C++classesDemonstratedthroughspheres

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1 Class Index

1.1 Class List

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

2 File Index

2.1 File List

Here is a list of all files with brief descriptions:

3 Class Documentation

3.1 Sphere Class Reference

`#include <sphere.h>`

Public Member Functions

- **Sphere** ()
  Constructs a new instance.
- **Sphere** (double)
  Constructs a new instance.
- double **getRadius** () const
  Gets the radius.
- double **getDiameter** () const
  Gets the diameter.
- double **getCircumference** () const
  Gets the circumference.
- double **getArea** () const
  Gets the area.
- double **getVolume** () const
  Gets the volume.
- void **setRadius** (double)
  Sets the radius.
- std::ostream & **display** (std::ostream &)
  Displays the given out.

Private Attributes

- double **radius**

3.1.1 Constructor & Destructor Documentation

3.1.1.1 Sphere() [1/2] `Sphere::Sphere ( )`

Constructs a new instance.

3.1.1.2 Sphere() [2/2] `Sphere::Sphere ( double r )`

Constructs a new instance.

Parameters

in	*r*	radius of sphere being created

3.1.2 Member Function Documentation

3.1.2.1 display() `std::ostream & Sphere::display ( std::ostream & out )`

Displays the given out.

Parameters

out	The output to pass along

Returns

an ostream item to be chained/linked to cout for passing to stdio

3.1.2.2 getArea() `double Sphere::getArea ( ) const`

Gets the area.

Returns

The area.

3.1.2.3 getCircumference() `double Sphere::getCircumference ( ) const`

Gets the circumference.

Returns

The circumference.

3.1.2.4 getDiameter() `double Sphere::getDiameter ( ) const`

Gets the diameter.

Returns

The diameter.

3.1.2.5 getRadius() `double Sphere::getRadius ( ) const`

Gets the radius.

Returns

The radius.

3.1.2.6 getVolume() `double Sphere::getVolume ( ) const`

Gets the volume.

Returns

The volume.

3.1.2.7 setRadius() `void Sphere::setRadius ( double r )`

Sets the radius.

Parameters

in	*r*	The new value to change the radius to.

3.1.3 Member Data Documentation

3.1.3.1 radius `double Sphere::radius [private]`

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

- **sphere.h**
- **sphere.cpp**

3.2 sphere Class Reference

Class to manage spheres This class has an overload function that allows a sphere to be passed, and then reads out the values for that sphere like radious, diameter and volume.

`#include <sphere.h>`

3.2.1 Detailed Description

Class to manage spheres This class has an overload function that allows a sphere to be passed, and then reads out the values for that sphere like radious, diameter and volume.

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

- **sphere.h**

4 File Documentation

4.1 driver.cpp File Reference

`#include "sphere.h"`

Functions

- std::ostream & **operator**<< (std::ostream &strm, **Sphere** &a)
- int **main** ()

4.1.1 Function Documentation

4.1.1.1 main() `int main ( )`

4.1.1.2 operator<<() `std::ostream& operator<< ( std::ostream & strm, Sphere & a )`

4.2 sphere.cpp File Reference

`#include "sphere.h"`

Macros

- #define **M_PI** 3.14159265
  created to add more precision to pi for calculations

4.2.1 Macro Definition Documentation

4.2.1.1 M_PI `#define M_PI 3.14159265`

created to add more precision to pi for calculations

4.3 sphere.h File Reference

```
#include <iostream>
```

Classes

- class **Sphere**

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