

## OBJECT ORIENTED PRINCIPLES.

### Lab03: OOP Fundamentals: Encapsulation.

On this lab a Java application for practising Encapsulation is proposed.

- The folder **src** contains the code of the Java application.
  - o MyMain.java => This class tests the functionality of Lab03. This class is provided completed, so you must not modify it.
  - o Dog.java => Our class modelling the concept of a dog. **You must complete this class.** However, for the get and set methods, and the extra methods, you can reuse them from Lab02.
  - o Toy.java => A class modelling a Dog toy. This class is provided completed, so you must not modify it.
- The folder **javadoc** contains the documentation of the Java application.
  - o MyMain.html => This file contains the description of the class MyMain.java.
  - o Dog.html => This file contains the description of the fields, constructor, get methods, set methods and extra functionality of the class Dog.java. Use this file to guide you in completing the code of the file Dog.java.
  - o Toy.html => This file contains the description of the fields, constructor, get and set methods of the class Toy.java.
- The folder **results** contains the expected results of the Java application.
  - o result\_option\_1.txt => This file contains the output obtained from running the lecturer's solution when using <option = 1> in the main method of MyMain.java. That is, when the Java application is used to test the functionality of the first constructor of the class Dog.
  - o result\_option\_2.txt => Running the application with <option = 2> for testing the second constructor of the class Dog.
  - o result\_option\_3.txt => Running the application with <option = 3> for testing the copy constructor in shallow mode of the class Dog.
  - o result\_option\_4.txt => Running the application with <option = 4> for testing the copy constructor in deep mode of the class Dog.

#### Actions:

1. Complete the class Dog.java.  
The fields, constructor, get methods, set methods and extra functionality must follow the description given by the Javadoc files Dog.html.