Shapes Inheretance

Shape

- totalArea : Double = 0
- type : String
- parent : Shape = null

+ getType() : String
+ getArea() : Double
+ toString(): String
+ abstract addArea(String type)

- isMyType(String) : Boolean

Ellipses

- parent : Shape = Shape
- type : String = "Ellipses"

Convex Polygon

- parent : Shape = Shape
- type : String = "Convex Polygon

Square

- parent : Shape = Ellipses
- type : String = "Circles"

+ addArea(String type, Double radius)

Non-Square Rectangles

- parent : Shape = Ellipses
- type : String = "Non-Circle Ellipses"

+ addArea(String type, Double major, Double minor)

Triangles

- parent : Shape = "Convex Polygon"
- type : String = "Triangles

+ addArea(String type, Double side1, Double side2, Double side3)

Rectangles

- parent : Shape = Convex Polygon
- type : String = "Rectangles"

+ addArea(String type, Double length, Double width)

Other Regular Polygons

- parent : Shape = Convex Polygon
- type : String = "Other Regular Polygons"

+ addArea(String type, Double apothea, Int sides, Double sideLength)

Equilateral

- parent : Shape = Triangles
- type : String = "Equilateral"

Isosceles

- parent : Shape = Triangles
- type : String = "Isosceles"

Scalene

- parent : Shape = Triangles
- type : String = "Scalene"

Square

- parent : Shape = Rectangles
- type : String = "Square"

Non-Square Rectangles

- parent : Shape = Rectangles
- type : String = "Non-Square Rectangles"