

arcade

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# Chapter 1

## Namespace Index

### 1.1 Namespace List

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## Chapter 2

# Hierarchical Index

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## Chapter 3

# Class Index

### 3.1 Class List

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

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## Chapter 4

# File Index

### 4.1 File List

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

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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.*
- struct [SpriteAssets](#)
- class [ISprite](#)  
*Sprite Interface.*
- class [Core](#)  
*Core class.*
- class [RuntimeException](#)  
*RuntimeException class.*
- class [Sdl2](#)  
*Sdl2 class.*
- class [Sdl2Sprite](#)  
*Sdl2Sprite class.*
- class [Ncurses](#)  
*Ncurses class.*
- class [NCursesSprite](#)  
*NCursesSprite class.*
- class [Sfml](#)  
*Sfml class.*
- class [SfmlSprite](#)  
*SfmlSprite class.*

#### Typedefs

- using [ascii\\_char\\_array\\_t](#) = std::vector< std::vector< char > >

## Enumerations

- enum class **CoreMode** : std::uint8\_t { **GAME** , **MENU** , **PAUSE** , **QUIT** }
- enum class **GameMode** : std::uint8\_t { **GAME** , **GAME\_OVER** , **MENU** , **PAUSE** , **QUIT** }
- enum class **GameEvent** : std::uint8\_t { **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 : std::uint8_t [strong]
```

Enum for the GameEvent.

Set of enum used for the game event



## Chapter 6

# Class Documentation

### 6.1 Arcade::SpriteAssets::AsciiSprite Struct Reference

#### Public Attributes

- `ascii_char_array_t chars`

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

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

### 6.2 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
- **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*
- void [loadGraphic](#) ()  
*load graphic*
- void [displayMenu](#) ()  
*display menu*

### 6.2.1 Detailed Description

[Core](#) class.

[Core](#) class for the [Arcade](#) project

### 6.2.2 Member Function Documentation

#### 6.2.2.1 [gameLoop\(\)](#)

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

Game loop.

Main game loop

#### 6.2.2.2 [handleEvents\(\)](#)

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

Handle events.

## Parameters

<i>event</i>	
--------------	--

### 6.2.2.3 parser()

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

parse arguments

## Parameters

<i>path</i>	
-------------	--

### 6.2.2.4 runArcade()

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

Run [Arcade](#).

## Parameters

<i>path</i>	
-------------	--

## Returns

int

### 6.2.2.5 setMode()

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

Set the game mode.

## Parameters

<i>gameMode</i>	
-----------------	--

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

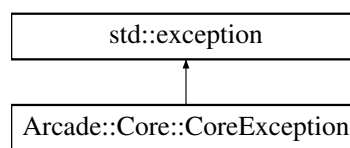
- Core/include/Arcade/[Core.hpp](#)

## 6.3 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** (const [CoreException](#) &)=delete
- [CoreException](#) & **operator=** (const [CoreException](#) &)=delete
- **CoreException** (const [CoreException](#) &&)=delete
- [CoreException](#) & **operator=** (const [CoreException](#) &&)=delete
- const char \* **what** () const noexcept override

### 6.3.1 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](#)

## 6.4 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*

### 6.4.1 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:

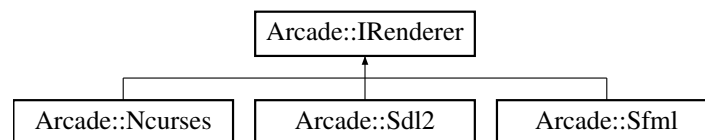
- Core/include/Arcade/abstractions/[IGame.hpp](#)

## 6.5 Arcade::IRenderer Class Reference

Graphic Interface.

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

Inheritance diagram for Arcade::IRenderer:



## Public Member Functions

- virtual void **openWindow** (unsigned int width, unsigned int height)=0  
*Create a window with the specified dimensions.*
- virtual void **displayWindow** ()=0  
*Display the current window.*
- virtual void **clearWindow** ()=0  
*Clear the contents of the current window.*
- virtual void **closeWindow** ()=0  
*Close the current window.*
- virtual void **setTitle** (const std::string &title)=0  
*Set the title of the window.*
- virtual **GameEvent** **getEvent** ()=0  
*Retrieve the current event from the window.*
- virtual bool **isASCII** ()=0

*Check if the renderer supports only ASCII characters.*

- virtual bool [loadTexture](#) (const std::string &filepath, const std::string &name)=0

*Load a texture from a file.*

- virtual bool [loadFont](#) (const std::string &filepath, const std::string &name)=0

*Load a font from a file.*

- virtual void [createSprite](#) (const std::string &textureName, float pos\_x, float pos\_y, float scale\_x, float scale\_y)=0

*Create a sprite with the specified parameters.*

- virtual void [displaySprite](#) (const std::string &spriteName)=0

*Display a sprite with the specified name.*

- virtual void [createText](#) (const std::string &fontName, const std::string &text, int size, float pos\_x, float pos\_y)=0

*Create a text object with the specified parameters.*

- virtual void [displayText](#) (const std::string &textName)=0

*Display a text object with the specified name.*

### 6.5.1 Detailed Description

Graphic Interface.

Set of method for the [Arcade](#) project

### 6.5.2 Member Function Documentation

#### 6.5.2.1 createSprite()

```
virtual void Arcade::IRenderer::createSprite (
    const std::string & textureName,
    float pos_x,
    float pos_y,
    float scale_x,
    float scale_y ) [pure virtual]
```

Create a sprite with the specified parameters.

#### Parameters

<i>textureName</i>	The name of the texture to use for the sprite
<i>pos_x</i>	The x-coordinate of the sprite's position
<i>pos_y</i>	The y-coordinate of the sprite's position
<i>scale_x</i>	The scale factor for the sprite's width
<i>scale_y</i>	The scale factor for the sprite's height

Implemented in [Arcade::Sfml](#), [Arcade::Sdl2](#), and [Arcade::Ncurses](#).

### 6.5.2.2 createText()

```
virtual void Arcade::IRenderer::createText (
    const std::string & fontName,
    const std::string & text,
    int size,
    float pos_x,
    float pos_y ) [pure virtual]
```

Create a text object with the specified parameters.

#### Parameters

<i>fontName</i>	The name of the font to use for the text
<i>text</i>	The text to display
<i>size</i>	The size of the text
<i>pos_x</i>	The x-coordinate of the text's position
<i>pos_y</i>	The y-coordinate of the text's position

Implemented in [Arcade::Sfml](#), [Arcade::Sdl2](#), and [Arcade::Ncurses](#).

### 6.5.2.3 displaySprite()

```
virtual void Arcade::IRenderer::displaySprite (
    const std::string & spriteName ) [pure virtual]
```

Display a sprite with the specified name.

#### Parameters

<i>spriteName</i>	The name of the sprite to display
-------------------	-----------------------------------

Implemented in [Arcade::Sfml](#), [Arcade::Sdl2](#), and [Arcade::Ncurses](#).

### 6.5.2.4 displayText()

```
virtual void Arcade::IRenderer::displayText (
    const std::string & textName ) [pure virtual]
```

Display a text object with the specified name.

#### Parameters

<i>textName</i>	The name of the text to display
-----------------	---------------------------------

Implemented in [Arcade::Sfml](#), [Arcade::Sdl2](#), and [Arcade::Ncurses](#).

#### 6.5.2.5 `getEvent()`

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

Retrieve the current event from the window.

##### Returns

The current event

Implemented in [Arcade::Sfml](#), [Arcade::Sdl2](#), and [Arcade::Ncurses](#).

#### 6.5.2.6 `isASCII()`

```
virtual bool Arcade::IRenderer::isASCII ( ) [pure virtual]
```

Check if the renderer supports only ASCII characters.

##### Returns

True if the renderer supports ASCII, false otherwise

Implemented in [Arcade::Sfml](#), [Arcade::Sdl2](#), and [Arcade::Ncurses](#).

#### 6.5.2.7 `loadFont()`

```
virtual bool Arcade::IRenderer::loadFont (
    const std::string & filepath,
    const std::string & name ) [pure virtual]
```

Load a font from a file.

##### Parameters

<i>filepath</i>	The path to the font file
<i>name</i>	The name to associate with the font

##### Returns

True if the font was loaded successfully, false otherwise



Implemented in [Arcade::Sfml](#), [Arcade::Sdl2](#), and [Arcade::Ncurses](#).

#### 6.5.2.8 loadTexture()

```
virtual bool Arcade::IRenderer::loadTexture (
    const std::string & filepath,
    const std::string & name ) [pure virtual]
```

Load a texture from a file.

##### Parameters

<i>filepath</i>	The path to the texture file
<i>name</i>	The name to associate with the texture

##### Returns

True if the texture was loaded successfully, false otherwise

Implemented in [Arcade::Sfml](#), [Arcade::Sdl2](#), and [Arcade::Ncurses](#).

#### 6.5.2.9 openWindow()

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

Create a window with the specified dimensions.

##### Parameters

<i>width</i>	The width of the window
<i>height</i>	The height of the window

Implemented in [Arcade::Sfml](#), [Arcade::Sdl2](#), and [Arcade::Ncurses](#).

#### 6.5.2.10 setTitle()

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

Set the title of the window.

## Parameters

<i>title</i>	The new title of the window
--------------	-----------------------------

Implemented in [Arcade::Sfml](#), [Arcade::Sdl2](#), and [Arcade::Ncurses](#).

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

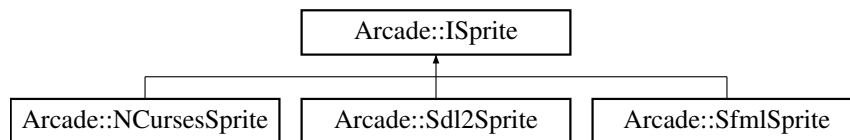
- [Core/include/Arcade/abstractions/IRenderer.hpp](#)

## 6.6 Arcade::ISprite Class Reference

Sprite Interface.

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

Inheritance diagram for Arcade::ISprite:



### Public Member Functions

- virtual bool [loadTexture](#) (const std::string &texture, const std::string &name)=0  
*load the texture*
- virtual void [setPosition](#) (int x, int y)=0  
*set the position of the sprite*

### 6.6.1 Detailed Description

Sprite Interface.

Set of method to implement for the business logic of the [Arcade](#) project

### 6.6.2 Member Function Documentation

#### 6.6.2.1 loadTexture()

```
virtual bool Arcade::ISprite::loadTexture (
    const std::string & texture,
    const std::string & name ) [pure virtual]
```

load the texture

## Parameters

<i>texture</i>	
----------------	--

load the texture with the given texture

Implemented in [Arcade::SfmlSprite](#), [Arcade::Sdl2Sprite](#), and [Arcade::NCursesSprite](#).

## 6.6.2.2 setPosition()

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

set the position of the sprite

## Parameters

<i>x</i>	
<i>y</i>	

Implemented in [Arcade::SfmlSprite](#), [Arcade::Sdl2Sprite](#), and [Arcade::NCursesSprite](#).

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

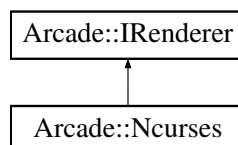
- Core/include/Arcade/abstractions/[ISprite.hpp](#)

## 6.7 Arcade::Ncurses Class Reference

[Ncurses](#) class.

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

Inheritance diagram for Arcade::Ncurses:



## Public Member Functions

- [GameEvent](#) [getEvent](#) () override  
*Retrieve the current event from the window.*
- void [openWindow](#) (unsigned int width, unsigned int height) override  
*Create a window with the specified dimensions.*
- void [displayWindow](#) () override  
*Display the current window.*
- void [clearWindow](#) () override  
*Clear the contents of the current window.*
- void [closeWindow](#) () override  
*Close the current window.*
- void [setTitle](#) (const std::string &title) override  
*Set the title of the window.*
- bool [loadTexture](#) (const std::string &texture, const std::string &name) override  
*Load a texture from a file.*
- bool [loadFont](#) (const std::string &filepath, const std::string &name) override  
*Load a font from a file.*
- void [createSprite](#) (const std::string &textureName, float pos\_x, float pos\_y, float scale\_x, float scale\_y) override  
*Create a sprite with the specified parameters.*
- void [createText](#) (const std::string &fontName, const std::string &text, int size, float pos\_x, float pos\_y) override  
*Create a text object with the specified parameters.*
- void [displaySprite](#) (const std::string &spriteName) override  
*Display a sprite with the specified name.*
- void [displayText](#) (const std::string &textName) override  
*Display a text object with the specified name.*
- bool [isASCII](#) () override  
*Check if the renderer supports only ASCII characters.*

### 6.7.1 Detailed Description

[Ncurses](#) class.

[Ncurses](#) class for the [Arcade](#) project

### 6.7.2 Member Function Documentation

#### 6.7.2.1 createSprite()

```
void Arcade::Ncurses::createSprite (
    const std::string & textureName,
    float pos_x,
    float pos_y,
    float scale_x,
    float scale_y ) [inline], [override], [virtual]
```

Create a sprite with the specified parameters.

## Parameters

<i>textureName</i>	The name of the texture to use for the sprite
<i>pos_x</i>	The x-coordinate of the sprite's position
<i>pos_y</i>	The y-coordinate of the sprite's position
<i>scale_x</i>	The scale factor for the sprite's width
<i>scale_y</i>	The scale factor for the sprite's height

Implements [Arcade::IRenderer](#).

### 6.7.2.2 createText()

```
void Arcade::Ncurses::createText (
    const std::string & fontName,
    const std::string & text,
    int size,
    float pos_x,
    float pos_y ) [inline], [override], [virtual]
```

Create a text object with the specified parameters.

## Parameters

<i>fontName</i>	The name of the font to use for the text
<i>text</i>	The text to display
<i>size</i>	The size of the text
<i>pos_x</i>	The x-coordinate of the text's position
<i>pos_y</i>	The y-coordinate of the text's position

Implements [Arcade::IRenderer](#).

### 6.7.2.3 displaySprite()

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

Display a sprite with the specified name.

## Parameters

<i>spriteName</i>	The name of the sprite to display
-------------------	-----------------------------------

Implements [Arcade::IRenderer](#).

#### 6.7.2.4 displayText()

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

Display a text object with the specified name.

##### Parameters

<i>textName</i>	The name of the text to display
-----------------	---------------------------------

Implements [Arcade::IRenderer](#).

#### 6.7.2.5 getEvent()

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

Retrieve the current event from the window.

##### Returns

The current event

Implements [Arcade::IRenderer](#).

#### 6.7.2.6 isASCII()

```
bool Arcade::Ncurses::isASCII ( ) [inline], [override], [virtual]
```

Check if the renderer supports only ASCII characters.

##### Returns

True if the renderer supports ASCII, false otherwise

Implements [Arcade::IRenderer](#).

#### 6.7.2.7 loadFont()

```
bool Arcade::Ncurses::loadFont (
    const std::string & filepath,
    const std::string & name ) [inline], [override], [virtual]
```

Load a font from a file.

## Parameters

<i>filepath</i>	The path to the font file
<i>name</i>	The name to associate with the font

## Returns

True if the font was loaded successfully, false otherwise

Implements [Arcade::IRenderer](#).

### 6.7.2.8 loadTexture()

```
bool Arcade::Ncurses::loadTexture (
    const std::string & filepath,
    const std::string & name ) [inline], [override], [virtual]
```

Load a texture from a file.

## Parameters

<i>filepath</i>	The path to the texture file
<i>name</i>	The name to associate with the texture

## Returns

True if the texture was loaded successfully, false otherwise

Implements [Arcade::IRenderer](#).

### 6.7.2.9 openWindow()

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

Create a window with the specified dimensions.

## Parameters

<i>width</i>	The width of the window
<i>height</i>	The height of the window

Implements [Arcade::IRenderer](#).

### 6.7.2.10 setTitle()

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

Set the title of the window.

#### Parameters

<i>title</i>	The new title of the window
--------------	-----------------------------

Implements [Arcade::IRenderer](#).

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

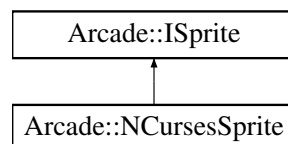
- Graphics/NCurses/include/Arcade/[NCurses.hpp](#)

## 6.8 Arcade::NCursesSprite Class Reference

[NCursesSprite](#) class.

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

Inheritance diagram for Arcade::NCursesSprite:



### Public Member Functions

- bool [loadTexture](#) (const std::string &texture, const std::string &name) override  
*load the texture*
- void **draw** () override
- void [setPosition](#) (int x, int y) override  
*set the position of the sprite*

### 6.8.1 Detailed Description

[NCursesSprite](#) class.

[NCursesSprite](#) class for the [Arcade](#) project



## 6.8.2 Member Function Documentation

### 6.8.2.1 loadTexture()

```
bool Arcade::NCursesSprite::loadTexture (
    const std::string & texture,
    const std::string & name ) [inline], [override], [virtual]
```

load the texture

#### Parameters

<i>texture</i>	
----------------	--

load the texture with the given texture

Implements [Arcade::ISprite](#).

### 6.8.2.2 setPosition()

```
void Arcade::NCursesSprite::setPosition (
    int x,
    int y ) [inline], [override], [virtual]
```

set the position of the sprite

#### Parameters

<i>x</i>	
<i>y</i>	

Implements [Arcade::ISprite](#).

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

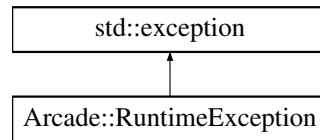
- Graphics/NCurses/include/Arcade/[NCursesSprite.hpp](#)

## 6.9 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

### 6.9.1 Detailed Description

[RuntimeException](#) class.

[RuntimeException](#) class for the [Arcade](#) project

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

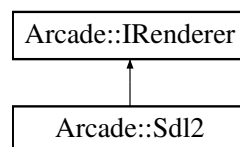
- Core/include/Arcade/[RuntimeException.hpp](#)

## 6.10 Arcade::Sdl2 Class Reference

[Sdl2](#) class.

```
#include <Arcade/Sdl2.hpp>
```

Inheritance diagram for `Arcade::Sdl2`:



## Public Member Functions

- [GameEvent](#) **getEvent** () override  
*Retrieve the current event from the window.*
- void **openWindow** (unsigned int width, unsigned int height) override  
*Create a window with the specified dimensions.*
- void **displayWindow** () override  
*Display the current window.*
- void **clearWindow** () override  
*Clear the contents of the current window.*
- void **closeWindow** () override

- *Close the current window.*
- void [setTitle](#) (const std::string &title) override
- *Set the title of the window.*
- bool [loadTexture](#) (const std::string &texture, const std::string &name) override
- *Load a texture from a file.*
- bool [loadFont](#) (const std::string &filepath, const std::string &name) override
- *Load a font from a file.*
- void [createSprite](#) (const std::string &textureName, float pos\_x, float pos\_y, float scale\_x, float scale\_y) override
- *Create a sprite with the specified parameters.*
- void [createText](#) (const std::string &fontName, const std::string &text, int size, float pos\_x, float pos\_y) override
- *Create a text object with the specified parameters.*
- void [displaySprite](#) (const std::string &spriteName) override
- *Display a sprite with the specified name.*
- void [displayText](#) (const std::string &textName) override
- *Display a text object with the specified name.*
- bool [isASCII](#) () override
- *Check if the renderer supports only ASCII characters.*

### 6.10.1 Detailed Description

[Sdl2](#) class.

[Sdl2](#) class for the [Arcade](#) project

### 6.10.2 Member Function Documentation

#### 6.10.2.1 createSprite()

```
void Arcade::Sdl2::createSprite (
    const std::string & textureName,
    float pos_x,
    float pos_y,
    float scale_x,
    float scale_y ) [inline], [override], [virtual]
```

Create a sprite with the specified parameters.

##### Parameters

<i>textureName</i>	The name of the texture to use for the sprite
<i>pos_x</i>	The x-coordinate of the sprite's position
<i>pos_y</i>	The y-coordinate of the sprite's position
<i>scale_x</i>	The scale factor for the sprite's width
<i>scale_y</i>	The scale factor for the sprite's height

Implements [Arcade::IRenderer](#).

### 6.10.2.2 createText()

```
void Arcade::Sdl2::createText (
    const std::string & fontName,
    const std::string & text,
    int size,
    float pos_x,
    float pos_y ) [inline], [override], [virtual]
```

Create a text object with the specified parameters.

#### Parameters

<i>fontName</i>	The name of the font to use for the text
<i>text</i>	The text to display
<i>size</i>	The size of the text
<i>pos_x</i>	The x-coordinate of the text's position
<i>pos_y</i>	The y-coordinate of the text's position

Implements [Arcade::IRenderer](#).

### 6.10.2.3 displaySprite()

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

Display a sprite with the specified name.

#### Parameters

<i>spriteName</i>	The name of the sprite to display
-------------------	-----------------------------------

Implements [Arcade::IRenderer](#).

### 6.10.2.4 displayText()

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

Display a text object with the specified name.

## Parameters

<i>textName</i>	The name of the text to display
-----------------	---------------------------------

Implements [Arcade::IRenderer](#).

### 6.10.2.5 `getEvent()`

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

Retrieve the current event from the window.

## Returns

The current event

Implements [Arcade::IRenderer](#).

### 6.10.2.6 `isASCII()`

```
bool Arcade::Sdl2::isASCII ( ) [inline], [override], [virtual]
```

Check if the renderer supports only ASCII characters.

## Returns

True if the renderer supports ASCII, false otherwise

Implements [Arcade::IRenderer](#).

### 6.10.2.7 `loadFont()`

```
bool Arcade::Sdl2::loadFont (
    const std::string & filepath,
    const std::string & name ) [inline], [override], [virtual]
```

Load a font from a file.

## Parameters

<i>filepath</i>	The path to the font file
<i>name</i>	The name to associate with the font

**Returns**

True if the font was loaded successfully, false otherwise

Implements [Arcade::IRenderer](#).

**6.10.2.8 loadTexture()**

```
bool Arcade::Sdl2::loadTexture (
    const std::string & filepath,
    const std::string & name ) [inline], [override], [virtual]
```

Load a texture from a file.

**Parameters**

<i>filepath</i>	The path to the texture file
<i>name</i>	The name to associate with the texture

**Returns**

True if the texture was loaded successfully, false otherwise

Implements [Arcade::IRenderer](#).

**6.10.2.9 openWindow()**

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

Create a window with the specified dimensions.

**Parameters**

<i>width</i>	The width of the window
<i>height</i>	The height of the window

Implements [Arcade::IRenderer](#).

**6.10.2.10 setTitle()**

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

Set the title of the window.

## Parameters

<i>title</i>	The new title of the window
--------------	-----------------------------

Implements [Arcade::IRenderer](#).

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

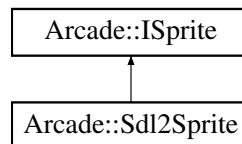
- Graphics/SDL2/include/Arcade/[Sdl2.hpp](#)

## 6.11 Arcade::Sdl2Sprite Class Reference

[Sdl2Sprite](#) class.

```
#include <Arcade/Sdl2Sprite.hpp>
```

Inheritance diagram for `Arcade::Sdl2Sprite`:



### Public Member Functions

- bool [loadTexture](#) (const std::string &texture, const std::string &name) override  
*load the texture*
- void **draw** () override
- void [setPosition](#) (int x, int y) override  
*set the position of the sprite*

#### 6.11.1 Detailed Description

[Sdl2Sprite](#) class.

[Sdl2Sprite](#) class for the [Arcade](#) project

#### 6.11.2 Member Function Documentation

##### 6.11.2.1 loadTexture()

```
bool Arcade::Sdl2Sprite::loadTexture (
    const std::string & texture,
    const std::string & name ) [inline], [override], [virtual]
```

load the texture



## Parameters

<i>texture</i>	
----------------	--

load the texture with the given texture

Implements [Arcade::ISprite](#).

### 6.11.2.2 setPosition()

```
void Arcade::Sdl2Sprite::setPosition (
    int x,
    int y ) [inline], [override], [virtual]
```

set the position of the sprite

## Parameters

<i>x</i>	
<i>y</i>	

Implements [Arcade::ISprite](#).

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

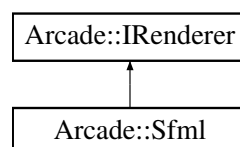
- Graphics/SDL2/include/Arcade/[Sdl2Sprite.hpp](#)

## 6.12 Arcade::Sfml Class Reference

[Sfml](#) class.

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

Inheritance diagram for Arcade::Sfml:



## Public Member Functions

- [GameEvent](#) [getEvent](#) () override  
*Retrieve the current event from the window.*
- void [openWindow](#) (unsigned int width, unsigned int height) override  
*Create a window with the specified dimensions.*
- void [displayWindow](#) () override  
*Display the current window.*
- void [clearWindow](#) () override  
*Clear the contents of the current window.*
- void [closeWindow](#) () override  
*Close the current window.*
- void [setTitle](#) (const std::string &title) override  
*Set the title of the window.*
- bool [loadTexture](#) (const std::string &texture, const std::string &name) override  
*Load a texture from a file.*
- bool [loadFont](#) (const std::string &filepath, const std::string &name) override  
*Load a font from a file.*
- void [createSprite](#) (const std::string &textureName, float pos\_x, float pos\_y, float scale\_x, float scale\_y) override  
*Create a sprite with the specified parameters.*
- void [createText](#) (const std::string &fontName, const std::string &text, int size, float pos\_x, float pos\_y) override  
*Create a text object with the specified parameters.*
- void [displaySprite](#) (const std::string &spriteName) override  
*Display a sprite with the specified name.*
- void [displayText](#) (const std::string &textName) override  
*Display a text object with the specified name.*
- bool [isASCII](#) () override  
*Check if the renderer supports only ASCII characters.*

### 6.12.1 Detailed Description

[Sfml](#) class.

[Sfml](#) class for the [Arcade](#) project

### 6.12.2 Member Function Documentation

#### 6.12.2.1 [createSprite\(\)](#)

```
void Arcade::Sfml::createSprite (
    const std::string & textureName,
    float pos_x,
    float pos_y,
    float scale_x,
    float scale_y ) [override], [virtual]
```

Create a sprite with the specified parameters.

## Parameters

<i>textureName</i>	The name of the texture to use for the sprite
<i>pos_x</i>	The x-coordinate of the sprite's position
<i>pos_y</i>	The y-coordinate of the sprite's position
<i>scale_x</i>	The scale factor for the sprite's width
<i>scale_y</i>	The scale factor for the sprite's height

Implements [Arcade::IRenderer](#).

### 6.12.2.2 createText()

```
void Arcade::Sfml::createText (
    const std::string & fontName,
    const std::string & text,
    int size,
    float pos_x,
    float pos_y ) [override], [virtual]
```

Create a text object with the specified parameters.

## Parameters

<i>fontName</i>	The name of the font to use for the text
<i>text</i>	The text to display
<i>size</i>	The size of the text
<i>pos_x</i>	The x-coordinate of the text's position
<i>pos_y</i>	The y-coordinate of the text's position

Implements [Arcade::IRenderer](#).

### 6.12.2.3 displaySprite()

```
void Arcade::Sfml::displaySprite (
    const std::string & spriteName ) [override], [virtual]
```

Display a sprite with the specified name.

## Parameters

<i>spriteName</i>	The name of the sprite to display
-------------------	-----------------------------------

Implements [Arcade::IRenderer](#).

#### 6.12.2.4 displayText()

```
void Arcade::Sfml::displayText (
    const std::string & textName ) [override], [virtual]
```

Display a text object with the specified name.

##### Parameters

<i>textName</i>	The name of the text to display
-----------------	---------------------------------

Implements [Arcade::IRenderer](#).

#### 6.12.2.5 getEvent()

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

Retrieve the current event from the window.

##### Returns

The current event

Implements [Arcade::IRenderer](#).

#### 6.12.2.6 isASCII()

```
bool Arcade::Sfml::isASCII ( ) [inline], [override], [virtual]
```

Check if the renderer supports only ASCII characters.

##### Returns

True if the renderer supports ASCII, false otherwise

Implements [Arcade::IRenderer](#).

#### 6.12.2.7 loadFont()

```
bool Arcade::Sfml::loadFont (
    const std::string & filepath,
    const std::string & name ) [override], [virtual]
```

Load a font from a file.

## Parameters

<i>filepath</i>	The path to the font file
<i>name</i>	The name to associate with the font

## Returns

True if the font was loaded successfully, false otherwise

Implements [Arcade::IRenderer](#).

### 6.12.2.8 loadTexture()

```
bool Arcade::Sfml::loadTexture (
    const std::string & filepath,
    const std::string & name ) [override], [virtual]
```

Load a texture from a file.

## Parameters

<i>filepath</i>	The path to the texture file
<i>name</i>	The name to associate with the texture

## Returns

True if the texture was loaded successfully, false otherwise

Implements [Arcade::IRenderer](#).

### 6.12.2.9 openWindow()

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

Create a window with the specified dimensions.

## Parameters

<i>width</i>	The width of the window
<i>height</i>	The height of the window

Implements [Arcade::IRenderer](#).

### 6.12.2.10 setTitle()

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

Set the title of the window.

#### Parameters

<i>title</i>	The new title of the window
--------------	-----------------------------

Implements [Arcade::IRenderer](#).

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

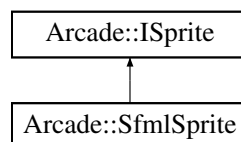
- Graphics/SFML/include/Arcade/[Sfml.hpp](#)

## 6.13 Arcade::SfmlSprite Class Reference

[SfmlSprite](#) class.

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

Inheritance diagram for Arcade::SfmlSprite:



### Public Member Functions

- **SfmlSprite** (const std::string &string, float pos\_x, float pos\_y, float scale\_x, float scale\_y)
- bool [loadTexture](#) (const std::string &texture, const std::string &name) override  
*load the texture*
- void **draw** (sf::RenderWindow &window)
- void [setPosition](#) (int x, int y) override  
*set the position of the sprite*

### 6.13.1 Detailed Description

[SfmlSprite](#) class.

[SfmlSprite](#) class for the [Arcade](#) project

### 6.13.2 Member Function Documentation

#### 6.13.2.1 loadTexture()

```
bool Arcade::SfmlSprite::loadTexture (
    const std::string & texture,
    const std::string & name ) [override], [virtual]
```

load the texture

##### Parameters

<i>texture</i>	
----------------	--

load the texture with the given texture

Implements [Arcade::ISprite](#).

#### 6.13.2.2 setPosition()

```
void Arcade::SfmlSprite::setPosition (
    int x,
    int y ) [inline], [override], [virtual]
```

set the position of the sprite

##### Parameters

<i>x</i>	
<i>y</i>	

Implements [Arcade::ISprite](#).

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

- Graphics/SFML/include/Arcade/[SfmlSprite.hpp](#)

## 6.14 Arcade::SpriteAssets Struct Reference

### Classes

- struct [AsciiSprite](#)

## Public Attributes

- struct [Arcade::SpriteAssets::AsciiSprite](#) **sprite**

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

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

```
#include <string>
#include <vector>
```

## Classes

- struct [Arcade::SpriteAssets](#)
- struct [Arcade::SpriteAssets::AsciiSprite](#)
- class [Arcade::ISprite](#)

*Sprite Interface.*

## Namespaces

- [Arcade](#)

*Main namespace for the [Arcade](#) project.*

## Typedefs

- using [Arcade::ascii\\_char\\_array\\_t](#) = std::vector< std::vector< char > >

### 7.3.1 Detailed Description

File declaring Sprite Interface.

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

File containing constant values used in the [Arcade](#) project.

## Variables

- constexpr int [EPITECH\\_ERROR](#) = 84  
*Exit code for Epitech errors.*
- constexpr int [SUCCESS](#) = 0  
*Exit code indicating that the program has executed successfully.*
- constexpr int [ERROR](#) = -1  
*Exit code indicating that an error has occurred.*

### 7.4.1 Detailed Description

File containing constant values used in the [Arcade](#) project.

This file provides a set of constant values that are used throughout the [Arcade](#) project.

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

File declaring Core.

```
#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.*

### 7.5.1 Detailed Description

File declaring Core.

## 7.6 Core/include/Arcade/Enum.hpp File Reference

File declaring Enum.

## Namespaces

- [Arcade](#)

Main namespace for the [Arcade](#) project.

## Enumerations

- enum class **CoreMode** : std::uint8\_t { **GAME** , **MENU** , **PAUSE** , **QUIT** }
- enum class **GameMode** : std::uint8\_t { **GAME** , **GAME\_OVER** , **MENU** , **PAUSE** , **QUIT** }
- enum class [Arcade::GameEvent](#) : std::uint8\_t { **UP** , **DOWN** , **LEFT** , **RIGHT** , **SHOOT** , **PAUSE** , **QUIT** , **NONE** }

Enum for the GameEvent.

### 7.6.1 Detailed Description

File declaring Enum.

Set of enum used in the [Arcade](#) project

## 7.7 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.

### 7.7.1 Detailed Description

File declaring RuntimeException.

## 7.8 Graphics/NCurses/include/Arcade/NCurses.hpp File Reference

File declaring Ncurses.

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

### Classes

- class [Arcade::Ncurses](#)  
*Ncurses class.*

### Namespaces

- [Arcade](#)  
*Main namespace for the [Arcade](#) project.*

#### 7.8.1 Detailed Description

File declaring Ncurses.

## 7.9 Graphics/NCurses/include/Arcade/NCursesSprite.hpp File Reference

File declaring NCursesSprite class.

```
#include "Arcade/abstractions/ISprite.hpp"
```

### Classes

- class [Arcade::NCursesSprite](#)  
*NCursesSprite class.*

### Namespaces

- [Arcade](#)  
*Main namespace for the [Arcade](#) project.*

#### 7.9.1 Detailed Description

File declaring NCursesSprite class.

## 7.10 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"

### 7.10.1 Detailed Description

File declaring Sdl2 class.

## 7.11 Graphics/SDL2/include/Arcade/Sdl2Sprite.hpp File Reference

File declaring SfmISprite class.

```
#include "Arcade/abstractions/ISprite.hpp"
```

### Classes

- class [Arcade::Sdl2Sprite](#)  
*Sdl2Sprite class.*

### Namespaces

- [Arcade](#)  
*Main namespace for the [Arcade](#) project.*

### 7.11.1 Detailed Description

File declaring SfmlSprite class.

## 7.12 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.*

### 7.12.1 Detailed Description

File declaring Sfml class.

## 7.13 Graphics/SFML/include/Arcade/SfmlSprite.hpp File Reference

File declaring SfmlSprite class.

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

### Classes

- class [Arcade::SfmlSprite](#)  
*SfmlSprite* class.

### Namespaces

- [Arcade](#)  
*Main namespace for the [Arcade](#) project.*

### 7.13.1 Detailed Description

File declaring SfmlSprite class.





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