Larbi ben M'Hidi University
Faculty of exact sciences & natural and life sciences   **2022/2023**
Department MI
3rd year **IS license**   **Dr. Kouah Sofia**
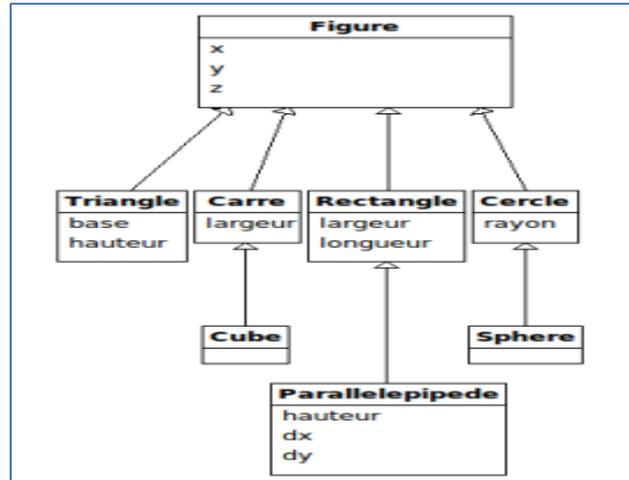
Tutorial 5 : Personal Work

Consider the following class diagram, representing geometric shapes:

Questions:

1. Develop, in Modelio, this class diagram by completing the attributes and operations of each class with the required properties.

Examples of operations: calculation of Perimeter (محيط), calculation of Area (مساحة), calculation of Volume (حجم), etc.

N.B: Class attributes are private; operations are public.

For attributes, indicate their type. For operations, indicate all parameters.

2. Generate, in Modelio, the java code corresponding to each of classes in the diagram.

3. Create a project in Eclipse by putting in all the classes generated by Modelio (Don't forget to make the link between modelio and Eclipse).

4. Complete the class code with the methods corresponding to the diagram operations, as well as with getters, setters, constructors, and the redefinition of the display methods toString( ).

5. Create a Test class allowing you to test the operations implemented on class instances (Objects).

Additional note (You can ignore the note, it does not influence the solution in any way).

Mathematically, a square is a rectangle. On the other hand, we voluntarily presented it as a type in its own right in order to avoid certain object-oriented programming problems relating to behavior and linked mainly to the getters and setters of the two classes if we had presented it as a rectangle subtype

Bon courage