```
- T * elem
- int space
+ vector()
+ vector(int s)
+ vector(const vector
  &other)
+ vector & operator=
  (const vector &other)
+ vector(vector &&other)
  noexcept
```

alpha::vector< T >

int size v

- + vector & operator=
- (vector &&other) noexcept
- + ~vector()
- + T & operator[](int n) + const T & operator
- [](int n) const
- + int size() const and 10 more...

< QTreeWidgetItem * >

alpha::vector< QTreeWidget Item * > int size_v

- QTreeWidgetItem ** elem
- int space
- + vector()
 - + vector(int s)
 - + vector(const vector &other) + vector(vector &&other)
 - noexcept + vector & operator=
 - (const vector &other) + vector & operator=
 - (vector &&other) noexcept + ~vector()
 - + QTreeWidgetItem *&
- operator[](int n) + const QTreeWidgetItem
- *& operator[](int n) const + int size() const
- and 10 more...

#brushItems #childItems #penItems #pointsItems

Shape + static int nextTracker

+ static bool trackersInUse

- # QTreeWidgetItem * parentItem
- const int shapeld
- int trackerld - 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

QPolygon pointsList

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

Polygon

- 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)