

## 1. Statement of the problem

There is a BlueJ project with some classes and interfaces similar to the ones from the practice sessions. Some code may be missing and has to be completed by the student:

1. Add a new class to the class hierarchy in order to represent a quadrangular prism. A quadrangular prism is a three-dimensional geometrical shape similar to a cylinder but the base is an *square* instead of a circumference.
  - Since quadrangular prisms have volume, this new kind of figure must be properly related with the other project components so that this project can be managed in an efficient way. For instance, if we plan to force all three-dimensional figures to implement a new method, it can be possible to do it with the minimal number of changes.
  - Inheritance must be taken into account: quadrangular prisms must inherit their position and their base from other geometrical shape.
  - Quadrangular prisms can be constructed in two different ways: A constructor can receive X,Y coordinates, the length of their base and the height. Another constructor receive as arguments an square and the height. An example of each type of constructor is found in the *UsoGrupoFiguras* class.
2. Add the *volumen* method to the *GrupoFiguras* class in order to compute the overall volume of the group (the sum of the volumes of all the figures contained in the group). This method should be valid if new types of figure are included into the project.
3. Perform the required changes in the project so that it compile without errors and all the elements works correctly.

## 2. Test

If the project is successfully completed, the execution of the *main* method from the *UsoGrupoFiguras* class produces the following result: 8.0.

## 3. Available time to solve the problem

The student has 45 minutes to solve the problem.