Arcade

1.0

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Chapter 1

How to implement your own game / library

Game

- First, you wanna create a c++ class implementing the IGameModule interface.
- Next you wanna compile it into a dynamic library (.so file).
- Put that library file in the `games/` folder located at the root of the arcade repository.
  - Note that it must follow the following naming expression : *lib_arcade_.+\.so*, so that means a name like **lib_arcade_$gamename.so**.

Every class contained by the libraries located in the `games/` folder are going to be instanciated thanks to the symbol `createLib` that your library **must** contain.

```
extern "C" std::unique_ptr<Arcade::Games::IGameModule> createLib(void)
{
    return std::make_unique<MyGameModule>();
}
```

Library

- First, you wanna create a c++ class implementing the IDisplayModule interface.
- Next you wanna compile it into a dynamic library (.so file).
- Put that library file in the `lib/` folder located at the root of the arcade repository.
  - Note that it must follow the following naming expression : *lib_arcade_.+\.so*, so that means a name like **lib_arcade_$libraryname.so**.

Every class contained by the libraries located in the `lib/` folder are going to be instanciated thanks to the symbol `createLib` that your library **must** contain.

```
extern "C" std::unique_ptr<Arcade::Display::IDisplayModule> createLib(void)
{
    return std::make_unique<MyDisplayModule>();
}
```

Chapter 2

Namespace Index

2.1 Namespace List

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

Chapter 3

Hierarchical Index

3.1 Class Hierarchy

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

Chapter 4

Class Index

4.1 Class List

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

Chapter 5

Namespace Documentation

5.1 Arcade Namespace Reference

Namespaces

- Display
- Exceptions
- Games

Classes

- class Core

  Core class that handles all the interactions between the library modules and the game modules.

5.1.1 Detailed Description

Default namespace for the project.

5.2 Arcade::Display Namespace Reference

Classes

- class IDisplayModule

  Interface for the display modules used to display things.
- class Libcaca
- class SDL
- class SFML

5.2.1 Detailed Description

Contains elements related to the display libraries of the Arcade project.

5.3 Arcade::Exceptions Namespace Reference

Classes

- class ArcadeException

  Base exception class for this projects' exceptions.
- class BadFileException

  Thrown when looking up to an external file that is inexistant.
- class BadInstanciationException

  Thrown when library objects failed to be instanciated.
- class InvalidLibraryException

  Thrown when trying to use an invalid library file.

5.3.1 Detailed Description

Contains a loadout of exceptions that are used in the Arcade project.

5.4 Arcade::Games Namespace Reference

Classes

- class AGameModule

  Abstract class implementing key methods of the IGameModule interface.
- class Centipede
- class IGameModule

  Interface for the game modules used to handle games.
- class Nibbler
- class Pacman
- class Qix
- class Solarfox

5.4.1 Detailed Description

Contains elements related to the game libraries of the Arcade project.

Chapter 6

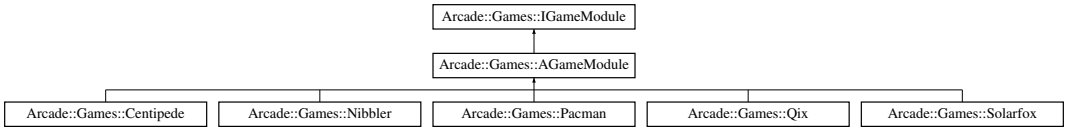
Class Documentation

6.1 Arcade::Games::AGameModule Class Reference

Abstract class implementing key methods of the IGameModule interface.

`#include <AGameModule.hpp>`

Inheritance diagram for Arcade::Games::AGameModule:



Public Member Functions

- AGameModule (std::string const &libname)

  Construct a new AGameModule object.
- bool loadFromFile (const std::string &filepath) final

  Loads highscores from a file.
- bool loadFromFile () final

  Loads highscores from the default save file.
- bool saveToFile (const std::string &filepath) const final

  Saves highscores to a file.
- bool saveToFile () const final

  Saves highscores from the default save file.
- void setPlayerName (const std::string &name) final

  Sets the player name.
- std::pair< std::string, int > getScore () const final

  Gets the current score.
- std::vector< std::pair< std::string, int > > getBestScores () const final

  Gets the best 16 scores.
- void render (Arcade::Display::IDisplayModule &lib) const override
- const std::string & getLibName () const final

  Gets the library name.

Protected Member Functions

- void addToBestScores (int nb)

  Adds a score to the scoreboard.

Protected Attributes

- int _currentScore

  The current score of the active game session.

6.1.1 Detailed Description

Abstract class implementing key methods of the IGameModule interface.

6.1.2 Constructor & Destructor Documentation

6.1.2.1 AGameModule()

```
Arcade::Games::AGameModule::AGameModule (
            std::string const & libname )
```

Construct a new AGameModule object.

Parameters

libname	THe library's name

6.1.3 Member Function Documentation

6.1.3.1 addToBestScores()

```
void Arcade::Games::AGameModule::addToBestScores (
            int nb )  [protected]
```

Adds a score to the scoreboard.

Parameters

nb	The score value

6.1.3.2 getBestScores()

```
std::vector<std::pair<std::string, int> > Arcade::Games::AGameModule::getBestScores ( ) const
[final], [virtual]
```

Gets the best 16 scores.

Returns

std::vector<std::pair<std::string, int>> Vector of [name, score] value pairs

Implements Arcade::Games::IGameModule.

6.1.3.3 getLibName()

```
const std::string& Arcade::Games::AGameModule::getLibName ( ) const  [final], [virtual]
```

Gets the library name.

Returns

The library's name

Implements Arcade::Games::IGameModule.

6.1.3.4 getScore()

```
std::pair<std::string, int> Arcade::Games::AGameModule::getScore ( ) const  [final], [virtual]
```

Gets the current score.

Returns

std::pair<std::string, int> [Name, score] value pairs

Implements Arcade::Games::IGameModule.

6.1.3.5 loadFromFile() [1/2]

```
bool Arcade::Games::AGameModule::loadFromFile (
            const std::string & filepath )  [final], [virtual]
```

Loads highscores from a file.

Parameters

filepath	The file path

Returns

true Highscores were loaded
false An error occured

Implements Arcade::Games::IGameModule.

6.1.3.6 loadFromFile() [2/2]

```
bool Arcade::Games::AGameModule::loadFromFile ( )  [final], [virtual]
```

Loads highscores from the default save file.

Returns

true Highscores were loaded
false An error occured

Implements Arcade::Games::IGameModule.

6.1.3.7 render()

```
void Arcade::Games::AGameModule::render (
            Arcade::Display::IDisplayModule & lib ) const  [override], [virtual]
```

Default game implementation (out of order)

Implements Arcade::Games::IGameModule.

Reimplemented in Arcade::Games::Nibbler, and Arcade::Games::Pacman.

6.1.3.8 saveToFile() [1/2]

```
bool Arcade::Games::AGameModule::saveToFile (
            const std::string & filepath ) const  [final], [virtual]
```

Saves highscores to a file.

Parameters

filepath	The file path

Returns

true Highscores were saved
false An error occured

Implements Arcade::Games::IGameModule.

6.1.3.9 saveToFile() [2/2]

```
bool Arcade::Games::AGameModule::saveToFile ( ) const  [final], [virtual]
```

Saves highscores from the default save file.

Returns

true Highscores were saved
false An error occured

Implements Arcade::Games::IGameModule.

6.1.3.10 setPlayerName()

```
void Arcade::Games::AGameModule::setPlayerName (
            const std::string & name )  [final], [virtual]
```

Sets the player name.

Parameters

name	The player name

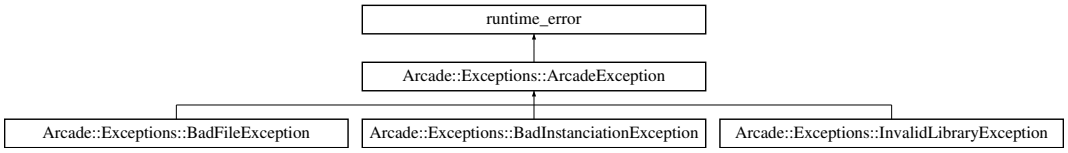
Implements Arcade::Games::IGameModule.

6.2 Arcade::Exceptions::ArcadeException Class Reference

Base exception class for this projects' exceptions.

```
#include <ArcadeException.hpp>
```

Inheritance diagram for Arcade::Exceptions::ArcadeException:



Public Member Functions

- ArcadeException (std::string const &message, std::string const &component)

  Construct a new Arcade Exception object.
- std::string const & getComponent (void) const noexcept

  Gets the name of component where the exception occured.

6.2.1 Detailed Description

Base exception class for this projects' exceptions.

6.2.2 Constructor & Destructor Documentation

6.2.2.1 ArcadeException()

```
Arcade::Exceptions::ArcadeException::ArcadeException (
            std::string const & message,
            std::string const & component )
```

Construct a new Arcade Exception object.

Parameters

message	Message explaining the problem.
component	Additional information on where the problem occured.

6.2.3 Member Function Documentation

6.2.3.1 getComponent()

```
std::string const& Arcade::Exceptions::ArcadeException::getComponent (
            void  ) const  [noexcept]
```

Gets the name of component where the exception occured.

Returns

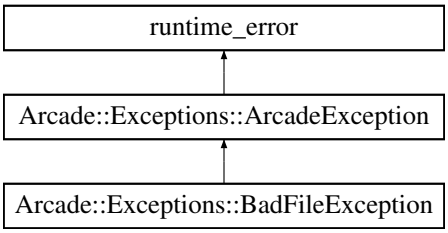
The component name

6.3 Arcade::Exceptions::BadFileException Class Reference

Thrown when looking up to an external file that is inexistant.

`#include <BadFileException.hpp>`

Inheritance diagram for Arcade::Exceptions::BadFileException:



Public Member Functions

- BadFileException (std::string const &message, std::string const &component)

  Construct a new Bad File Exception object.

6.3.1 Detailed Description

Thrown when looking up to an external file that is inexistant.

6.3.2 Constructor & Destructor Documentation

6.3.2.1 BadFileException()

```
Arcade::Exceptions::BadFileException::BadFileException (
            std::string const & message,
            std::string const & component )
```

Construct a new Bad File Exception object.

Parameters

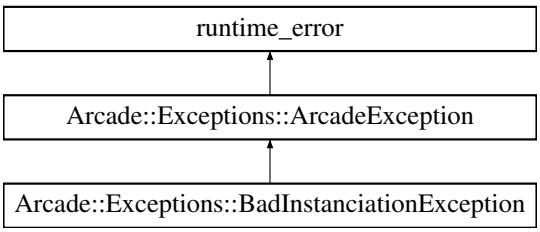
message	Message explaining the problem.
component	Additional information on where the problem occured.

6.4 Arcade::Exceptions::BadInstanciationException Class Reference

Thrown when library objects failed to be instanciated.

`#include <BadInstanciationException.hpp>`

Inheritance diagram for Arcade::Exceptions::BadInstanciationException:



Public Member Functions

- BadInstanciationException (std::string const &message, std::string const &component)
  Construct a new Bad Instanciation Exception object.

6.4.1 Detailed Description

Thrown when library objects failed to be instanciated.

6.4.2 Constructor & Destructor Documentation

6.4.2.1 BadInstanciationException()

```
Arcade::Exceptions::BadInstanciationException::BadInstanciationException (
            std::string const & message,
            std::string const & component )
```

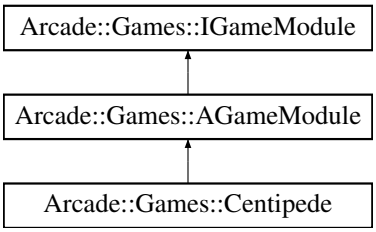
Construct a new Bad Instanciation Exception object.

Parameters

message	Message explaining the problem.
component	Additional information on where the problem occured.

6.5 Arcade::Games::Centipede Class Reference

Inheritance diagram for Arcade::Games::Centipede:



Public Member Functions

- void reset () final

  Resets and restarts the game.
- void update (const Arcade::Display::IDisplayModule &lib) final

  Updates the game.

Additional Inherited Members

6.5.1 Member Function Documentation

6.5.1.1 update()

```
void Arcade::Games::Centipede::update (
            const Arcade::Display::IDisplayModule & lib )  [final], [virtual]
```

Updates the game.

Parameters

lib	The display module that will be used to get events that occured

Implements Arcade::Games::IGameModule.

6.6 Arcade::Core Class Reference

Core class that handles all the interactions between the library modules and the game modules.

```
#include <Core.hpp>
```

Public Member Functions

- Core (const std::string &startLibraryPath)

  Construct a new Core object.
- void play ()

  Starts the arcade program.

6.6.1 Detailed Description

Core class that handles all the interactions between the library modules and the game modules.

6.6.2 Constructor & Destructor Documentation

6.6.2.1 Core()

```
Arcade::Core::Core (
            const std::string & startLibraryPath )  [explicit]
```

Construct a new Core object.

Parameters

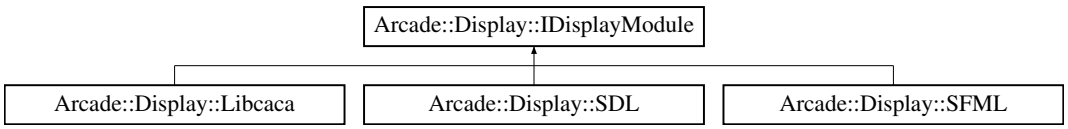
startLibraryPath	The library path that will be first used when the program will be started.

6.7 Arcade::Display::IDisplayModule Class Reference

Interface for the display modules used to display things.

`#include <IDisplayModule.hpp>`

Inheritance diagram for Arcade::Display::IDisplayModule:



Public Types

- enum Colors {
  DEFAULT, BLACK, RED, GREEN,
  YELLOW, BLUE, MAGENTA, CYAN,
  LIGHT_GRAY, DARK_GRAY, LIGHT_RED, LIGHT_GREEN,
  LIGHT_YELLOW, LIGHT_BLUE, LIGHT_MAGENTA, LIGHT_CYAN,
  WHITE, COLORS_END }

  Available colors.
- enum Keys {
  LEFT, RIGHT, UP, DOWN,
  Z, Q, S, D,
  A, E, W, X,
  SPACE, ESCAPE, J, K,
  U, I, M, R,
  ENTER, KEYS_END }

  Available keys.

Public Member Functions

- virtual void reset ()=0

  Resets the library.
- virtual void open ()=0

  Opens / initializes the window.
- virtual bool isOpen () const =0

  Check window status.
- virtual bool switchToNextLib () const =0

  Checks whether you need to change the current display library.
- virtual bool switchToPreviousLib () const =0

  Checks whether you need to change the current display library.
- virtual bool switchToNextGame () const =0

  Checks whether you need to change the current game library.
- virtual bool switchToPreviousGame () const =0

  Checks whether you need to change the current game library.
- virtual bool shouldBeRestarted () const =0

  Checks whether you need to restart the current game.
- virtual bool shouldGoToMenu () const =0

  Checks whether you need to go back to the menu.
- virtual bool shouldExit () const =0

  Checks whether you need to exit the program.
- virtual bool isKeyPressed (IDisplayModule::Keys) const =0

  Checks whether the current key is being pressed.
- virtual bool isKeyPressedOnce (IDisplayModule::Keys) const =0

  Checks whether the current key was pressed during the last frame.
- virtual float getDelta () const =0

  Gets the number of frames since last update.
- virtual void clear () const =0

  Clears the canvas.
- virtual void update ()=0

  Runs an update over the events that occured.
- virtual void render () const =0

  Renders the canvas.
- virtual char getKeyCode () const =0

  Gets the last pressed character from the keyboard.
- virtual void setColor (IDisplayModule::Colors col)=0

  Defines the color of the elements that will be drawn.
- virtual void putPixel (float x, float y) const =0

  Displays a pixel.
- virtual void putLine (float x1, float y1, float x2, float y2) const =0

  Displays a line.
- virtual void putRect (float x, float y, float w, float h) const =0

  Displays a rectangle.
- virtual void putFillRect (float x, float y, float w, float h) const =0

  Displays a filled rectangle.
- virtual void putCircle (float x, float y, float rad) const =0

  Displays a cirle.
- virtual void putFillCircle (float x, float y, float rad) const =0

  Displays a filled cirle.
- virtual void putText (const std::string &text, unsigned int size, float x, float y) const =0

  Displays text.
- virtual const std::string & getLibName () const =0

  Gets the library name.

6.7.1 Detailed Description

Interface for the display modules used to display things.

6.7.2 Member Enumeration Documentation

6.7.2.1 Colors

enum Arcade::Display::IDisplayModule::Colors

Available colors.

Enumerator

DEFAULT	The color the window clears to.
BLACK	Black color.
RED	Red color.
GREEN	Green color.
YELLOW	Yellow color.
BLUE	Blue color.
MAGENTA	Magenta color.
CYAN	Cyan color.
LIGHT_GRAY	Light gray color.
DARK_GRAY	Dark gray color.
LIGHT_RED	Light red color.
LIGHT_GREEN	Light green color.
LIGHT_YELLOW	Light yellow color.
LIGHT_BLUE	Light blue color.
LIGHT_MAGENTA	Light magenta color.
LIGHT_CYAN	Light cyan color.
WHITE	White color.
COLORS_END	Color count.

6.7.2.2 Keys

enum Arcade::Display::IDisplayModule::Keys

Available keys.

Enumerator

LEFT	Left key.
RIGHT	Right key.

Enumerator

UP	Up key.
DOWN	Down key.
Z	Z key.
Q	Q key.
S	S key.
D	D key.
A	A key.
E	E key.
W	W key.
X	X key.
SPACE	Space key.
ESCAPE	Backspace key.
J	J key.
K	K key.
U	U key.
I	I key.
M	M key.
R	R key.
ENTER	Return key.
KEYS_END	Key count.

6.7.3 Member Function Documentation

6.7.3.1 getDelta()

```
virtual float Arcade::Display::IDisplayModule::getDelta ( ) const  [pure virtual]
```

Gets the number of frames since last update.

Returns

float Frame count

Implemented in Arcade::Display::SDL, Arcade::Display::Libcaca, and Arcade::Display::SFML.

6.7.3.2 getKeyCode()

```
virtual char Arcade::Display::IDisplayModule::getKeyCode ( ) const  [pure virtual]
```

Gets the last pressed character from the keyboard.

Returns

\0 if nothing was pressed, \b if backspace was pressed, \n if return was pressed, otherwise, a character.

Implemented in Arcade::Display::SDL, Arcade::Display::Libcaca, and Arcade::Display::SFML.

6.7.3.3 getLibName()

```
virtual const std::string& Arcade::Display::IDisplayModule::getLibName ( ) const  [pure virtual]
```

Gets the library name.

Returns

The library's name

Implemented in Arcade::Display::SDL, Arcade::Display::Libcaca, and Arcade::Display::SFML.

6.7.3.4 isKeyPressed()

```
virtual bool Arcade::Display::IDisplayModule::isKeyPressed (
            IDisplayModule::Keys  ) const  [pure virtual]
```

Checks whether the current key is being pressed.

Returns

true Key is pressed
false Key is not pressed

Implemented in Arcade::Display::SDL, Arcade::Display::Libcaca, and Arcade::Display::SFML.

6.7.3.5 isKeyPressedOnce()

```
virtual bool Arcade::Display::IDisplayModule::isKeyPressedOnce (
            IDisplayModule::Keys  ) const  [pure virtual]
```

Checks whether the current key was pressed during the last frame.

Returns

true Key is pressed
false Key is not pressed

Implemented in Arcade::Display::SDL, Arcade::Display::Libcaca, and Arcade::Display::SFML.

6.7.3.6 isOpen()

```
virtual bool Arcade::Display::IDisplayModule::isOpen ( ) const  [pure virtual]
```

Check window status.

Returns

true Window is open
false Window is closed

Implemented in Arcade::Display::SDL, Arcade::Display::Libcaca, and Arcade::Display::SFML.

6.7.3.7 putCircle()

```
virtual void Arcade::Display::IDisplayModule::putCircle (
            float x,
            float y,
            float rad ) const  [pure virtual]
```

Displays a cirle.

Parameters

x	X coordinates
y	Y coordinates
rad	Radius of the circle

Implemented in Arcade::Display::SDL, Arcade::Display::Libcaca, and Arcade::Display::SFML.

6.7.3.8 putFillCircle()

```
virtual void Arcade::Display::IDisplayModule::putFillCircle (
            float x,
            float y,
            float rad ) const  [pure virtual]
```

Displays a filled cirle.

Parameters

x	X coordinates
y	Y coordinates
rad	Radius of the circle

Implemented in Arcade::Display::SDL, Arcade::Display::Libcaca, and Arcade::Display::SFML.

6.7.3.9 putFillRect()

```
virtual void Arcade::Display::IDisplayModule::putFillRect (
            float x,
            float y,
            float w,
            float h ) const  [pure virtual]
```

Displays a filled rectangle.

Parameters

x	X coordinates
y	Y coordinates
w	Width of the rectangle
h	Height of the rectangle

Implemented in Arcade::Display::SDL, Arcade::Display::Libcaca, and Arcade::Display::SFML.

6.7.3.10 putLine()

```
virtual void Arcade::Display::IDisplayModule::putLine (
            float x1,
            float y1,
            float x2,
            float y2 ) const  [pure virtual]
```

Displays a line.

Parameters

x1	X coordinates for the first point
y1	Y coordinates for the first point
x2	X coordinates for the second point
y2	Y coordinates for the second point

Implemented in Arcade::Display::SDL, Arcade::Display::Libcaca, and Arcade::Display::SFML.

6.7.3.11 putPixel()

```
virtual void Arcade::Display::IDisplayModule::putPixel (
            float x,
            float y ) const  [pure virtual]
```

Displays a pixel.

Parameters

x	X coordinates
y	Y coordinates

Implemented in Arcade::Display::SDL, Arcade::Display::Libcaca, and Arcade::Display::SFML.

6.7.3.12 putRect()

```
virtual void Arcade::Display::IDisplayModule::putRect (
            float x,
            float y,
            float w,
            float h ) const  [pure virtual]
```

Displays a rectangle.

Parameters

x	X coordinates
y	Y coordinates
w	Width of the rectangle
h	Height of the rectangle

Implemented in Arcade::Display::SDL, Arcade::Display::Libcaca, and Arcade::Display::SFML.

6.7.3.13 putText()

```
virtual void Arcade::Display::IDisplayModule::putText (
            const std::string & text,
            unsigned int size,
            float x,
            float y ) const  [pure virtual]
```

Displays text.

Parameters

text	The text content
size	The text size
x	X coordinates
y	Y coordinates

Implemented in Arcade::Display::SDL, Arcade::Display::Libcaca, and Arcade::Display::SFML.

6.7.3.14 setColor()

```
virtual void Arcade::Display::IDisplayModule::setColor (
            IDisplayModule::Colors col )  [pure virtual]
```

Defines the color of the elements that will be drawn.

Parameters

col	The color

Implemented in Arcade::Display::SDL, Arcade::Display::Libcaca, and Arcade::Display::SFML.

6.7.3.15 shouldBeRestarted()

```
virtual bool Arcade::Display::IDisplayModule::shouldBeRestarted ( ) const  [pure virtual]
```

Checks whether you need to restart the current game.

Returns

true Restart the game
false Do nothing

Implemented in Arcade::Display::SDL, Arcade::Display::Libcaca, and Arcade::Display::SFML.

6.7.3.16 shouldExit()

```
virtual bool Arcade::Display::IDisplayModule::shouldExit ( ) const  [pure virtual]
```

Checks whether you need to exit the program.

Returns

true Exit the program
false Do nothing

Implemented in Arcade::Display::SDL, Arcade::Display::Libcaca, and Arcade::Display::SFML.

6.7.3.17 shouldGoToMenu()

```
virtual bool Arcade::Display::IDisplayModule::shouldGoToMenu ( ) const  [pure virtual]
```

Checks whether you need to go back to the menu.

Returns

true Go back to menu
false Do nothing

Implemented in Arcade::Display::SDL, Arcade::Display::Libcaca, and Arcade::Display::SFML.

6.7.3.18 switchToNextGame()

```
virtual bool Arcade::Display::IDisplayModule::switchToNextGame ( ) const  [pure virtual]
```

Checks whether you need to change the current game library.

Returns

true Switch to next available library
false Do nothing

Implemented in Arcade::Display::SDL, Arcade::Display::Libcaca, and Arcade::Display::SFML.

6.7.3.19 switchToNextLib()

```
virtual bool Arcade::Display::IDisplayModule::switchToNextLib ( ) const  [pure virtual]
```

Checks whether you need to change the current display library.

Returns

true Switch to next available library
false Do nothing

Implemented in Arcade::Display::SDL, Arcade::Display::Libcaca, and Arcade::Display::SFML.

6.7.3.20 switchToPreviousGame()

```
virtual bool Arcade::Display::IDisplayModule::switchToPreviousGame ( ) const  [pure virtual]
```

Checks whether you need to change the current game library.

Returns

true Switch to previous available library
false Do nothing

Implemented in Arcade::Display::SDL, Arcade::Display::Libcaca, and Arcade::Display::SFML.

6.7.3.21 switchToPreviousLib()

```
virtual bool Arcade::Display::IDisplayModule::switchToPreviousLib ( ) const  [pure virtual]
```

Checks whether you need to change the current display library.

Returns

true Switch to previous available library
false Do nothing

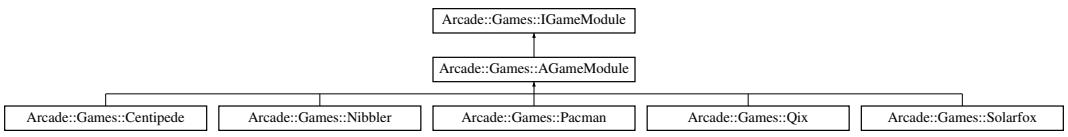
Implemented in Arcade::Display::SDL, Arcade::Display::Libcaca, and Arcade::Display::SFML.

6.8 Arcade::Games::IGameModule Class Reference

Interface for the game modules used to handle games.

```
#include <IGameModule.hpp>
```

Inheritance diagram for Arcade::Games::IGameModule:



Public Member Functions

- virtual void reset ()=0

  Resets and restarts the game.
- virtual bool loadFromFile (const std::string &filepath)=0

  Loads highscores from a file.
- virtual bool loadFromFile ()=0

  Loads highscores from the default save file.
- virtual bool saveToFile (const std::string &filepath) const =0

  Saves highscores to a file.
- virtual bool saveToFile () const =0

  Saves highscores from the default save file.
- virtual void setPlayerName (const std::string &name)=0

  Sets the player name.
- virtual std::pair< std::string, int > getScore () const =0

  Gets the current score.
- virtual std::vector< std::pair< std::string, int > > getBestScores () const =0

  Gets the best 16 scores.
- virtual void update (const Arcade::Display::IDisplayModule &lib)=0

  Updates the game.
- virtual void render (Arcade::Display::IDisplayModule &lib) const =0

  Renders the game on the display module.
- virtual const std::string & getLibName () const =0

  Gets the library name.

6.8.1 Detailed Description

Interface for the game modules used to handle games.

6.8.2 Member Function Documentation

6.8.2.1 getBestScores()

```
virtual std::vector<std::pair<std::string, int> > Arcade::Games::IGameModule::getBestScores (
) const  [pure virtual]
```

Gets the best 16 scores.

Returns

std::vector<std::pair<std::string, int>> Vector of [name, score] value pairs

Implemented in Arcade::Games::AGameModule.

6.8.2.2 getLibName()

```
virtual const std::string& Arcade::Games::IGameModule::getLibName ( ) const  [pure virtual]
```

Gets the library name.

Returns

The library's name

Implemented in Arcade::Games::AGameModule.

6.8.2.3 getScore()

```
virtual std::pair<std::string, int> Arcade::Games::IGameModule::getScore ( ) const  [pure
virtual]
```

Gets the current score.

Returns

std::pair<std::string, int> [Name, score] value pairs

Implemented in Arcade::Games::AGameModule.

6.8.2.4 loadFromFile() [1/2]

```
virtual bool Arcade::Games::IGameModule::loadFromFile (
            const std::string & filepath )  [pure virtual]
```

Loads highscores from a file.

Parameters

filepath	The file path

Returns

true Highscores were loaded
false An error occured

Implemented in Arcade::Games::AGameModule.

6.8.2.5 loadFromFile() [2/2]

```
virtual bool Arcade::Games::IGameModule::loadFromFile ( )  [pure virtual]
```

Loads highscores from the default save file.

Returns

true Highscores were loaded
false An error occured

Implemented in Arcade::Games::AGameModule.

6.8.2.6 render()

```
virtual void Arcade::Games::IGameModule::render (
            Arcade::Display::IDisplayModule & lib ) const  [pure virtual]
```

Renders the game on the display module.

Parameters

lib	The display module that will be used to put things on a canvas.

Implemented in Arcade::Games::AGameModule, Arcade::Games::Nibbler, and Arcade::Games::Pacman.

6.8.2.7 saveToFile() [1/2]

```
virtual bool Arcade::Games::IGameModule::saveToFile (
            const std::string & filepath ) const  [pure virtual]
```

Saves highscores to a file.

Parameters

filepath	The file path

Returns

true Highscores were saved
false An error occured

Implemented in Arcade::Games::AGameModule.

6.8.2.8 saveToFile() [2/2]

```
virtual bool Arcade::Games::IGameModule::saveToFile ( ) const  [pure virtual]
```

Saves highscores from the default save file.

Returns

true Highscores were saved
false An error occured

Implemented in Arcade::Games::AGameModule.

6.8.2.9 setPlayerName()

```
virtual void Arcade::Games::IGameModule::setPlayerName (
            const std::string & name )  [pure virtual]
```

Sets the player name.

Parameters

name	The player name

Implemented in Arcade::Games::AGameModule.

6.8.2.10 update()

```
virtual void Arcade::Games::IGameModule::update (
            const Arcade::Display::IDisplayModule & lib )  [pure virtual]
```

Updates the game.

Parameters

lib	The display module that will be used to get events that occured

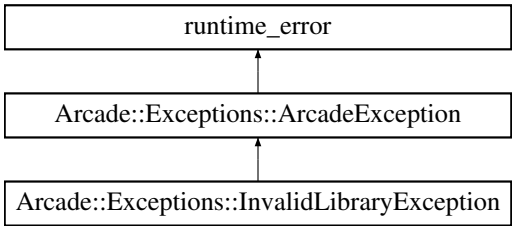
Implemented in Arcade::Games::Nibbler, Arcade::Games::Pacman, Arcade::Games::Centipede, Arcade::Games::Qix, and Arcade::Games::Solarfox.

6.9 Arcade::Exceptions::InvalidLibraryException Class Reference

Thrown when trying to use an invalid library file.

`#include <InvalidLibraryException.hpp>`

Inheritance diagram for Arcade::Exceptions::InvalidLibraryException:



Public Member Functions

- InvalidLibraryException (std::string const &message, std::string const &component)
  Construct a new Invalid Library Exception object.

6.9.1 Detailed Description

Thrown when trying to use an invalid library file.

6.9.2 Constructor & Destructor Documentation

6.9.2.1 InvalidLibraryException()

```
Arcade::Exceptions::InvalidLibraryException::InvalidLibraryException (
            std::string const & message,
            std::string const & component )
```

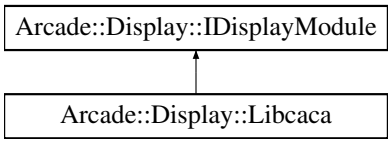
Construct a new Invalid Library Exception object.

Parameters

message	Message explaining the problem.
component	Additional information on where the problem occured.

6.10 Arcade::Display::Libcaca Class Reference

Inheritance diagram for Arcade::Display::Libcaca:



Public Member Functions

- void reset () final

  Resets the library.
- void open () final

  Opens / initializes the window.
- bool isOpen () const final

  Check window status.
- bool switchToNextLib () const final

  Checks whether you need to change the current display library.
- bool switchToPreviousLib () const final

  Checks whether you need to change the current display library.
- bool switchToNextGame () const final

  Checks whether you need to change the current game library.
- bool switchToPreviousGame () const final

  Checks whether you need to change the current game library.
- bool shouldBeRestarted () const final

  Checks whether you need to restart the current game.
- bool shouldGoToMenu () const final

  Checks whether you need to go back to the menu.
- bool shouldExit () const final

  Checks whether you need to exit the program.
- bool isKeyPressed (IDisplayModule::Keys) const final

  Checks whether the current key is being pressed.
- bool isKeyPressedOnce (IDisplayModule::Keys) const final

  Checks whether the current key was pressed during the last frame.
- float getDelta () const final

  Gets the number of frames since last update.
- void clear () const final

  Clears the canvas.
- void update () final

  Runs an update over the events that occured.
- void render () const final

  Renders the canvas.
- char getKeyCode () const final

  Gets the last pressed character from the keyboard.
- void setColor (IDisplayModule::Colors col) final

  Defines the color of the elements that will be drawn.
- void putPixel (float x, float y) const final

  Displays a pixel.
- void putLine (float x1, float y1, float x2, float y2) const final

  Displays a line.
- void putRect (float x, float y, float w, float h) const final

  Displays a rectangle.

- void putFillRect (float x, float y, float w, float h) const final

  Displays a filled rectangle.
- void putCircle (float x, float y, float rad) const final

  Displays a cirle.
- void putFillCircle (float x, float y, float rad) const final

  Displays a filled cirle.
- void putText (const std::string &text, unsigned int size, float x, float y) const final

  Displays text.
- const std::string & getLibName () const final

  Gets the library name.

Additional Inherited Members

6.10.1 Member Function Documentation

6.10.1.1 getDelta()

```
float Arcade::Display::Libcaca::getDelta ( ) const  [final], [virtual]
```

Gets the number of frames since last update.

Returns

float Frame count

Implements Arcade::Display::IDisplayModule.

6.10.1.2 getKeyCode()

```
char Arcade::Display::Libcaca::getKeyCode ( ) const  [final], [virtual]
```

Gets the last pressed character from the keyboard.

Returns

\0 if nothing was pressed, \b if backspace was pressed, \n if return was pressed, otherwise, a character.

Implements Arcade::Display::IDisplayModule.

6.10.1.3 getLibName()

```
const std::string& Arcade::Display::Libcaca::getLibName ( ) const  [final], [virtual]
```

Gets the library name.

Returns

The library's name

Implements Arcade::Display::IDisplayModule.

6.10.1.4 isKeyPressed()

```
bool Arcade::Display::Libcaca::isKeyPressed (
            IDisplayModule::Keys  ) const  [final], [virtual]
```

Checks whether the current key is being pressed.

Returns

true Key is pressed
false Key is not pressed

Implements Arcade::Display::IDisplayModule.

6.10.1.5 isKeyPressedOnce()

```
bool Arcade::Display::Libcaca::isKeyPressedOnce (
            IDisplayModule::Keys  ) const  [final], [virtual]
```

Checks whether the current key was pressed during the last frame.

Returns

true Key is pressed
false Key is not pressed

Implements Arcade::Display::IDisplayModule.

6.10.1.6 isOpen()

```
bool Arcade::Display::Libcaca::isOpen ( ) const  [final], [virtual]
```

Check window status.

Returns

true Window is open
false Window is closed

Implements Arcade::Display::IDisplayModule.

6.10.1.7 putCircle()

```
void Arcade::Display::Libcaca::putCircle (
            float x,
            float y,
            float rad ) const  [final], [virtual]
```

Displays a cirle.

Parameters

x	X coordinates
y	Y coordinates
rad	Radius of the circle

Implements Arcade::Display::IDisplayModule.

6.10.1.8 putFillCircle()

```
void Arcade::Display::Libcaca::putFillCircle (
            float x,
            float y,
            float rad ) const  [final], [virtual]
```

Displays a filled cirle.

Parameters

x	X coordinates
y	Y coordinates
rad	Radius of the circle

Implements Arcade::Display::IDisplayModule.

6.10.1.9 putFillRect()

```
void Arcade::Display::Libcaca::putFillRect (
            float x,
            float y,
            float w,
            float h ) const  [final], [virtual]
```

Displays a filled rectangle.

Parameters

x	X coordinates
y	Y coordinates
w	Width of the rectangle
h	Height of the rectangle

Implements Arcade::Display::IDisplayModule.

6.10.1.10 putLine()

```
void Arcade::Display::Libcaca::putLine (
            float x1,
            float y1,
            float x2,
            float y2 ) const  [final], [virtual]
```

Displays a line.

Parameters

x1	X coordinates for the first point
y1	Y coordinates for the first point
x2	X coordinates for the second point
y2	Y coordinates for the second point

Implements Arcade::Display::IDisplayModule.

6.10.1.11 putPixel()

```
void Arcade::Display::Libcaca::putPixel (
            float x,
            float y ) const  [final], [virtual]
```

Displays a pixel.

Parameters

x	X coordinates
y	Y coordinates

Implements Arcade::Display::IDisplayModule.

6.10.1.12 putRect()

```
void Arcade::Display::Libcaca::putRect (
            float x,
            float y,
            float w,
            float h ) const  [final], [virtual]
```

Displays a rectangle.

Parameters

x	X coordinates
y	Y coordinates
w	Width of the rectangle
h	Height of the rectangle

Implements Arcade::Display::IDisplayModule.

6.10.1.13 putText()

```
void Arcade::Display::Libcaca::putText (
            const std::string & text,
            unsigned int size,
            float x,
            float y ) const  [final], [virtual]
```

Displays text.

Parameters

text	The text content
size	The text size
x	X coordinates
y	Y coordinates

Implements Arcade::Display::IDisplayModule.

6.10.1.14 setColor()

```
void Arcade::Display::Libcaca::setColor (
            IDisplayModule::Colors col )  [final], [virtual]
```

Defines the color of the elements that will be drawn.

Parameters

col	The color

Implements Arcade::Display::IDisplayModule.

6.10.1.15 shouldBeRestarted()

```
bool Arcade::Display::Libcaca::shouldBeRestarted ( ) const  [final], [virtual]
```

Checks whether you need to restart the current game.

Returns

true Restart the game
false Do nothing

Implements Arcade::Display::IDisplayModule.

6.10.1.16 shouldExit()

```
bool Arcade::Display::Libcaca::shouldExit ( ) const  [final], [virtual]
```

Checks whether you need to exit the program.

Returns

true Exit the program
false Do nothing

Implements Arcade::Display::IDisplayModule.

6.10.1.17 shouldGoToMenu()

```
bool Arcade::Display::Libcaca::shouldGoToMenu ( ) const  [final], [virtual]
```

Checks whether you need to go back to the menu.

Returns

true Go back to menu
false Do nothing

Implements Arcade::Display::IDisplayModule.

6.10.1.18 switchToNextGame()

```
bool Arcade::Display::Libcaca::switchToNextGame ( ) const  [final], [virtual]
```

Checks whether you need to change the current game library.

Returns

true Switch to next available library
false Do nothing

Implements Arcade::Display::IDisplayModule.

6.10.1.19 switchToNextLib()

```
bool Arcade::Display::Libcaca::switchToNextLib ( ) const  [final], [virtual]
```

Checks whether you need to change the current display library.

Returns

true Switch to next available library
false Do nothing

Implements Arcade::Display::IDisplayModule.

6.10.1.20 switchToPreviousGame()

```
bool Arcade::Display::Libcaca::switchToPreviousGame ( ) const  [final], [virtual]
```

Checks whether you need to change the current game library.

Returns

true Switch to previous available library
false Do nothing

Implements Arcade::Display::IDisplayModule.

6.10.1.21 switchToPreviousLib()

```
bool Arcade::Display::Libcaca::switchToPreviousLib ( ) const  [final], [virtual]
```

Checks whether you need to change the current display library.

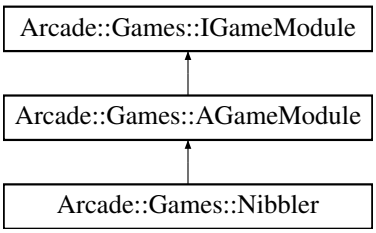
Returns

true Switch to previous available library
false Do nothing

Implements Arcade::Display::IDisplayModule.

6.11 Arcade::Games::Nibbler Class Reference

Inheritance diagram for Arcade::Games::Nibbler:



Public Member Functions

- void reset () final
  Resets and restarts the game.
- void update (const Arcade::Display::IDisplayModule &displayModule) final
  Updates the game.
- void render (Arcade::Display::IDisplayModule &displayModule) const final

Additional Inherited Members

6.11.1 Member Function Documentation

6.11.1.1 render()

```
void Arcade::Games::Nibbler::render (
            Arcade::Display::IDisplayModule & lib ) const  [final], [virtual]
```

Default game implementation (out of order)

Reimplemented from Arcade::Games::AGameModule.

6.11.1.2 update()

```
void Arcade::Games::Nibbler::update (
            const Arcade::Display::IDisplayModule & lib )  [final], [virtual]
```

Updates the game.

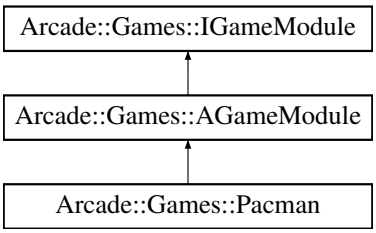
Parameters

lib	The display module that will be used to get events that occured

Implements Arcade::Games::IGameModule.

6.12 Arcade::Games::Pacman Class Reference

Inheritance diagram for Arcade::Games::Pacman:



Public Member Functions

- void reset () final

  Resets and restarts the game.
- void update (const Arcade::Display::IDisplayModule &lib) final

  Updates the game.
- void render (Arcade::Display::IDisplayModule &lib) const final

Additional Inherited Members

6.12.1 Member Function Documentation

6.12.1.1 render()

```
void Arcade::Games::Pacman::render (
            Arcade::Display::IDisplayModule & lib ) const  [final], [virtual]
```

Default game implementation (out of order)

Reimplemented from Arcade::Games::AGameModule.

6.12.1.2 update()

```
void Arcade::Games::Pacman::update (
            const Arcade::Display::IDisplayModule & lib )  [final], [virtual]
```

Updates the game.

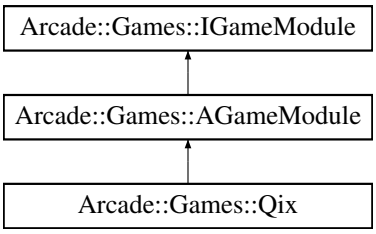
Parameters

lib	The display module that will be used to get events that occured

Implements Arcade::Games::IGameModule.

6.13 Arcade::Games::Qix Class Reference

Inheritance diagram for Arcade::Games::Qix:



Public Member Functions

- void reset () final

  Resets and restarts the game.
- void update (const Arcade::Display::IDisplayModule &lib) final

  Updates the game.

Additional Inherited Members

6.13.1 Member Function Documentation

6.13.1.1 update()

```
void Arcade::Games::Qix::update (
            const Arcade::Display::IDisplayModule & lib )  [final], [virtual]
```

Updates the game.

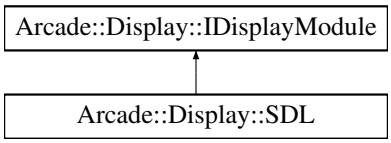
Parameters

lib	The display module that will be used to get events that occured

Implements Arcade::Games::IGameModule.

6.14 Arcade::Display::SDL Class Reference

Inheritance diagram for Arcade::Display::SDL:



Public Member Functions

- void reset () final

  Resets the library.
- void open () final

  Opens / initializes the window.
- bool isOpen () const final

  Check window status.
- bool switchToNextLib () const final

  Checks whether you need to change the current display library.
- bool switchToPreviousLib () const final

  Checks whether you need to change the current display library.
- bool switchToNextGame () const final

  Checks whether you need to change the current game library.
- bool switchToPreviousGame () const final

  Checks whether you need to change the current game library.
- bool shouldBeRestarted () const final

Checks whether you need to restart the current game.

- bool shouldGoToMenu () const final

  Checks whether you need to go back to the menu.

- bool shouldExit () const final

  Checks whether you need to exit the program.

- bool isKeyPressed (IDisplayModule::Keys) const final

  Checks whether the current key is being pressed.

- bool isKeyPressedOnce (IDisplayModule::Keys) const final

  Checks whether the current key was pressed during the last frame.

- float getDelta () const final

  Gets the number of frames since last update.

- void clear () const final

  Clears the canvas.

- void update () final

  Runs an update over the events that occured.

- void render () const final

  Renders the canvas.

- char getKeyCode () const final

  Gets the last pressed character from the keyboard.

- void setColor (IDisplayModule::Colors col) final

  Defines the color of the elements that will be drawn.

- void putPixel (float x, float y) const final

  Displays a pixel.

- void putLine (float x1, float y1, float x2, float y2) const final

  Displays a line.

- void putRect (float x, float y, float w, float h) const final

  Displays a rectangle.

- void putFillRect (float x, float y, float w, float h) const final

  Displays a filled rectangle.

- void putCircle (float x, float y, float rad) const final

  Displays a cirle.

- void putFillCircle (float x, float y, float rad) const final

  Displays a filled cirle.

- void putText (const std::string &text, unsigned int size, float x, float y) const final

  Displays text.

- const std::string & getLibName () const final

  Gets the library name.

Additional Inherited Members

6.14.1 Member Function Documentation

6.14.1.1 getDelta()

```
float Arcade::Display::SDL::getDelta ( ) const  [final], [virtual]
```

Gets the number of frames since last update.

Returns

float Frame count

Implements Arcade::Display::IDisplayModule.

6.14.1.2 getKeyCode()

```
char Arcade::Display::SDL::getKeyCode ( ) const  [final], [virtual]
```

Gets the last pressed character from the keyboard.

Returns

\0 if nothing was pressed, \b if backspace was pressed, \n if return was pressed, otherwise, a character.

Implements Arcade::Display::IDisplayModule.

6.14.1.3 getLibName()

```
const std::string& Arcade::Display::SDL::getLibName ( ) const  [final], [virtual]
```

Gets the library name.

Returns

The library's name

Implements Arcade::Display::IDisplayModule.

6.14.1.4 isKeyPressed()

```
bool Arcade::Display::SDL::isKeyPressed (
            IDisplayModule::Keys  ) const  [final], [virtual]
```

Checks whether the current key is being pressed.

Returns

true Key is pressed
false Key is not pressed

Implements Arcade::Display::IDisplayModule.

6.14.1.5 isKeyPressedOnce()

```
bool Arcade::Display::SDL::isKeyPressedOnce (
            IDisplayModule::Keys  ) const  [final], [virtual]
```

Checks whether the current key was pressed during the last frame.

Returns

true Key is pressed
false Key is not pressed

Implements Arcade::Display::IDisplayModule.

6.14.1.6 isOpen()

```
bool Arcade::Display::SDL::isOpen ( ) const  [final], [virtual]
```

Check window status.

Returns

true Window is open
false Window is closed

Implements Arcade::Display::IDisplayModule.

6.14.1.7 putCircle()

```
void Arcade::Display::SDL::putCircle (
            float x,
            float y,
            float rad ) const  [final], [virtual]
```

Displays a cirle.

Parameters

x	X coordinates
y	Y coordinates
rad	Radius of the circle

Implements Arcade::Display::IDisplayModule.

6.14.1.8 putFillCircle()

```
void Arcade::Display::SDL::putFillCircle (
            float x,
            float y,
            float rad ) const  [final], [virtual]
```

Displays a filled cirle.

Parameters

x	X coordinates
y	Y coordinates
rad	Radius of the circle

Implements Arcade::Display::IDisplayModule.

6.14.1.9 putFillRect()

```
void Arcade::Display::SDL::putFillRect (
            float x,
            float y,
            float w,
            float h ) const  [final], [virtual]
```

Displays a filled rectangle.

Parameters

x	X coordinates
y	Y coordinates
w	Width of the rectangle
h	Height of the rectangle

Implements Arcade::Display::IDisplayModule.

6.14.1.10 putLine()

```
void Arcade::Display::SDL::putLine (
            float x1,
            float y1,
            float x2,
            float y2 ) const  [final], [virtual]
```

Displays a line.

Parameters

x1	X coordinates for the first point
y1	Y coordinates for the first point
x2	X coordinates for the second point
y2	Y coordinates for the second point

Implements Arcade::Display::IDisplayModule.

6.14.1.11 putPixel()

```
void Arcade::Display::SDL::putPixel (
            float x,
            float y ) const  [final], [virtual]
```

Displays a pixel.

Parameters

x	X coordinates
y	Y coordinates

Implements Arcade::Display::IDisplayModule.

6.14.1.12 putRect()

```
void Arcade::Display::SDL::putRect (
            float x,
            float y,
            float w,
            float h ) const  [final], [virtual]
```

Displays a rectangle.

Parameters

x	X coordinates
y	Y coordinates
w	Width of the rectangle
h	Height of the rectangle

Implements Arcade::Display::IDisplayModule.

6.14.1.13 putText()

```
void Arcade::Display::SDL::putText (
            const std::string & text,
            unsigned int size,
            float x,
            float y ) const  [final], [virtual]
```

Displays text.

Parameters

text	The text content
size	The text size
x	X coordinates
y	Y coordinates

Implements Arcade::Display::IDisplayModule.

6.14.1.14 setColor()

```
void Arcade::Display::SDL::setColor (
            IDisplayModule::Colors col )  [final], [virtual]
```

Defines the color of the elements that will be drawn.

Parameters

col	The color

Implements Arcade::Display::IDisplayModule.

6.14.1.15 shouldBeRestarted()

```
bool Arcade::Display::SDL::shouldBeRestarted ( ) const  [final], [virtual]
```

Checks whether you need to restart the current game.

Returns

true Restart the game
false Do nothing

Implements Arcade::Display::IDisplayModule.

6.14.1.16 shouldExit()

```
bool Arcade::Display::SDL::shouldExit ( ) const  [final], [virtual]
```

Checks whether you need to exit the program.

Returns

true Exit the program
false Do nothing

Implements Arcade::Display::IDisplayModule.

6.14.1.17 shouldGoToMenu()

```
bool Arcade::Display::SDL::shouldGoToMenu ( ) const  [final], [virtual]
```

Checks whether you need to go back to the menu.

Returns

true Go back to menu
false Do nothing

Implements Arcade::Display::IDisplayModule.

6.14.1.18 switchToNextGame()

```
bool Arcade::Display::SDL::switchToNextGame ( ) const  [final], [virtual]
```

Checks whether you need to change the current game library.

Returns

true Switch to next available library
false Do nothing

Implements Arcade::Display::IDisplayModule.

6.14.1.19 switchToNextLib()

```
bool Arcade::Display::SDL::switchToNextLib ( ) const  [final], [virtual]
```

Checks whether you need to change the current display library.

Returns

true Switch to next available library
false Do nothing

Implements Arcade::Display::IDisplayModule.

6.14.1.20 switchToPreviousGame()

```
bool Arcade::Display::SDL::switchToPreviousGame ( ) const  [final], [virtual]
```

Checks whether you need to change the current game library.

Returns

true Switch to previous available library
false Do nothing

Implements Arcade::Display::IDisplayModule.

6.14.1.21 switchToPreviousLib()

```
bool Arcade::Display::SDL::switchToPreviousLib ( ) const  [final], [virtual]
```

Checks whether you need to change the current display library.

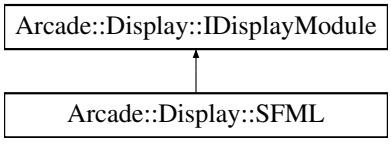
Returns

true Switch to previous available library
false Do nothing

Implements Arcade::Display::IDisplayModule.

6.15 Arcade::Display::SFML Class Reference

Inheritance diagram for Arcade::Display::SFML:



Public Member Functions

- void reset () final

  Resets the library.
- void open () final

  Opens / initializes the window.
- bool isOpen () const final

  Check window status.
- bool switchToNextLib () const final

  Checks whether you need to change the current display library.
- bool switchToPreviousLib () const final

  Checks whether you need to change the current display library.
- bool switchToNextGame () const final

  Checks whether you need to change the current game library.
- bool switchToPreviousGame () const final

  Checks whether you need to change the current game library.
- bool shouldBeRestarted () const final

  Checks whether you need to restart the current game.
- bool shouldGoToMenu () const final

  Checks whether you need to go back to the menu.
- bool shouldExit () const final

  Checks whether you need to exit the program.
- bool isKeyPressed (IDisplayModule::Keys) const final

  Checks whether the current key is being pressed.
- bool isKeyPressedOnce (IDisplayModule::Keys) const final

  Checks whether the current key was pressed during the last frame.
- float getDelta () const final

  Gets the number of frames since last update.
- void clear () const final

  Clears the canvas.
- void update () final

  Runs an update over the events that occured.
- void render () const final

  Renders the canvas.
- char getKeyCode () const final

  Gets the last pressed character from the keyboard.
- void setColor (IDisplayModule::Colors col) final

  Defines the color of the elements that will be drawn.
- void putPixel (float x, float y) const final

  Displays a pixel.
- void putLine (float x1, float y1, float x2, float y2) const final

  Displays a line.
- void putRect (float x, float y, float w, float h) const final

  Displays a rectangle.
- void putFillRect (float x, float y, float w, float h) const final

  Displays a filled rectangle.
- void putCircle (float x, float y, float rad) const final

  Displays a cirle.
- void putFillCircle (float x, float y, float rad) const final

  Displays a filled cirle.
- void putText (const std::string &text, unsigned int size, float x, float y) const final

  Displays text.
- const std::string & getLibName () const final

  Gets the library name.

Additional Inherited Members

6.15.1 Member Function Documentation

6.15.1.1 getDelta()

```
float Arcade::Display::SFML::getDelta ( ) const  [final], [virtual]
```

Gets the number of frames since last update.

Returns

float Frame count

Implements Arcade::Display::IDisplayModule.

6.15.1.2 getKeyCode()

```
char Arcade::Display::SFML::getKeyCode ( ) const  [final], [virtual]
```

Gets the last pressed character from the keyboard.

Returns

\0 if nothing was pressed, \b if backspace was pressed, \n if return was pressed, otherwise, a character.

Implements Arcade::Display::IDisplayModule.

6.15.1.3 getLibName()

```
const std::string& Arcade::Display::SFML::getLibName ( ) const  [final], [virtual]
```

Gets the library name.

Returns

The library's name

Implements Arcade::Display::IDisplayModule.

6.15.1.4 isKeyPressed()

```
bool Arcade::Display::SFML::isKeyPressed (
            IDisplayModule::Keys ) const [final], [virtual]
```

Checks whether the current key is being pressed.

Returns

true Key is pressed
false Key is not pressed

Implements Arcade::Display::IDisplayModule.

6.15.1.5 isKeyPressedOnce()

```
bool Arcade::Display::SFML::isKeyPressedOnce (
            IDisplayModule::Keys ) const [final], [virtual]
```

Checks whether the current key was pressed during the last frame.

Returns

true Key is pressed
false Key is not pressed

Implements Arcade::Display::IDisplayModule.

6.15.1.6 isOpen()

```
bool Arcade::Display::SFML::isOpen ( ) const [final], [virtual]
```

Check window status.

Returns

true Window is open
false Window is closed

Implements Arcade::Display::IDisplayModule.

6.15.1.7 putCircle()

```
void Arcade::Display::SFML::putCircle (
            float x,
            float y,
            float rad ) const [final], [virtual]
```

Displays a cirle.

Parameters

x	X coordinates
y	Y coordinates
rad	Radius of the circle

Implements Arcade::Display::IDisplayModule.

6.15.1.8 putFillCircle()

```
void Arcade::Display::SFML::putFillCircle (
            float x,
            float y,
            float rad ) const  [final], [virtual]
```

Displays a filled cirle.

Parameters

x	X coordinates
y	Y coordinates
rad	Radius of the circle

Implements Arcade::Display::IDisplayModule.

6.15.1.9 putFillRect()

```
void Arcade::Display::SFML::putFillRect (
            float x,
            float y,
            float w,
            float h ) const  [final], [virtual]
```

Displays a filled rectangle.

Parameters

x	X coordinates
y	Y coordinates
w	Width of the rectangle
h	Height of the rectangle

Implements Arcade::Display::IDisplayModule.

6.15.1.10 putLine()

```
void Arcade::Display::SFML::putLine (
            float x1,
            float y1,
            float x2,
            float y2 ) const  [final], [virtual]
```

Displays a line.

Parameters

x1	X coordinates for the first point
y1	Y coordinates for the first point
x2	X coordinates for the second point
y2	Y coordinates for the second point

Implements Arcade::Display::IDisplayModule.

6.15.1.11 putPixel()

```
void Arcade::Display::SFML::putPixel (
            float x,
            float y ) const  [final], [virtual]
```

Displays a pixel.

Parameters

x	X coordinates
y	Y coordinates

Implements Arcade::Display::IDisplayModule.

6.15.1.12 putRect()

```
void Arcade::Display::SFML::putRect (
            float x,
            float y,
            float w,
            float h ) const  [final], [virtual]
```

Displays a rectangle.

Parameters

x	X coordinates

Parameters

y	Y coordinates
w	Width of the rectangle
h	Height of the rectangle

Implements Arcade::Display::IDisplayModule.

6.15.1.13 putText()

```
void Arcade::Display::SFML::putText (
            const std::string & text,
            unsigned int size,
            float x,
            float y ) const  [final], [virtual]
```

Displays text.

Parameters

text	The text content
size	The text size
x	X coordinates
y	Y coordinates

Implements Arcade::Display::IDisplayModule.

6.15.1.14 setColor()

```
void Arcade::Display::SFML::setColor (
            IDisplayModule::Colors col )  [final], [virtual]
```

Defines the color of the elements that will be drawn.

Parameters

col	The color

Implements Arcade::Display::IDisplayModule.

6.15.1.15 shouldBeRestarted()

```
bool Arcade::Display::SFML::shouldBeRestarted ( ) const  [final], [virtual]
```

Checks whether you need to restart the current game.

Returns

true Restart the game
false Do nothing

Implements Arcade::Display::IDisplayModule.

6.15.1.16 shouldExit()

```
bool Arcade::Display::SFML::shouldExit ( ) const  [final], [virtual]
```

Checks whether you need to exit the program.

Returns

true Exit the program
false Do nothing

Implements Arcade::Display::IDisplayModule.

6.15.1.17 shouldGoToMenu()

```
bool Arcade::Display::SFML::shouldGoToMenu ( ) const  [final], [virtual]
```

Checks whether you need to go back to the menu.

Returns

true Go back to menu
false Do nothing

Implements Arcade::Display::IDisplayModule.

6.15.1.18 switchToNextGame()

```
bool Arcade::Display::SFML::switchToNextGame ( ) const  [final], [virtual]
```

Checks whether you need to change the current game library.

Returns

true Switch to next available library
false Do nothing

Implements Arcade::Display::IDisplayModule.

6.15.1.19 switchToNextLib()

```
bool Arcade::Display::SFML::switchToNextLib ( ) const  [final], [virtual]
```

Checks whether you need to change the current display library.

Returns

true Switch to next available library
false Do nothing

Implements Arcade::Display::IDisplayModule.

6.15.1.20 switchToPreviousGame()

```
bool Arcade::Display::SFML::switchToPreviousGame ( ) const  [final], [virtual]
```

Checks whether you need to change the current game library.

Returns

true Switch to previous available library
false Do nothing

Implements Arcade::Display::IDisplayModule.

6.15.1.21 switchToPreviousLib()

```
bool Arcade::Display::SFML::switchToPreviousLib ( ) const  [final], [virtual]
```

Checks whether you need to change the current display library.

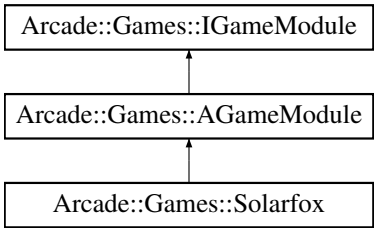
Returns

true Switch to previous available library
false Do nothing

Implements Arcade::Display::IDisplayModule.

6.16 Arcade::Games::Solarfox Class Reference

Inheritance diagram for Arcade::Games::Solarfox:



Public Member Functions

- void reset () final

  Resets and restarts the game.
- void update (const Arcade::Display::IDisplayModule &lib) final

  Updates the game.

Additional Inherited Members

6.16.1 Member Function Documentation

6.16.1.1 update()

```
void Arcade::Games::Solarfox::update (
            const Arcade::Display::IDisplayModule & lib )  [final], [virtual]
```

Updates the game.

Parameters

lib	The display module that will be used to get events that occured

Implements Arcade::Games::IGameModule.

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