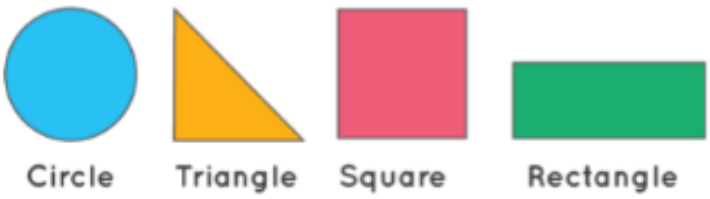
C5- S2 – PRACTICE



⚠ Your project must include a `tsconfig.json` file and build JS files in `/dist` folder

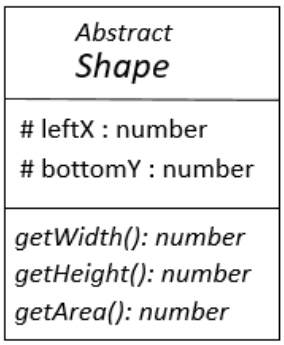
⚠ Each class must be in a separate file *(example: Rectangle.ts)*

⚠ You also need to create a Main.ts file to test all your shapes

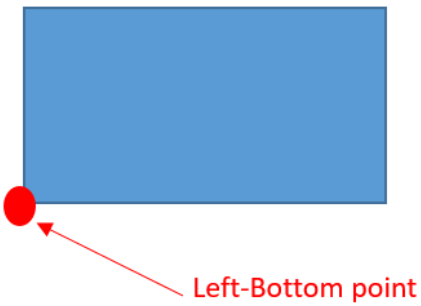
A) The abstract shape

We want to manage shapes such as triangles, squares, rectangles, circles…

We first define an **abstract** class Shape as follows:



- ✓ leftX and bottomY are the position of the left bottom point of shapes.



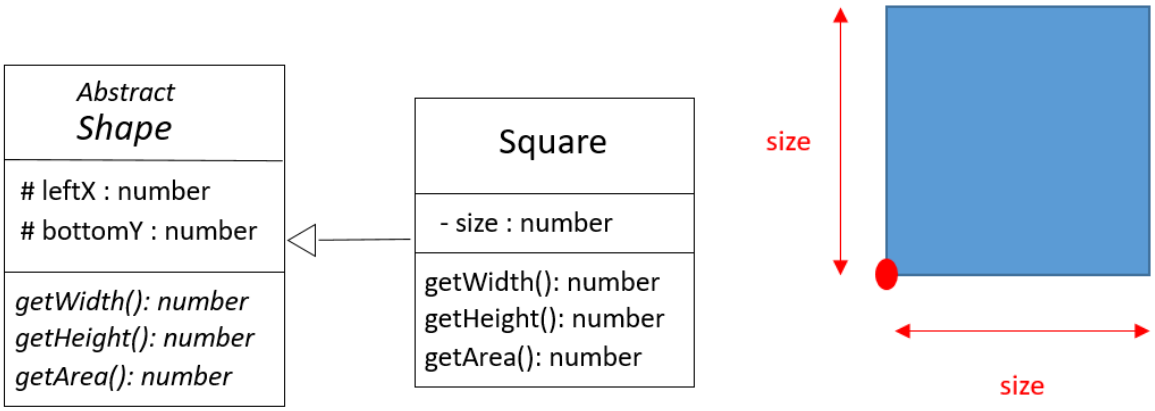
- ✓ getWidth, getHeight, getArea are abstract, because they depends on the specific shape.

Q1 Implement this class Shape

B) The square

A square:

- Inherits from the abstract Shape class
- Is defined by its **left-bottom point** and **size**



Q2 Implement this class Square

Note: the constructor has following parameters: leftX, bottomY and size.

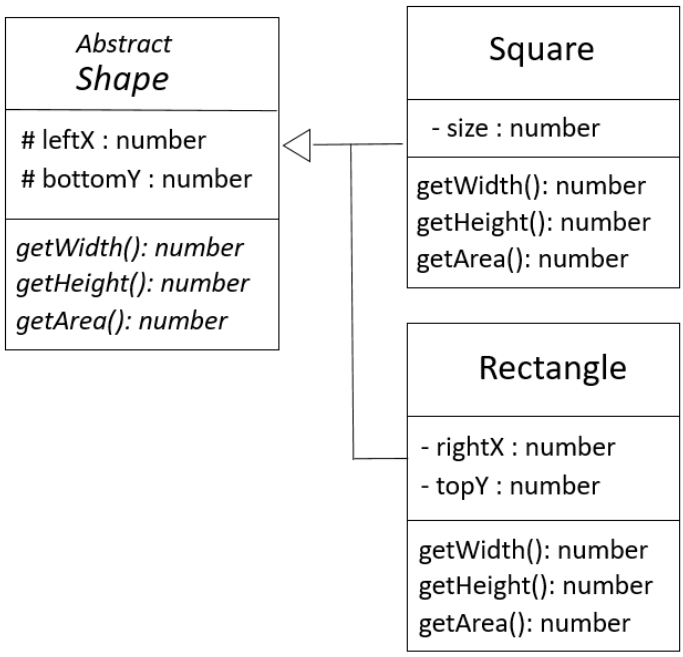
Q3 Implement the required methods (required by the abstract class):

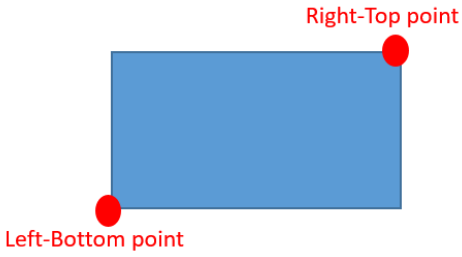
- getWidth
- getHeight
- getArea

C) The rectangle

A rectangle:

- Inherits from the abstract Shape class
- Is defined by its **left-bottom point** and its **right-top points**





Q4 Implement this class Rectangle

Note: the constructor has following parameters: leftX, bottomY and rigthX, topY.

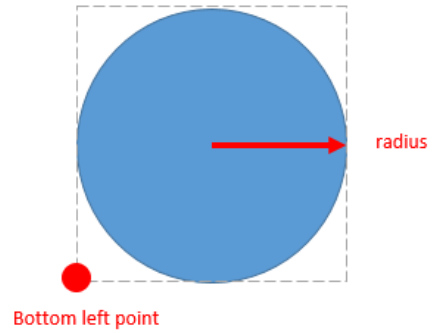
Q5 Implement the required methods (required by the abstract class):

- getWidth
- getHeight
- getArea

C) The circle

A circle:

- Inherits from the abstract Shape class
- Is defined by its **left-bottom point** and its **radius**



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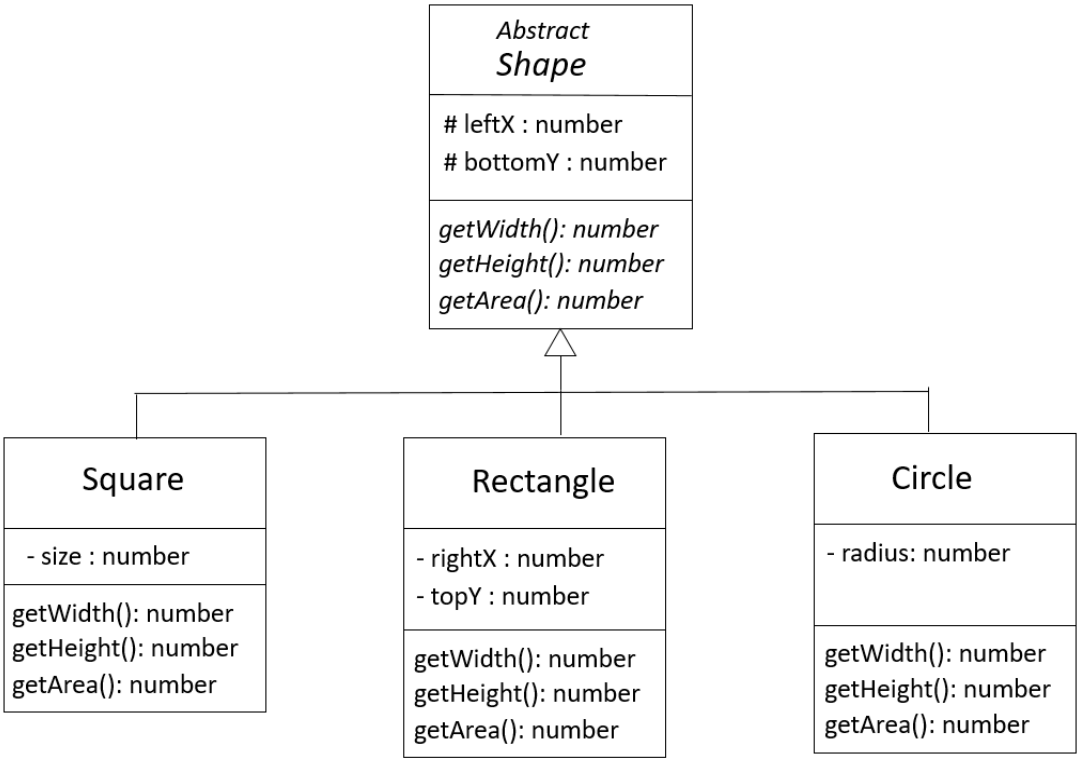

Q4 Implement this class Circle

Note: the constructor has following parameters: leftX, bottomY and radius

Q5 Implement the required methods (required by the abstract class):

- getWidth
- getHeight
- getArea