arcade

0.1.0

Generated by Doxygen 1.9.1

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Chapter 1

Namespace Index

1.1 Namespace List

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

Arcade
Main namespace for the Arcade project 9

Chapter 2

Hierarchical Index

2.1 Class Hierarchy

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

Arcade::Core 11
std::exception
  Arcade::Core::CoreException 13
  Arcade::RuntimeException 19
Arcade::IGame 14
Arcade::IRenderer 14
  Arcade::Ncurses 17
  Arcade::Sdl2 19
  Arcade::Sfml 21
Arcade::ISprite 16

Chapter 3

Class Index

3.1 Class List

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

Arcade::Core
    Core class 11
Arcade::Core::CoreException
    CoreException class 13
Arcade::IGame
    Game Interface 14
Arcade::IRenderer
    Graphic Interface 14
Arcade::ISprite
    Sprite Interface 16
Arcade::Ncurses
    Ncurses class 17
Arcade::RuntimeException
    RuntimeException class 19
Arcade::Sdl2
    Sdl2 class 19
Arcade::Sfml
    Sfml class 21

Chapter 4

File Index

4.1 File List

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

Core/include/Arcade/**Constants.hpp** . . . . . **??**
Core/include/Arcade/Core.hpp
File declaring Core 26
Core/include/Arcade/Enum.hpp
File declaring Enum 27
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File declaring RuntimeException 27
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Core/include/Arcade/abstractions/IRenderer.hpp
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Chapter 5

Namespace Documentation

5.1 Arcade Namespace Reference

Main namespace for the Arcade project.

Classes

- class IGame

  Game Interface.
- class IRenderer

  Graphic Interface.
- class ISprite

  Sprite Interface.
- class Core

  Core class.
- class RuntimeException

  RuntimeException class.
- class Sdl2

  Sdl2 class.
- class Ncurses

  Ncurses class.
- class Sfml

  Sfml class.

Enumerations

- enum class **CoreMode** { **GAME** , **MENU** , **PAUSE** , **QUIT** }
- enum class **GameMode** {
  GAME , **GAME_OVER** , **MENU** , **PAUSE** ,
  QUIT }
- enum class GameEvent {
  UP , **DOWN** , **LEFT** , **RIGHT** ,
  SHOOT , **PAUSE** , **QUIT** , **NONE** }

  Enum for the GameEvent.

5.1.1 Detailed Description

Main namespace for the Arcade project.

5.1.2 Enumeration Type Documentation

5.1.2.1 GameEvent

```
enum Arcade::GameEvent  [strong]
```

Enum for the GameEvent.

Set of enum used for the game event

Chapter 6

Class Documentation

6.1 Arcade::Core Class Reference

Core class.

`#include <Arcade/Core.hpp>`

Classes

- class CoreException

  CoreException class.

Public Member Functions

- **Core** (const Core &)=delete
- Core & **operator=** (const Core &)=delete
- void parser (const std::string &path)

  parse arguments
- int runArcade (const std::string &path)

  Run Arcade.
- void gameLoop ()

  Game loop.
- void handleEvents (const GameEvent &event)

  Handle events.
- void setMode (const CoreMode &gameMode)

  Set the game mode.
- void closeWindow ()

  close the window

6.1.1 Detailed Description

Core class.

Core class for the Arcade project

6.1.2 Member Function Documentation

6.1.2.1 gameLoop()

```
void Arcade::Core::gameLoop ( )
```

Game loop.

Main game loop

6.1.2.2 handleEvents()

```
void Arcade::Core::handleEvents (
            const GameEvent & event )
```

Handle events.

Parameters

event	

6.1.2.3 parser()

```
void Arcade::Core::parser (
            const std::string & path )
```

parse arguments

Parameters

path	

6.1.2.4 runArcade()

```
int Arcade::Core::runArcade (
            const std::string & path )
```

Run Arcade.

Parameters

path	

Returns

int

6.1.2.5 setMode()

```
void Arcade::Core::setMode (
            const CoreMode & gameMode )  [inline]
```

Set the game mode.

Parameters

gameMode	

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

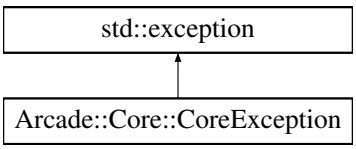
- Core/include/Arcade/Core.hpp

6.2 Arcade::Core::CoreException Class Reference

CoreException class.

`#include <Arcade/Core.hpp>`

Inheritance diagram for Arcade::Core::CoreException:



Public Member Functions

- **CoreException** (std::string msg)
- **CoreException** (CoreException const &)=delete
- const char * **what** () const noexcept override

6.2.1 Detailed Description

CoreException class.

Exception class for the Core class

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

- Core/include/Arcade/Core.hpp

6.3 Arcade::IGame Class Reference

Game Interface.

`#include <Arcade/abstractions/IGame.hpp>`

Public Member Functions

- **IGame** (const IGame &)=delete
- IGame & **operator=** (const IGame &)=delete
- virtual void start ()=0

  start the game
- virtual void stop ()=0

  stop the game

6.3.1 Detailed Description

Game Interface.

Set of method to implement for the business logic of the Arcade project

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

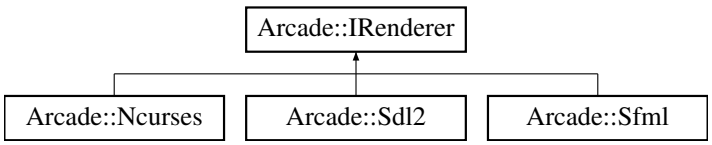
- Core/include/Arcade/abstractions/IGame.hpp

6.4 Arcade::IRenderer Class Reference

Graphic Interface.

`#include <Arcade/abstractions/IRenderer.hpp>`

Inheritance diagram for Arcade::IRenderer:



Public Member Functions

- **IRenderer** (const IRenderer &)=delete
- IRenderer & **operator=** (const IRenderer &)=delete
- virtual void openWindow (const unsigned int width, const unsigned int height)=0

  Create a window.
- virtual GameEvent getEvent ()=0

  Get the event object.
- virtual void displayWindow ()=0

  display actual window
- virtual void clearWindow ()=0

  clear actual window
- virtual void closeWindow ()=0

  close actual window
- virtual void setTitle (const std::string &title)=0

  set window title
- virtual void displayMenu ()=0

  display menu

6.4.1 Detailed Description

Graphic Interface.

Set of method to implement for the business logic of the Arcade project

6.4.2 Member Function Documentation

6.4.2.1 getEvent()

```
virtual GameEvent Arcade::IRenderer::getEvent ( )  [pure virtual]
```

Get the event object.

Returns

GameEvent

Implemented in Arcade::Sfml, Arcade::Sdl2, and Arcade::Ncurses.

6.4.2.2 openWindow()

```
virtual void Arcade::IRenderer::openWindow (
            const unsigned int width,
            const unsigned int height )  [pure virtual]
```

Create a window.

Parameters

width	
height	

Implemented in Arcade::Sfml, Arcade::Sdl2, and Arcade::Ncurses.

6.4.2.3 setTitle()

```
virtual void Arcade::IRenderer::setTitle (
            const std::string & title )  [pure virtual]
```

set window title

Parameters

title	

Implemented in Arcade::Sfml, Arcade::Sdl2, and Arcade::Ncurses.

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

- Core/include/Arcade/abstractions/IRenderer.hpp

6.5 Arcade::ISprite Class Reference

Sprite Interface.

```
#include <Arcade/abstractions/ISprite.hpp>
```

Public Member Functions

- **ISprite** (const ISprite &)=delete
- ISprite & **operator=** (const ISprite &)=delete
- virtual void draw ()=0

  draw the sprite
- virtual void setPosition (int x, int y)=0

  set the position of the sprite

6.5.1 Detailed Description

Sprite Interface.

Set of method to implement for the business logic of the Arcade project

6.5.2 Member Function Documentation

6.5.2.1 setPosition()

```
virtual void Arcade::ISprite::setPosition (
            int x,
            int y )  [pure virtual]
```

set the position of the sprite

Parameters

x	
y	

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

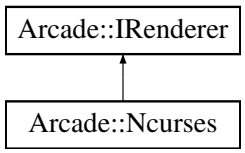
- Core/include/Arcade/abstractions/ISprite.hpp

6.6 Arcade::Ncurses Class Reference

Ncurses class.

`#include <Arcade/Ncurses.hpp>`

Inheritance diagram for Arcade::Ncurses:



Public Member Functions

- **Ncurses** (const Ncurses &)=delete
- Ncurses & **operator=** (const Ncurses &)=delete
- GameEvent getEvent () override

  Get the event object.
- void openWindow (unsigned int width, unsigned int height) override

  Create a window.
- void displayWindow () override

  display actual window
- void clearWindow () override

  clear actual window
- void closeWindow () override

  close actual window
- void setTitle (const std::string &title) override

  set window title
- void displayMenu () override

  display menu

6.6.1 Detailed Description

Ncurses class.

Ncurses class for the Arcade project

6.6.2 Member Function Documentation

6.6.2.1 getEvent()

```
GameEvent Arcade::Ncurses::getEvent ( )  [override], [virtual]
```

Get the event object.

Returns

GameEvent

Implements Arcade::IRenderer.

6.6.2.2 openWindow()

```
void Arcade::Ncurses::openWindow (
            unsigned int width,
            unsigned int height )  [override], [virtual]
```

Create a window.

Parameters

width	
height	

Implements Arcade::IRenderer.

6.6.2.3 setTitle()

```
void Arcade::Ncurses::setTitle (
            const std::string & title )  [inline], [override], [virtual]
```

set window title

Parameters

title	

Implements Arcade::IRenderer.

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

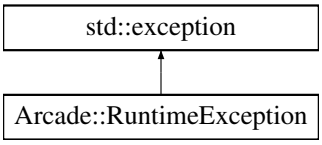
- Graphics/NCurses/include/Arcade/Ncurses.hpp

6.7 Arcade::RuntimeException Class Reference

RuntimeException class.

`#include <Arcade/RuntimeException.hpp>`

Inheritance diagram for Arcade::RuntimeException:



Public Member Functions

- **RuntimeException** (std::string msg)
- **RuntimeException** (RuntimeException const &)=delete
- const char * **what** () const noexcept override

6.7.1 Detailed Description

RuntimeException class.

RuntimeException class for the Arcade project

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

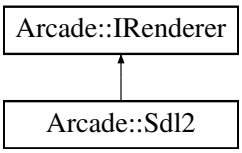
- Core/include/Arcade/RuntimeException.hpp

6.8 Arcade::Sdl2 Class Reference

Sdl2 class.

`#include <Arcade/Sdl2.hpp>`

Inheritance diagram for Arcade::Sdl2:



Public Member Functions

- **Sdl2** (const Sdl2 &)=delete
- Sdl2 & **operator=** (const Sdl2 &)=delete
- GameEvent getEvent () override

  Get the event object.
- void openWindow (unsigned int width, unsigned int height) override

  Create a window.
- void displayWindow () override

  display actual window
- void clearWindow () override

  clear actual window
- void closeWindow () override

  close actual window
- void setTitle (const std::string &title) override

  set window title
- void displayMenu () override

  display menu

6.8.1 Detailed Description

Sdl2 class.

Sdl2 class for the Arcade project

6.8.2 Member Function Documentation

6.8.2.1 getEvent()

```
GameEvent Arcade::Sdl2::getEvent ( )  [override], [virtual]
```

Get the event object.

Returns

GameEvent

Implements Arcade::IRenderer.

6.8.2.2 openWindow()

```
void Arcade::Sdl2::openWindow (
            unsigned int width,
            unsigned int height )  [override], [virtual]
```

Create a window.

Parameters

width	
height	

Implements Arcade::IRenderer.

6.8.2.3 setTitle()

```
void Arcade::Sdl2::setTitle (
            const std::string & title )  [inline], [override], [virtual]
```

set window title

Parameters

title	

Implements Arcade::IRenderer.

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

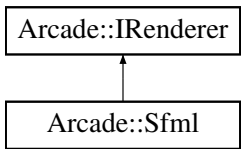
- Graphics/SDL2/include/Arcade/Sdl2.hpp

6.9 Arcade::Sfml Class Reference

Sfml class.

```
#include <Arcade/Sfml.hpp>
```

Inheritance diagram for Arcade::Sfml:



Public Member Functions

- **Sfml** (const Sfml &)=delete
- Sfml & **operator=** (const Sfml &)=delete
- GameEvent getEvent () override

  Get the event object.
- void openWindow (unsigned int width, unsigned int height) override

  Create a window.

- void displayWindow () override

  display actual window
- void clearWindow () override

  clear actual window
- void closeWindow () override

  close actual window
- void setTitle (const std::string &title) override

  set window title
- void displayMenu () override

  display menu
- bool **loadTexture** (const std::string &filepath, const std::string &name)
- bool **loadFont** (const std::string &filepath, const std::string &name)

6.9.1 Detailed Description

Sfml class.

Sfml class for the Arcade project

6.9.2 Member Function Documentation

6.9.2.1 getEvent()

```
GameEvent Arcade::Sfml::getEvent ( )  [override], [virtual]
```

Get the event object.

Returns

GameEvent

Implements Arcade::IRenderer.

6.9.2.2 openWindow()

```
void Arcade::Sfml::openWindow (
            unsigned int width,
            unsigned int height )  [override], [virtual]
```

Create a window.

Parameters

width	
height	

Implements Arcade::IRenderer.

6.9.2.3 setTitle()

```
void Arcade::Sfml::setTitle (
            const std::string & title )  [inline], [override], [virtual]
```

set window title

Parameters

title	

Implements Arcade::IRenderer.

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

- Graphics/SFML/include/Arcade/Sfml.hpp

Chapter 7

File Documentation

7.1 Core/include/Arcade/abstractions/IGame.hpp File Reference

File declaring Game Interface.

Classes

- class Arcade::IGame

  Game Interface.

Namespaces

- Arcade

  Main namespace for the Arcade project.

7.1.1 Detailed Description

File declaring Game Interface.

7.2 Core/include/Arcade/abstractions/IRenderer.hpp File Reference

File declaring Graphic Interface.

```
#include <string>
#include "Arcade/Enum.hpp"
```

Classes

- class Arcade::IRenderer

  Graphic Interface.

Namespaces

- Arcade

  Main namespace for the Arcade project.

7.2.1 Detailed Description

File declaring Graphic Interface.

7.3 Core/include/Arcade/abstractions/ISprite.hpp File Reference

File declaring Sprite Interface.

Classes

- class Arcade::ISprite

  Sprite Interface.

Namespaces

- Arcade

  Main namespace for the Arcade project.

7.3.1 Detailed Description

File declaring Sprite Interface.

7.4 Core/include/Arcade/Core.hpp File Reference

File declaring Core.

```
#include <iostream>
#include <exception>
#include <memory>
#include "Arcade/Enum.hpp"
#include "Arcade/abstractions/IRenderer.hpp"
```

Classes

- class Arcade::Core

  Core class.
- class Arcade::Core::CoreException

  CoreException class.

Namespaces

- Arcade

  Main namespace for the Arcade project.

7.4.1 Detailed Description

File declaring Core.

7.5 Core/include/Arcade/Enum.hpp File Reference

File declaring Enum.

Namespaces

- Arcade

  Main namespace for the Arcade project.

Enumerations

- enum class **CoreMode** { **GAME** , **MENU** , **PAUSE** , **QUIT** }
- enum class **GameMode** {
  GAME , **GAME_OVER** , **MENU** , **PAUSE** ,
  QUIT }
- enum class Arcade::GameEvent {
  UP , **DOWN** , **LEFT** , **RIGHT** ,
  SHOOT , **PAUSE** , **QUIT** , **NONE** }

  Enum for the GameEvent.

7.5.1 Detailed Description

File declaring Enum.

Set of enum used in the Arcade project

7.6 Core/include/Arcade/RuntimeException.hpp File Reference

File declaring RuntimeException.

```
#include <iostream>
#include <exception>
```

Classes

- class Arcade::RuntimeException

  RuntimeException class.

Namespaces

- Arcade

  Main namespace for the Arcade project.

7.6.1 Detailed Description

File declaring RuntimeException.

7.7 Graphics/NCurses/include/Arcade/Ncurses.hpp File Reference

File declaring Ncurses.

```
#include <ncurses.h>
#include <string_view>
#include "Arcade/abstractions/IRenderer.hpp"
```

Classes

- class Arcade::Ncurses

  Ncurses class.

Namespaces

- Arcade

  Main namespace for the Arcade project.

7.7.1 Detailed Description

File declaring Ncurses.

7.8 Graphics/SDL2/include/Arcade/Sdl2.hpp File Reference

File declaring Sdl2 class.

```
#include <iostream>
#include <SDL2/SDL.h>
#include "Arcade/abstractions/IRenderer.hpp"
```

Classes

- class Arcade::Sdl2
  Sdl2 class.

Namespaces

- Arcade
  Main namespace for the Arcade project.

Variables

- constexpr std::string_view **WINDOW_TITLE** = "Arcade - SDL2"

7.8.1 Detailed Description

File declaring Sdl2 class.

7.9 Graphics/SFML/include/Arcade/Sfml.hpp File Reference

File declaring Sfml class.

```
#include <SFML/Graphics.hpp>
#include "Arcade/abstractions/IRenderer.hpp"
```

Classes

- class Arcade::Sfml
  Sfml class.

Namespaces

- Arcade
  Main namespace for the Arcade project.

Variables

- constexpr std::string_view **WINDOW_TITLE** = "Arcade - SFML"

7.9.1 Detailed Description

File declaring Sfml class.

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