Assignment 1

Generated by Doxygen 1.8.13

Contents

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

File Index

3.1 File List

Here is a list of all documented files with brief descriptions:

Chapter 4

Class Documentation

4.1 complex_adt.ComplexT Class Reference

Public Member Functions

- def **__init__** (self, x, y)
- def **real** (self)
- def **imag** (self)
- def **get_r** (self)
- def **get_phi** (self)
- def **equal** (self, obj)
- def **conj** (self)
- def **add** (self, obj)
- def **sub** (self, obj)
- def **mult** (self, obj)
- def **recip** (self)
- def **div** (self, obj)
- def **sqrt** (self)

Static Public Attributes

- **x**
- **y**

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

- src/complex_adt.py

4.2 triangle_adt.TriangleT Class Reference

An ADT for a triangle represented by 3 side lengths.

Public Member Functions

- def __init__ (self, a, b, c)

  Constructor for TriangleT.
- def get_sides (self)

  Returns the side lengths of the triangle.
- def equal (self, obj)

  Compares the current triangle and a given triangle.
- def perim (self)

  Sums the side lengths of all 3 sides.
- def area (self)

  Computes the area of the triangle.
- def is_valid (self)

  Determines whether the given triangle is possible in Euclidian space.
- def tri_type (self)

  Determines the type of the triangle.

Static Public Attributes

- **a**
- **b**
- **c**

4.2.1 Detailed Description

An ADT for a triangle represented by 3 side lengths.

Triangle defined by 3 side lengths

4.2.2 Constructor & Destructor Documentation

4.2.2.1 __init__()

```
def triangle_adt.TriangleT.__init__ (
            self,
            a,
            b,
            c )
```

Constructor for TriangleT.

Represents a triangle with 3 given sides

Parameters

a	An integer representing the length of the first side
b	An integer representing the length of the second side
c	An integer representing the length of the third side

4.2.3 Member Function Documentation

4.2.3.1 area()

```
def triangle_adt.TriangleT.area (
              self )
```

Computes the area of the triangle.

Returns

The area of the triangle

4.2.3.2 equal()

```
def triangle_adt.TriangleT.equal (
              self,
              obj )
```

Compares the current triangle and a given triangle.

Returns

True if the triangles are equal

Parameters

obj	The triangle being compared to

4.2.3.3 get_sides()

```
def triangle_adt.TriangleT.get_sides (
              self )
```

Returns the side lengths of the triangle.

Returns

The three side lengths in a tuple

4.2.3.4 is_valid()

```
def triangle_adt.TriangleT.is_valid (
              self )
```

Determines whether the given triangle is possible in Euclidian space.

Returns

True if the triangle is physically possible

4.2.3.5 perim()

```
def triangle_adt.TriangleT.perim (
              self )
```

Sums the side lengths of all 3 sides.

Returns

The perimeter of the triangle

4.2.3.6 tri_type()

```
def triangle_adt.TriangleT.tri_type (
              self )
```

Determines the type of the triangle.

Returns

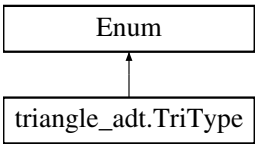
A TriType value representing the type of triangle

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

- src/triangle_adt.py

4.3 triangle_adt.TriType Class Reference

Inheritance diagram for triangle_adt.TriType:



Static Public Attributes

- int **equilat** = 1
- int **isosceles** = 2
- int **scalene** = 3
- int **right** = 4

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

- src/triangle_adt.py

Chapter 5

File Documentation

5.1 src/triangle_adt.py File Reference

Contains a class which represents a given triangle.

Classes

- class triangle_adt.TriangleT

  An ADT for a triangle represented by 3 side lengths.
- class triangle_adt.TriType

5.1.1 Detailed Description

Contains a class which represents a given triangle.

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Date

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