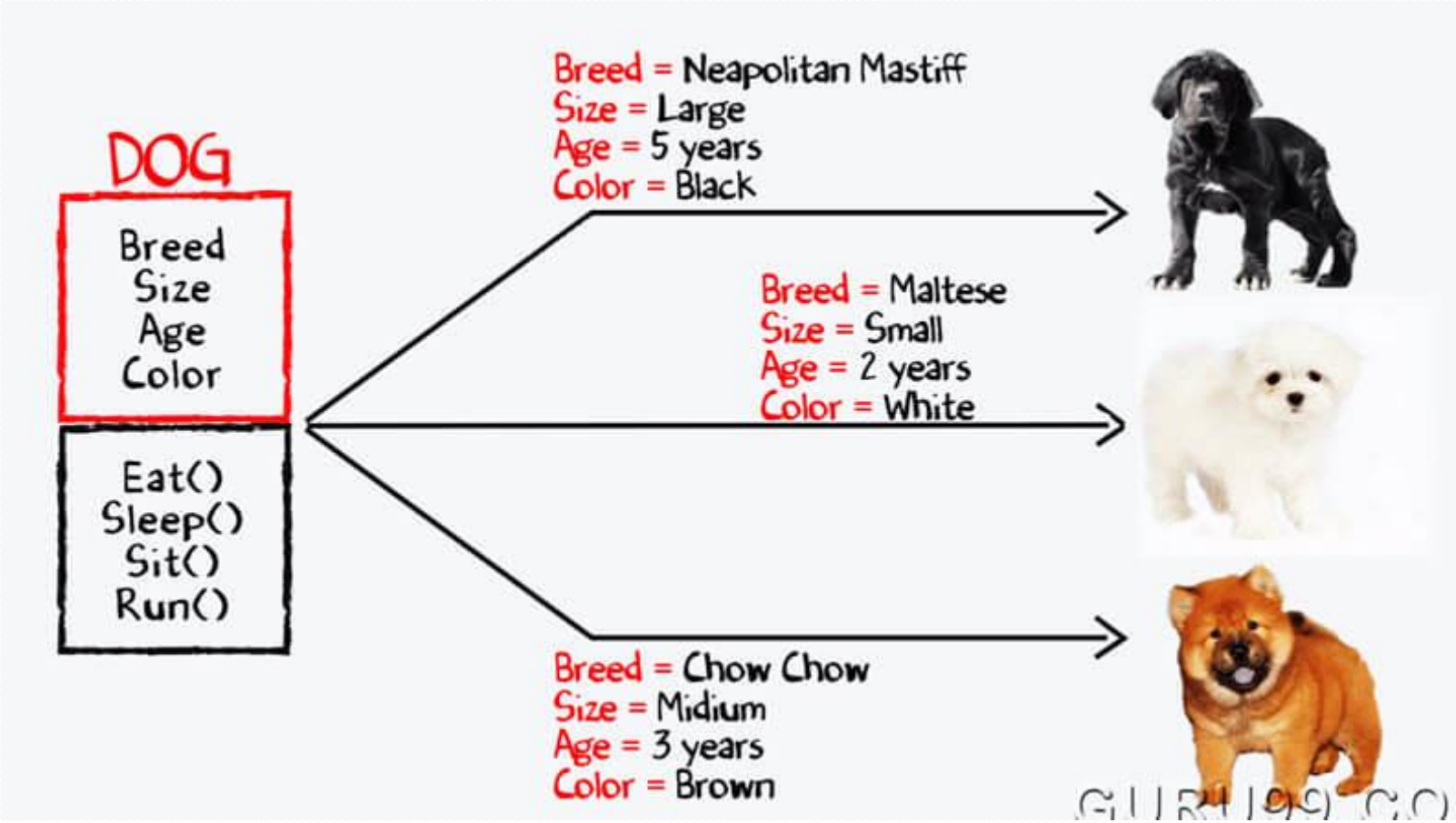


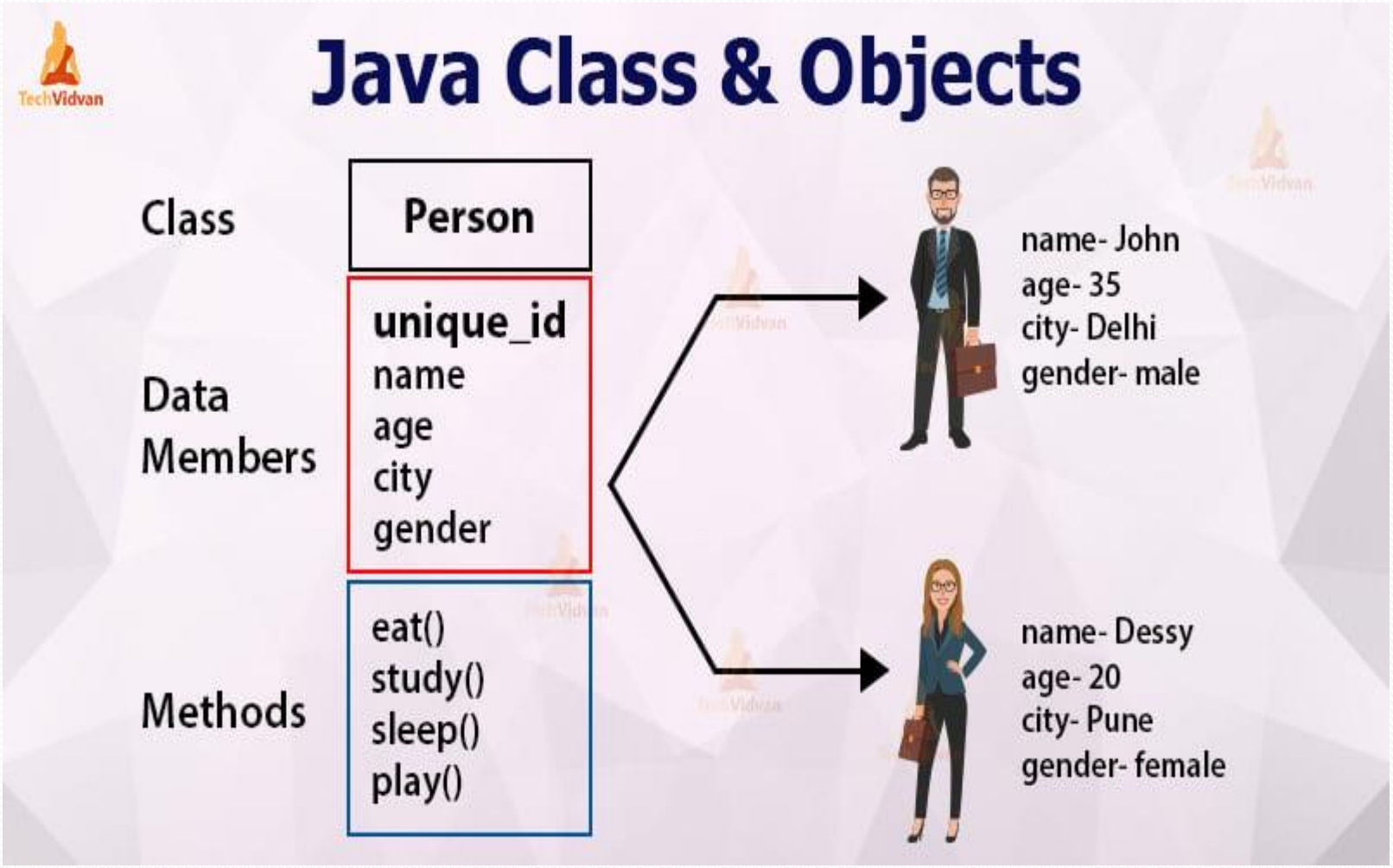
Spot the differences


COMMON CHARACTERISTICS
Breed
Size
Age
Color
Data Members
IDENTIFIED
GURU99.


COMMON ACTIONS
Eat
Sleep
Sit
Run
Actions
IDENTIFIED


DOG
Class
Breed
Size
Age
Color
Data members
Eat()
Sleep()
Sit()
Run()
Methods


DOG
Breed
Size
Age
Color
Eat()
Sleep()
Sit()
Run()
Breed = Neapolitan Mastiff
Size = Large
Age = 5 years
Color = Black
Breed = Maltese
Size = Small
Age = 2 years
Color = White
Breed = Chow Chow
Size = Midium
Age = 3 years
Color = Brown


Java Class & Objects
TechVidvan
Class
Person
Data Members
unique_id
name
age
city
gender
Methods
eat()
study()
sleep()
play()
name- John
age- 35
city- Delhi
gender- male
name- Dessy
age- 20
city- Pune
gender- female

Oop1.java

```java
package my_java_activities;

public class Oop1 {
    public static void main(String[] args) {
            Dog maltese = new Dog();
            maltese.breed="Maltese";
            maltese.size="Medium";
            maltese.age=2;
            maltese.color="white";
            System.out.println(maltese.getInfo());


            Dog shihtzu = new Dog();
            shihtzu.breed="Shihtzu";
            shihtzu.size="Small";
            shihtzu.age=3;
            shihtzu.color="brown";
            System.out.println(shihtzu.getInfo());

    }

}

class Dog {
    // Instance Variables
    String breed;
    String size;
    int age;
    String color;


    // method 1
    public String getInfo() {
        return ("Breed is: "+breed+" Size is:"+size+" Age is:"+age+" color is: "+color);
    }
}
```

Console

<terminated> Oop1 [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (31 Jan 2023, 6:46:36 pm – 6:46:37 pm)

```
Breed is: Maltese Size is:Medium Age is:2 color is: white
Breed is: Shihtzu Size is:Small Age is:3 color is: brown
```