SFMLCollision

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Chapter 1

Hierarchical Index

1.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

Chapter 2

Class Index

2.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

Chapter 3

Class Documentation

3.1 Line Class Reference

Public Member Functions

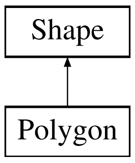
- **Line** (Vector2f p1, Vector2f p2)
- float **y** (float x)
- bool **intersects** (Line line)
- bool **intersects** (Line line, Vector2f &intersectionPoint, bool extendLine=false)
- float **getAngle** ()
- float **getIntercept** ()
- float **getSlope** ()
- Vector2f **getStart** ()
- Vector2f **getEnd** ()
- Vector2f **getPerpendicular** ()
- void **offset** (Vector2f offset)
- RectangleShape ∗ **getDrawable** (Color color=Color::Cyan)
- void **rotate** (Vector2f center, float angle)

The documentation for this class was generated from the following files:

- src/Line.hpp
- src/Line.cpp

3.2 Polygon Class Reference

Inheritance diagram for Polygon:



Public Member Functions

- Polygon (Texture ∗texture, Detail detail=Detail::Optimal, vector< Color > ignoredColors={})

  Construct a new Polygon object from a given texture (image).
- Polygon (vector< Vector2f > points)

  Construct a new Polygon object from a vector of points.
- Polygon (CircleShape shape)

  Construct a new Polygon object from a sf::CircleShape object.
- Polygon (RectangleShape shape)

  Construct a new Polygon object from a sf::RectangleShape object.
- Polygon (ConvexShape shape)

  Construct a new Polygon object from a sf::ConvexShape object.
- virtual size_t getPointCount () const

  Get the number of verticies on our polygon.
- virtual Vector2f getPoint (size_t index) const

  Get the vertex at index in the vector m_points.
- vector< Vector2f > getPoints ()

  Returns the entire vector of points that represent the shape, without any modifications from transformations (rotate, move, scale)
- vector< Line > getLines ()

  Return the lines that represent the polygon's outline/border.
- float getFarthestVertex ()

  Returns the distance of the farthest vertex from the centroid. Calculated in findCentroid()
- Vector2f **getCentroid** ()
- void setSolid (bool state)

  Set whether the shape is solid (can collide with other shapes)
- bool isSolid ()

  Check whether or not the shape can collide with other shapes.
- void setRigidity (float value)

  Set how much energy is conserved when this object collides with another. 0 for no energy conserved (completely inelastic collision) and 1 for completely elastic (all energy conserved)
- float getRigidity ()

  Get how much energy is conserved when this object collides with another. 0 for no energy conserved (completely inelastic collision) and 1 for completely elastic (all energy conserved)
- void setMovableByCollision (bool value)

  Set whether the shape can be moved by being collided with by another object.
- bool isMovableByCollision ()

  Get whether the shape can be moved by being collided with by another object.
- void setDensity (float newDensity)

  Set the density of the object, used in calculate its mass and moment of inertia (default is 1) and recalculate both values.
- float getDensity ()

  Get the relative density of the polygon.
- float getMass ()

  Return the mass of the polygon, using the density and area to calculate.
- float getMomentOfInertia ()

  Return the moment of inertia of the polygon, using the density and vertex distribution.
- void **setVelocity** (Vector2f newVelocity)
- Vector2f **getVelocity** ()
- void **setAngularVelocity** (float newAngularVelocity)
- float **getAngularVelocity** ()
- void **update** (float elapsedTime)