Shape

- + static int nextTracker
- + static bool trackersInUse
- # QTreeWidgetItem * parentItem
- # alpha::vector< QTreeWidget
 Item * > childItems
- # alpha::vector< QTreeWidget
 Item * > pointsItems
- # alpha::vector< QTreeWidget
 Item * > penItems
- # alpha::vector< QTreeWidget
 Item * > brushItems
- const int shapeld
- int trackerId
- string shapeType
- QPen pen
- · QBrush brush
- QPoint coords
- · QPainter painter
- bool isSelected
- + Shape(int shapeId, string shapeType, QPoint coords, QPen pen, QBrush brush)
- + virtual ~Shape()
- + virtual void Draw(QWidget *renderArea)=0
- + virtual void Move(int x, int y)
- + virtual double Perimeter () const =0
- virtual double Area
 () const =0
- + virtual bool isPointInside
- (const QPoint &point) const =0
- + void CreateParentItem()
- + void CreatePenChild()
- + void CreateBrushChild() and 36 more...
- Shape(Shape &shape) =delete
- Shape & operator=(Shape & object)=delete

Line

- int a
- int b

Circle

Circle(string shapeType,

QBrush brush, int r)

Area) override

double Perimeter()

double Area() const

+ bool isPointInside

const override

+ int getR() const

+ void setX(int x)

+ void setY(int y)

void setR(int radius)

(const QPoint &point)

const override

override

QPoint coords, QPen pen,

void Draw(QWidget *render

int r

+ Ellipse(string shapeType, QPoint coords, QPen pen, QBrush brush, int a, int b)

Ellipse

- + void Draw(QWidget *render Area) override
- + double Perimeter() const override
- + double Area() const override
- + bool isPointInside (const QPoint &point) const override
- + int getA() const
- + int getB() const
- + void setA(int newA)
- + void setB(int newB)
- + void setX(int newX)
- + void setY(int newY)

- QPoint startPoint
- QPoint endPoint
- Line(string shapeType, QPoint coords, QPen pen, QBrush brush, QPoint startPoint, QPoint endPoint)
- + void Draw(QWidget *render Area) override
- + void Move(int x, int y) override
- + double Perimeter() const override
- + double Area() const override
- + bool isPointInside (const QPoint &point) const override
- + QPoint getStartPoint () const
- + QPoint getEndPoint () const
- + void setStartPoint (const QPoint &newStartPoint)
- + void setEndPoint(const QPoint &newEndPoint)
- + void setX(int newX)
- + void setY(int newY)

Polygon

- + Polygon(string shapeType, QPoint coords, QPen pen, QBrush brush, QPolygon pointsList)
- + void Draw(QWidget *render Area) override

QPolygon pointsList

- + void Move(int x, int y) override
- + double Perimeter() const override
- + double Area() const
- override
- + bool isPointInside (const QPoint &point) const override
- + QPolygon getPointsList () const
- + void setPointsList (const QPolygon &newPoints List)
- + void setX(int newX)
- + void setY(int newY)

Polyline QPolygon pointsList

- Polyline(string shapeType, QPoint coords, QPen pen, QBrush brush, QPolygon pointsList)
- void Draw(QWidget *render Area) override
- + void Move(int x, int y) override
- + double Perimeter() const override
- const overridedouble Area() const
- override
 + bool isPointInside
 (const QPoint &point)
 const override
- + QPolygon getPointsList () const
- + void setPointsList (const QPolygon &newPoints List)
- + void setX(int newX)
- + void setY(int newY)

Rectangle

- int length
- int width
- Rectangle(string shapeType, QPoint coords, QPen pen, QBrush brush, int length, int width)
- + void Draw(QWidget *render Area) override
- + double Perimeter() const override
- + double Area() const override
- + bool isPointInside (const QPoint &point) const override
- + int getLength() const
- + int getWidth() const
- + void setLength(int newLength)
- + void setWidth(int newWidth)
- + void setX(int newX)
- + void setY(int newY)

|.

Square

Square(string shapeType,

QPoint coords, QPen pen,

QBrush brush, int length)

+ void Draw(QWidget *render

- int length

Area) override

+ double Perimeter()

const override

+ bool isPointInside

const override

+ void setLength(int

newLength)

+ int getLength() const

+ void setX(int newX)

+ void setY(int newY)

override

double Area() const

(const QPoint &point)

- int width

int length

- QString textString
- GlobalColor textColor
- QFont font
- AlignmentFlag textAlignment

Text

- F Text(string shapeType, QPoint coords, QString textString, GlobalColor textColor, AlignmentFlag textAlignment, QFont font, int length, int width)
- + void Draw(QWidget *render Area) override
- + double Perimeter()
- + double Area() const override
- + bool isPointInside (const QPoint &point) const override
- + int getLength() const
- + int getWidth() const
- + QString getTextString
 () const
- + GlobalColor getTextColor () const
- + QFont getFont() const and 10 more...