```
int size_v
    - T * elem
    - int space
    + vector()
    + vector(int s)
    + vector(const vector
       &other)
    + vector & operator=
      (const vector &other)
    + vector(vector &&other)
       noexcept
    + 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 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
               Circle
     int r
   + Circle(string shapeType,
      QPoint coords, QPen pen, QBrush brush, int r)
   + void Draw(QWidget *render
      Area) override
```

+ double Perimeter() const override+ double Area() const

override
+ bool isPointInside
(const QPoint &point)
const override
+ int getR() const
+ void setR(int radius)
+ void setX(int x)
+ void setY(int y)

alpha::vector< T >