My Project

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:

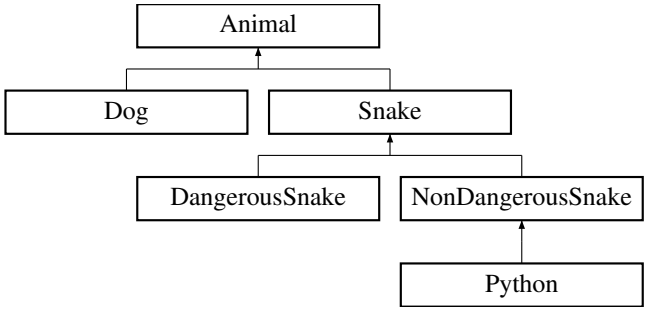
Chapter 3

Class Documentation

3.1 Animal Class Reference

`#include <animal.h>`

Inheritance diagram for Animal:



Public Member Functions

- Animal (const unsigned int a, const double w)
- Animal ()
- virtual void speak () const =0
- virtual void info () const noexcept
- virtual ~Animal ()

3.1.1 Detailed Description

Base class for animals. Each new animal should derive from this class and override `speak()` which is pure virtual.

3.1.2 Constructor & Destructor Documentation

3.1.2.1 Animal() [1/2]

```
Animal::Animal (
            const unsigned int a,
            const double w )
```

Animal Constructor. Takes `a` for the age and `w` for the weight.

3.1.2.2 Animal() [2/2]

```
Animal::Animal ( )
```

Deafult constructor. Set all attributes to zero.

3.1.2.3 ~Animal()

```
virtual Animal::~Animal ( )  [inline], [virtual]
```

Destructor. It does anything but is set virtual to ensure proper cleanup of the data that will be defined in the derived classes.

3.1.3 Member Function Documentation

3.1.3.1 info()

```
void Animal::info ( ) const  [virtual], [noexcept]
```

print animal's details

Reimplemented in Snake.

3.1.3.2 speak()

```
virtual void Animal::speak ( ) const  [pure virtual]
```

print on stdout the animal's call

Implemented in Snake, and Dog.

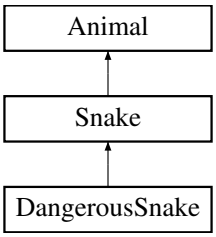
The documentation for this class was generated from the following files:

- include/animal.h
- src/animal.cc

3.2 DangerousSnake Class Reference

`#include <snake.h>`

Inheritance diagram for DangerousSnake:



Public Member Functions

- **DangerousSnake** (const unsigned int a, const double w)

3.2.1 Detailed Description

Specialization of class Snake. It specialize the constructors such that the attribute `dangerous` is set to true

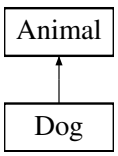
The documentation for this class was generated from the following file:

- include/snake.h

3.3 Dog Class Reference

`#include <dog.h>`

Inheritance diagram for Dog:



Public Member Functions

- void speak () const noexcept override
- Dog ()=default
- Dog (const unsigned int a, const double d)

3.3.1 Detailed Description

Specialization of class Animal. It simply overrides the function speak.

3.3.2 Constructor & Destructor Documentation

3.3.2.1 Dog() [1/2]

```
Dog::Dog ( )  [default]
```

Default constructor is fine. It will call the default constructor of Animal.

3.3.2.2 Dog() [2/2]

```
Dog::Dog (
            const unsigned int a,
            const double d )
```

Delegating constructor to build an Animal{a,b}

3.3.3 Member Function Documentation

3.3.3.1 speak()

```
void Dog::speak ( ) const  [override], [virtual], [noexcept]
```

A dog usually says "Bau"

Implements Animal.

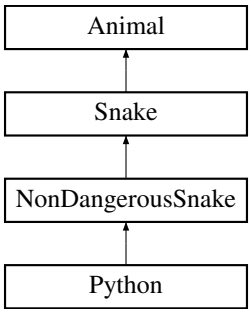
The documentation for this class was generated from the following files:

- include/dog.h
- src/dog.cc

3.4 NonDangerousSnake Class Reference

```
#include <snake.h>
```

Inheritance diagram for NonDangerousSnake:



Public Member Functions

- **NonDangerousSnake** (const unsigned int a, const double w)

3.4.1 Detailed Description

Specialization of class Snake. It specialize the constructors such that the attribute `dangerous` is set to false.

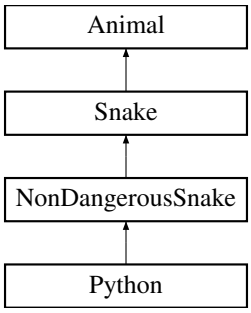
The documentation for this class was generated from the following file:

- include/snake.h

3.5 Python Struct Reference

`#include <snake.h>`

Inheritance diagram for Python:



Additional Inherited Members

3.5.1 Detailed Description

Define the type Python

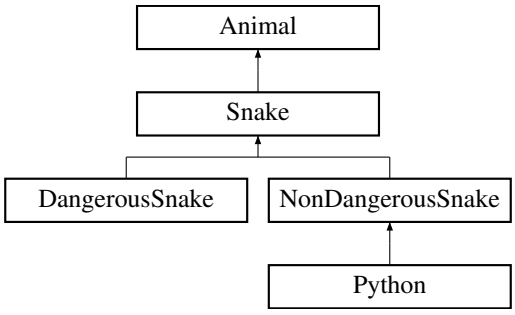
The documentation for this struct was generated from the following file:

- include/snake.h

3.6 Snake Class Reference

`#include <snake.h>`

Inheritance diagram for Snake:



Public Member Functions

- Snake (const unsigned int a, const double w, const bool b)
- Snake (const bool b)
- void info () const noexcept override
- void speak () const noexcept override

3.6.1 Detailed Description

Base class for snakes. It specializes into DangerousSnake and NonDangerousSnake. It is derived from class Animal and add a boolean Snake::dangerous to specify if a type of snake is dangerous or not.

3.6.2 Constructor & Destructor Documentation

3.6.2.1 Snake() [1/2]

```
Snake::Snake (
            const unsigned int a,
            const double w,
            const bool b )
```

Constructor. Takes all the arguments to construct an Animal plus the additional boolean

3.6.2.2 Snake() [2/2]

```
Snake::Snake (
            const bool b )
```

Calls the default constructor for Animal, and the `dangerous` is set to `b`

3.6.3 Member Function Documentation

3.6.3.1 info()

```
void Snake::info ( ) const  [override], [virtual], [noexcept]
```

Print details.

Reimplemented from Animal.

3.6.3.2 speak()

```
void Snake::speak ( ) const  [override], [virtual], [noexcept]
```

Snake's call

Implements Animal.

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

- include/snake.h
- src/snake.cc

Index