# Arcade

Generated by Doxygen 1.9.7

1	Namespace Index	1
	1.1 Namespace List	1
2	Hierarchical Index	3
	2.1 Class Hierarchy	3
3	Class Index	5
	3.1 Class List	5
4	File Index	7
	4.1 File List	7
5	Namespace Documentation	9
	5.1 arcade Namespace Reference	9
6	Class Documentation	11
•	6.1 arcade::ADisplayModule Class Reference	11
	6.1.1 Constructor & Destructor Documentation	12
	6.1.1.1 ADisplayModule()	12
	6.1.1.2 ~ADisplayModule()	12
	6.1.2 Member Function Documentation	12
	6.1.2.1 clearWindow()	12
	6.1.2.2 displayWindow()	12
	6.1.2.3 drawAllSprite()	12
	6.1.2.4 drawSprite()	13
	6.1.2.5 drawText()	13
	6.1.2.6 getCoreModule()	13
	6.1.2.7 getInput()	13
	6.1.2.8 getName()	13
	6.1.2.9 setCoreModule()	13
	6.1.3 Member Data Documentation	
		14 14
	6.1.3.1 _coreModule	
	6.1.3.2 _input	14
	6.2 arcade::AGameModule Class Reference	14
	6.2.1 Constructor & Destructor Documentation	15
	6.2.1.1 AGameModule()	15
	6.2.1.2 ~AGameModule()	15
	6.2.2 Member Function Documentation	15
	6.2.2.1 getCoreModule()	15
	6.2.2.2 getDirection()	15
	6.2.2.3 getGameStatus()	16
	6.2.2.4 getLayerCell()	16
	6.2.2.5 handdleKeyEvents()	16
	6.2.2.6 init()	16

6.2.2.7 setCoreModule()	. 16
6.2.2.8 setDirection()	. 17
6.2.2.9 setGameStatus()	. 17
6.2.2.10 updateGame()	. 17
6.3 CompareNode Struct Reference	. 17
6.3.1 Member Function Documentation	. 17
6.3.1.1 operator()()	. 17
6.4 arcade::DataGhost Struct Reference	. 18
6.4.1 Member Data Documentation	. 18
6.4.1.1 actualPathIndex	. 18
6.4.1.2 ghostTimer	. 18
6.4.1.3 initialPos	. 18
6.4.1.4 isDead	. 18
6.4.1.5 isScared	. 18
6.4.1.6 path	. 18
6.5 arcade::DataPacman Struct Reference	. 19
6.5.1 Member Data Documentation	. 19
6.5.1.1 _pacmanTimer	. 19
6.5.1.2 isBoosted	. 19
6.6 arcade::NCurses Class Reference	. 19
6.6.1 Constructor & Destructor Documentation	. 20
6.6.1.1 NCurses()	. 20
6.6.1.2 ~NCurses()	. 20
6.6.2 Member Function Documentation	. 20
6.6.2.1 clearWindow()	. 20
6.6.2.2 displayWindow()	. 21
6.6.2.3 drawAllSprite()	. 21
6.6.2.4 drawSprite()	. 21
6.6.2.5 drawText()	. 21
6.6.2.6 getInput()	. 21
6.6.2.7 getName()	. 21
6.6.3 Member Data Documentation	. 22
6.6.3.1 _window	. 22
6.7 arcade::Node Struct Reference	. 22
6.7.1 Member Data Documentation	. 22
6.7.1.1 f	. 22
6.7.1.2 g	. 22
6.7.1.3 h	. 22
6.7.1.4 position	. 22
6.8 arcade::Pacman Class Reference	. 23
6.8.1 Constructor & Destructor Documentation	. 24
6.8.1.1 Pacman()	. 24

6.8.1.2 ∼Pacman()	24
6.8.2 Member Function Documentation	24
6.8.2.1 handdleKeyEvents()	24
6.8.2.2 init()	24
6.8.2.3 isCoinEaten()	24
6.8.2.4 isOver()	24
6.8.2.5 isPacgumEaten()	25
6.8.2.6 moveEntities()	25
6.8.2.7 updateGame()	25
6.8.2.8 updateTimers()	25
6.8.3 Member Data Documentation	25
6.8.3.1 _ghostData	25
6.8.3.2 _levelSpeed	25
6.8.3.3 _pacmanData	25
6.9 arcade::Sdl2 Class Reference	26
6.9.1 Constructor & Destructor Documentation	27
6.9.1.1 Sdl2()	27
$6.9.1.2 \sim Sdl2() \dots \dots$	27
6.9.2 Member Function Documentation	27
6.9.2.1 clearWindow()	27
6.9.2.2 displayWindow()	27
6.9.2.3 drawAllSprite()	27
6.9.2.4 drawSprite()	28
6.9.2.5 drawText()	28
6.9.2.6 getInput()	29
6.9.2.7 getName()	29
6.9.3 Member Data Documentation	29
6.9.3.1 _renderer	29
6.9.3.2 _window	29
6.10 arcade::Sfml Class Reference	29
6.10.1 Constructor & Destructor Documentation	30
6.10.1.1 Sfml()	30
6.10.1.2 ~Sfml()	31
6.10.2 Member Function Documentation	31
6.10.2.1 clearWindow()	31
6.10.2.2 displayWindow()	31
6.10.2.3 drawAllSprite()	31
6.10.2.4 drawSprite()	31
6.10.2.5 drawText()	31
6.10.2.6 getInput()	32
6.10.2.7 getName()	32
6.10.3 Member Data Documentation	32

	6.10.3.1 _texture	32
	6.10.3.2 _window	32
	6.11 arcade::Snake Class Reference	32
	6.11.1 Constructor & Destructor Documentation	33
	6.11.1.1 Snake()	33
	6.11.1.2 ∼Snake()	33
	6.11.2 Member Function Documentation	34
	6.11.2.1 handdleKeyEvents()	34
	6.11.2.2 init()	34
	6.11.2.3 moveSnake()	34
	6.11.2.4 updateGame()	34
7	File Documentation	35
	7.1 /home/aleachlodnik/Arcade/lib/games/AGameModule.cpp File Reference	35
	7.2 /home/aleachlodnik/Arcade/lib/games/AGameModule.hpp File Reference	35
	7.3 AGameModule.hpp	35
	7.4 /home/aleachlodnik/Arcade/lib/games/pacman/Pacman.cpp File Reference	36
	7.4.1 Function Documentation	36
	7.4.1.1 aStar()	36
	7.4.1.2 entryPoint()	37
	7.4.1.3 getName()	37
	7.4.1.4 getNeighbors()	37
	7.4.1.5 getType()	37
	7.4.1.6 isValid()	37
	7.4.1.7 layersToMap()	37
	7.4.1.8 manhattanDistance()	37
	7.4.1.9 pairToNode()	37
	7.5 /home/aleachlodnik/Arcade/lib/games/pacman/Pacman.hpp File Reference	38
	7.5.1 Macro Definition Documentation	38
	7.5.1.1 SPEED_PACMAN	38
	7.6 Pacman.hpp	38
	7.7 /home/aleachlodnik/Arcade/lib/games/snake/Snake.cpp File Reference	39
	7.7.1 Function Documentation	39
	7.7.1.1 entryPoint()	39
	7.7.1.2 getName()	40
	7.7.1.3 getType()	40
	7.8 /home/aleachlodnik/Arcade/lib/games/snake/Snake.hpp File Reference	40
	7.8.1 Macro Definition Documentation	40
	7.8.1.1 MAX_SNAKE_SIZE	40
	7.8.1.2 SPEED_SNAKE	40
	7.9 Snake.hpp	41
	7 10 /home/aleachlodnik/Arcade/lih/granhics/ADisplayModule con File Reference	41

	7.11 /home/aleachlodnik/Arcade/lib/graphics/ADisplayModule.hpp File Reference	41
	7.12 ADisplayModule.hpp	42
	7.13 /home/aleachlodnik/Arcade/lib/graphics/ncurses/NCurses.cpp File Reference	42
	7.13.1 Function Documentation	42
	7.13.1.1 entryPoint()	42
	7.13.1.2 getName()	43
	7.13.1.3 getType()	43
	7.14 /home/aleachlodnik/Arcade/lib/graphics/ncurses/NCurses.hpp File Reference	43
	7.15 NCurses.hpp	43
	7.16 /home/aleachlodnik/Arcade/lib/graphics/sdl2/Sdl2.cpp File Reference	44
	7.16.1 Function Documentation	44
	7.16.1.1 entryPoint()	44
	7.16.1.2 getName()	44
	7.16.1.3 getType()	44
	7.17 /home/aleachlodnik/Arcade/lib/graphics/sdl2/Sdl2.hpp File Reference	44
	7.18 Sdl2.hpp	45
	7.19 /home/aleachlodnik/Arcade/lib/graphics/sfml/Sfml.cpp File Reference	45
	7.19.1 Function Documentation	46
	7.19.1.1 entryPoint()	46
	7.19.1.2 getName()	46
	7.19.1.3 getType()	46
	7.20 /home/aleachlodnik/Arcade/lib/graphics/sfml/Sfml.hpp File Reference	46
	7.21 Sfml.hpp	47
	7.22 /home/aleachlodnik/Arcade/src/CoreModule.cpp File Reference	47
	7.23 /home/aleachlodnik/Arcade/src/ErrorHandling.cpp File Reference	47
	7.23.1 Function Documentation	47
	7.23.1.1 checkPath()	47
	7.24 /home/aleachlodnik/Arcade/src/Main.cpp File Reference	48
	7.24.1 Function Documentation	48
	7.24.1.1 main()	48
In	ndex	49

# **Namespace Index**

# 1.1 Namespace List

Here is a list	of	all I	naı	me	sp	ac	es	w	ith	br	ief	f d	es	cri	ipti	on	ıs:													
arcade																														,

2 Namespace Index

# **Hierarchical Index**

# 2.1 Class Hierarchy

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

CompareNode	
arcade::DataGhost	
arcade::DataPacman	19
arcade::IDisplayModule	
arcade::ADisplayModule	
arcade::NCurses	
arcade::Sdl2	
arcade::Sfml	29
arcade::IGameModule	
arcade::AGameModule	
arcade::Pacman	23
arcade::Snake	32
arcade: Node	22

4 Hierarchical Index

# **Class Index**

# 3.1 Class List

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

arcade::ADisplayModule	11
arcade::AGameModule	14
CompareNode	17
arcade::DataGhost	18
arcade::DataPacman	
arcade::NCurses	19
arcade::Node	
arcade::Pacman	23
arcade::Sdl2	
arcade::Sfml	29
arcade::Snake	32

6 Class Index

# File Index

# 4.1 File List

Here is a list of all files with brief descriptions:

/home/aleachlodnik/Arcade/lib/games/AGameModule.cpp	35
/home/aleachlodnik/Arcade/lib/games/AGameModule.hpp	35
/home/aleachlodnik/Arcade/lib/games/pacman/Pacman.cpp	36
/home/aleachlodnik/Arcade/lib/games/pacman/Pacman.hpp	38
/home/aleachlodnik/Arcade/lib/games/snake/Snake.cpp	39
/home/aleachlodnik/Arcade/lib/games/snake/Snake.hpp	40
/home/aleachlodnik/Arcade/lib/graphics/ADisplayModule.cpp	41
/home/aleachlodnik/Arcade/lib/graphics/ADisplayModule.hpp	41
/home/aleachlodnik/Arcade/lib/graphics/ncurses/NCurses.cpp	42
/home/aleachlodnik/Arcade/lib/graphics/ncurses/NCurses.hpp	43
/home/aleachlodnik/Arcade/lib/graphics/sdl2/Sdl2.cpp	44
/home/aleachlodnik/Arcade/lib/graphics/sdl2/Sdl2.hpp	44
/home/aleachlodnik/Arcade/lib/graphics/sfml/Sfml.cpp	45
/home/aleachlodnik/Arcade/lib/graphics/sfml/Sfml.hpp	46
/home/aleachlodnik/Arcade/src/CoreModule.cpp	47
/home/aleachlodnik/Arcade/src/ErrorHandling.cpp	47
/home/aleachlodnik/Arcade/src/Main.cpp	48

8 File Index

# **Namespace Documentation**

# 5.1 arcade Namespace Reference

#### Classes

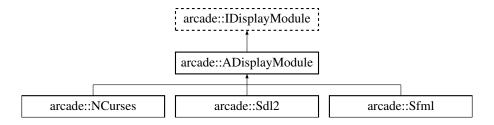
- class ADisplayModule
- class AGameModule
- struct DataGhost
- struct DataPacman
- class NCurses
- struct Node
- class Pacman
- class Sdl2
- class Sfml
- class Snake

# **Class Documentation**

# 6.1 arcade::ADisplayModule Class Reference

#include <ADisplayModule.hpp>

Inheritance diagram for arcade::ADisplayModule:



#### **Public Member Functions**

ADisplayModule ()

Construct a new arcade::ADisplayModule::ADisplayModule object.

∼ADisplayModule ()

Destroy the arcade::ADisplayModule::ADisplayModule object.

- virtual std::string getName () const =0
- void setCoreModule (arcade::CoreModule \*coreModule)

set the core module to the display module

• arcade::CoreModule \* getCoreModule () const

get the core module

- virtual void clearWindow ()=0
- virtual void displayWindow ()=0
- virtual arcade::KeyboardInput getInput ()=0
- virtual void drawSprite (std::pair < char, std::string > sprite, int x, int y, int width, int height)=0
- virtual void drawAllSprite (std::pair< char, std::string > sprite, std::vector< std::pair< int, int > > coordinates, int width, int height)=0
- virtual void drawText (const std::string text, int x, int y, int size)=0

#### **Protected Attributes**

```
 arcade::KeyboardInput _input arcade::CoreModule * _coreModule
```

#### 6.1.1 Constructor & Destructor Documentation

## 6.1.1.1 ADisplayModule()

```
arcade::ADisplayModule::ADisplayModule ( )
```

Construct a new arcade::ADisplayModule::ADisplayModule object.

#### 6.1.1.2 ∼ADisplayModule()

```
\verb|arcade::ADisplayModule::\sim ADisplayModule ( )
```

Destroy the arcade::ADisplayModule::ADisplayModule object.

#### 6.1.2 Member Function Documentation

#### 6.1.2.1 clearWindow()

```
\label{lem:pure_virtual} \mbox{ virtual void arcade::ADisplayModule::clearWindow ( ) } \mbox{ [pure virtual]}
```

Implemented in arcade::NCurses, arcade::Sdl2, and arcade::Sfml.

#### 6.1.2.2 displayWindow()

```
virtual void arcade::ADisplayModule::displayWindow ( ) [pure virtual]
```

Implemented in arcade::NCurses, arcade::Sdl2, and arcade::Sfml.

# 6.1.2.3 drawAllSprite()

Implemented in arcade::NCurses, arcade::Sdl2, and arcade::Sfml.

#### 6.1.2.4 drawSprite()

Implemented in arcade::NCurses, arcade::Sdl2, and arcade::Sfml.

#### 6.1.2.5 drawText()

Implemented in arcade::NCurses, arcade::Sdl2, and arcade::Sfml.

#### 6.1.2.6 getCoreModule()

```
arcade::CoreModule * arcade::ADisplayModule::getCoreModule ( ) const
get the core module
```

Returns

arcade::CoreModule \*

# 6.1.2.7 getInput()

```
virtual arcade::KeyboardInput arcade::ADisplayModule::getInput ( ) [pure virtual]
```

Implemented in arcade::NCurses, arcade::Sdl2, and arcade::Sfml.

### 6.1.2.8 getName()

```
virtual std::string arcade::ADisplayModule::getName ( ) const [pure virtual]
```

Implemented in arcade::NCurses, arcade::Sdl2, and arcade::Sfml.

#### 6.1.2.9 setCoreModule()

set the core module to the display module

## **Parameters**

coreModule

#### 6.1.3 Member Data Documentation

#### 6.1.3.1 \_coreModule

arcade::CoreModule\* arcade::ADisplayModule::\_coreModule [protected]

# 6.1.3.2 \_input

arcade::KeyboardInput arcade::ADisplayModule::\_input [protected]

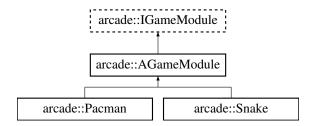
The documentation for this class was generated from the following files:

- /home/aleachlodnik/Arcade/lib/graphics/ADisplayModule.hpp
- /home/aleachlodnik/Arcade/lib/graphics/ADisplayModule.cpp

# 6.2 arcade::AGameModule Class Reference

#include <AGameModule.hpp>

Inheritance diagram for arcade::AGameModule:



#### **Public Member Functions**

• AGameModule ()

Construct a new arcade::A Game Module::A Game Module object.

∼AGameModule ()

Destroy the arcade::A Game Module::A Game Module object.

- virtual void updateGame ()=0
- void setGameStatus (GameStatus status)
- GameStatus getGameStatus () const

get the status of the game

void setCoreModule (arcade::CoreModule \*coreModule)

set the core module to the game module

arcade::CoreModule \* getCoreModule () const

get the core module

void setDirection (arcade::KeyboardInput direction)

set the direction of the game

• arcade::KeyboardInput getDirection () const

get the direction of the game

- virtual void init ()=0
- virtual void handdleKeyEvents (arcade::KeyboardInput key)=0
- int getLayerCell (int layer, int x, int y) const

get the cell of the actual layer

#### 6.2.1 Constructor & Destructor Documentation

#### 6.2.1.1 AGameModule()

```
arcade::AGameModule::AGameModule ( )
```

Construct a new arcade::A Game Module::A Game Module object.

#### 6.2.1.2 ∼AGameModule()

```
arcade::AGameModule::~AGameModule ( )
```

Destroy the arcade::A Game Module::A Game Module object.

#### 6.2.2 Member Function Documentation

### 6.2.2.1 getCoreModule()

```
arcade::CoreModule * arcade::AGameModule::getCoreModule ( ) const
```

get the core module

Returns

arcade::CoreModule \*

#### 6.2.2.2 getDirection()

```
\verb|arcade::KeyboardInput| arcade::AGameModule::getDirection ( ) const
```

get the direction of the game

Returns

arcade::KeyboardInput

#### 6.2.2.3 getGameStatus()

```
arcade::AGameModule::GameStatus arcade::AGameModule::getGameStatus ( ) const
```

get the status of the game

Returns

arcade::AGameModule::GameStatus

## 6.2.2.4 getLayerCell()

get the cell of the actual layer

#### **Parameters**



Returns

int

## 6.2.2.5 handdleKeyEvents()

```
\label{lem:module::handdleKeyEvents} \mbox{ (} \\ \mbox{arcade::AGameModule::handdleKeyEvents (} \\ \mbox{arcade::KeyboardInput } \mbox{\it key} \mbox{ ) [pure virtual]}
```

Implemented in arcade::Pacman, and arcade::Snake.

#### 6.2.2.6 init()

```
virtual void arcade::AGameModule::init ( ) [pure virtual]
```

Implemented in arcade::Pacman, and arcade::Snake.

# 6.2.2.7 setCoreModule()

set the core module to the game module

#### **Parameters**

coreModule

#### 6.2.2.8 setDirection()

set the direction of the game

#### **Parameters**

direction

#### 6.2.2.9 setGameStatus()

#### 6.2.2.10 updateGame()

```
virtual void arcade::AGameModule::updateGame ( ) [pure virtual]
```

Implemented in arcade::Pacman, and arcade::Snake.

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

- /home/aleachlodnik/Arcade/lib/games/AGameModule.hpp
- /home/aleachlodnik/Arcade/lib/games/AGameModule.cpp

# 6.3 CompareNode Struct Reference

#### **Public Member Functions**

• bool operator() (const arcade::Node lhs, const arcade::Node rhs) const

## 6.3.1 Member Function Documentation

#### 6.3.1.1 operator()()

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

/home/aleachlodnik/Arcade/lib/games/pacman/Pacman.cpp

# 6.4 arcade::DataGhost Struct Reference

#include <Pacman.hpp>

#### **Public Attributes**

- bool isScared
- bool isDead
- std::pair< int, int > initialPos
- std::vector< arcade::Node > path
- · int actualPathIndex
- std::chrono::time\_point< std::chrono::system\_clock > ghostTimer

#### 6.4.1 Member Data Documentation

#### 6.4.1.1 actualPathIndex

int arcade::DataGhost::actualPathIndex

#### 6.4.1.2 ghostTimer

std::chrono::time\_point<std::chrono::system\_clock> arcade::DataGhost::ghostTimer

#### 6.4.1.3 initialPos

std::pair<int, int> arcade::DataGhost::initialPos

#### 6.4.1.4 isDead

bool arcade::DataGhost::isDead

#### 6.4.1.5 isScared

bool arcade::DataGhost::isScared

#### 6.4.1.6 path

std::vector<arcade::Node> arcade::DataGhost::path

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

/home/aleachlodnik/Arcade/lib/games/pacman/Pacman.hpp

#### 6.5 arcade::DataPacman Struct Reference

#include <Pacman.hpp>

#### **Public Attributes**

- · bool isBoosted
- std::chrono::time\_point< std::chrono::system\_clock > \_pacmanTimer

#### 6.5.1 Member Data Documentation

#### 6.5.1.1 \_pacmanTimer

std::chrono::time\_point<std::chrono::system\_clock> arcade::DataPacman::\_pacmanTimer

#### 6.5.1.2 isBoosted

bool arcade::DataPacman::isBoosted

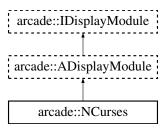
The documentation for this struct was generated from the following file:

/home/aleachlodnik/Arcade/lib/games/pacman/Pacman.hpp

## 6.6 arcade::NCurses Class Reference

#include <NCurses.hpp>

Inheritance diagram for arcade::NCurses:



#### **Public Member Functions**

- NCurses ()
- ∼NCurses ()
- std::string getName () const
- void clearWindow ()
- arcade::KeyboardInput getInput ()
- void displayWindow ()
- void drawText (const std::string text, int x, int y, int size)
- void drawSprite (std::pair < char, std::string > sprite, int x, int y, int width, int height)
- void drawAllSprite (std::pair< char, std::string > sprite, std::vector< std::pair< int, int > > coordinates, int width, int height)

## Public Member Functions inherited from arcade::ADisplayModule

• ADisplayModule ()

Construct a new arcade::ADisplayModule::ADisplayModule object.

∼ADisplayModule ()

Destroy the arcade::ADisplayModule::ADisplayModule object.

- virtual std::string getName () const =0
- void setCoreModule (arcade::CoreModule \*coreModule)

set the core module to the display module

arcade::CoreModule \* getCoreModule () const

get the core module

- virtual void clearWindow ()=0
- virtual void displayWindow ()=0
- virtual arcade::KeyboardInput getInput ()=0
- virtual void drawSprite (std::pair< char, std::string > sprite, int x, int y, int width, int height)=0
- virtual void drawAllSprite (std::pair< char, std::string > sprite, std::vector< std::pair< int, int > > coordinates, int width, int height)=0
- virtual void drawText (const std::string text, int x, int y, int size)=0

#### **Protected Attributes**

WINDOW \* \_window

## Protected Attributes inherited from arcade::ADisplayModule

```
    arcade::KeyboardInput _input
```

• arcade::CoreModule \* coreModule

#### 6.6.1 Constructor & Destructor Documentation

#### 6.6.1.1 NCurses()

```
arcade::NCurses::NCurses ( )
```

#### 6.6.1.2 ∼NCurses()

```
arcade::NCurses::\sim NCurses ( )
```

#### 6.6.2 Member Function Documentation

#### 6.6.2.1 clearWindow()

```
void arcade::NCurses::clearWindow ( ) [virtual]
```

Implements arcade::ADisplayModule.

#### 6.6.2.2 displayWindow()

```
void arcade::NCurses::displayWindow ( ) [virtual]
```

Implements arcade::ADisplayModule.

#### 6.6.2.3 drawAllSprite()

```
void arcade::NCurses::drawAllSprite (
    std::pair< char, std::string > sprite,
    std::vector< std::pair< int, int > > coordinates,
    int width,
    int height ) [virtual]
```

Implements arcade::ADisplayModule.

#### 6.6.2.4 drawSprite()

```
void arcade::NCurses::drawSprite (
          std::pair< char, std::string > sprite,
          int x,
          int y,
          int width,
          int height ) [virtual]
```

Implements arcade::ADisplayModule.

# 6.6.2.5 drawText()

Implements arcade::ADisplayModule.

#### 6.6.2.6 getInput()

```
arcade::KeyboardInput arcade::NCurses::getInput ( ) [virtual]
```

Implements arcade::ADisplayModule.

#### 6.6.2.7 getName()

```
std::string arcade::NCurses::getName ( ) const [virtual]
```

Implements arcade::ADisplayModule.

## 6.6.3 Member Data Documentation

#### 6.6.3.1 window

```
WINDOW* arcade::NCurses::_window [protected]
```

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

- /home/aleachlodnik/Arcade/lib/graphics/ncurses/NCurses.hpp
- /home/aleachlodnik/Arcade/lib/graphics/ncurses/NCurses.cpp

# 6.7 arcade::Node Struct Reference

```
#include <Pacman.hpp>
```

#### **Public Attributes**

- std::pair< int, int > position
- float f
- float g
- float h

#### 6.7.1 Member Data Documentation

## 6.7.1.1 f

```
float arcade::Node::f
```

#### 6.7.1.2 g

```
float arcade::Node::g
```

#### 6.7.1.3 h

float arcade::Node::h

#### 6.7.1.4 position

```
std::pair<int, int> arcade::Node::position
```

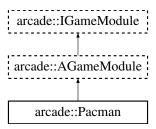
The documentation for this struct was generated from the following file:

• /home/aleachlodnik/Arcade/lib/games/pacman/Pacman.hpp

# 6.8 arcade::Pacman Class Reference

#include <Pacman.hpp>

Inheritance diagram for arcade::Pacman:



#### **Public Member Functions**

• Pacman ()

Construct a new arcade::Pacman::Pacman object.

∼Pacman ()

Destroy the arcade::Pacman::Pacman object.

- void init ()
- void updateGame ()

update the game

- std::vector< std::vector< arcade::entity >> moveEntities (std::vector< std::vector< arcade::entity >> layers)
- void handdleKeyEvents (arcade::KeyboardInput key)
- bool isOver (std::vector< std::vector< arcade::entity > > layers)
- void updateTimers (std::vector< std::vector< arcade::entity > > layers)
- bool isPacgumEaten (std::pair< int, int > pos, std::vector< std::vector< arcade::entity > > layers)
- bool isCoinEaten (std::pair< int, int > pos, std::vector< std::vector< arcade::entity > > layers)

#### Public Member Functions inherited from arcade::AGameModule

· AGameModule ()

Construct a new arcade::A Game Module::A Game Module object.

∼AGameModule ()

Destroy the arcade::A Game Module::A Game Module object.

- virtual void updateGame ()=0
- void setGameStatus (GameStatus status)
- GameStatus getGameStatus () const

get the status of the game

void setCoreModule (arcade::CoreModule \*coreModule)

set the core module to the game module

• arcade::CoreModule \* getCoreModule () const

get the core module

void setDirection (arcade::KeyboardInput direction)

set the direction of the game

• arcade::KeyboardInput getDirection () const

get the direction of the game

- virtual void init ()=0
- virtual void handdleKeyEvents (arcade::KeyboardInput key)=0
- int getLayerCell (int layer, int x, int y) const

get the cell of the actual layer

#### **Private Attributes**

- int \_levelSpeed = 0
- arcade::DataPacman\_pacmanData
- std::vector < arcade::DataGhost > \_ghostData

#### 6.8.1 Constructor & Destructor Documentation

#### 6.8.1.1 Pacman()

```
arcade::Pacman::Pacman ( )
```

Construct a new arcade::Pacman::Pacman object.

#### 6.8.1.2 ~Pacman()

```
arcade::Pacman::~Pacman ( )
```

Destroy the arcade::Pacman::Pacman object.

#### 6.8.2 Member Function Documentation

# 6.8.2.1 handdleKeyEvents()

Implements arcade::AGameModule.

#### 6.8.2.2 init()

```
void arcade::Pacman::init ( ) [virtual]
```

Implements arcade::AGameModule.

#### 6.8.2.3 isCoinEaten()

```
bool arcade::Pacman::isCoinEaten ( std::pair < int,\ int > pos, \\ std::vector < std::vector < arcade::entity > > layers )
```

# 6.8.2.4 isOver()

```
bool arcade::Pacman::isOver ( {\tt std::vector} < {\tt arcade::entity} >> {\it layers}~)
```

#### 6.8.2.5 isPacgumEaten()

#### 6.8.2.6 moveEntities()

```
\label{thm:condition} $$ std::vector< arcade::entity >> arcade::Pacman::moveEntities ( std::vector< std::vector< arcade::entity >> layers )
```

#### 6.8.2.7 updateGame()

```
void arcade::Pacman::updateGame ( ) [virtual]
```

update the game

Implements arcade::AGameModule.

#### 6.8.2.8 updateTimers()

#### 6.8.3 Member Data Documentation

#### 6.8.3.1 \_ghostData

```
std::vector<arcade::DataGhost> arcade::Pacman::_ghostData [private]
```

## 6.8.3.2 \_levelSpeed

```
int arcade::Pacman::_levelSpeed = 0 [private]
```

#### 6.8.3.3 \_pacmanData

```
arcade::DataPacman arcade::Pacman::_pacmanData [private]
```

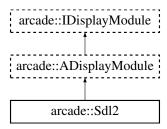
The documentation for this class was generated from the following files:

- /home/aleachlodnik/Arcade/lib/games/pacman/Pacman.hpp
- /home/aleachlodnik/Arcade/lib/games/pacman/Pacman.cpp

#### 6.9 arcade::Sdl2 Class Reference

#include <Sdl2.hpp>

Inheritance diagram for arcade::Sdl2:



#### **Public Member Functions**

- Sdl2 ()
- ∼Sdl2 ()
- std::string getName () const

get the name of the library

• void clearWindow ()

clear the window

- void displayWindow ()
- arcade::KeyboardInput getInput ()

get the input from the window

• void drawText (const std::string text, int x, int y, int size)

draw text on the window

• void drawSprite (std::pair< char, std::string > sprite, int x, int y, int width, int height)

draw a sprite on the window

• void drawAllSprite (std::pair< char, std::string > sprite, std::vector< std::pair< int, int > > coordinates, int width, int height)

draw a sprite on the window

## Public Member Functions inherited from arcade::ADisplayModule

· ADisplayModule ()

Construct a new arcade::ADisplayModule::ADisplayModule object.

∼ADisplayModule ()

Destroy the arcade::ADisplayModule::ADisplayModule object.

- virtual std::string getName () const =0
- void setCoreModule (arcade::CoreModule \*coreModule)

set the core module to the display module

arcade::CoreModule \* getCoreModule () const

get the core module

- virtual void clearWindow ()=0
- virtual void displayWindow ()=0
- virtual arcade::KeyboardInput getInput ()=0
- virtual void drawSprite (std::pair < char, std::string > sprite, int x, int y, int width, int height)=0
- virtual void drawAllSprite (std::pair< char, std::string > sprite, std::vector< std::pair< int, int > > coordinates, int width, int height)=0
- virtual void drawText (const std::string text, int x, int y, int size)=0

#### **Protected Attributes**

```
SDL_Renderer * _rendererSDL_Window * _window
```

# Protected Attributes inherited from arcade::ADisplayModule

```
 arcade::KeyboardInput _input arcade::CoreModule * coreModule
```

#### 6.9.1 Constructor & Destructor Documentation

#### 6.9.1.1 SdI2()

```
arcade::Sdl2::Sdl2 ( )
6.9.1.2 ~Sdl2()
arcade::Sdl2::~Sdl2 ( )
```

#### 6.9.2 Member Function Documentation

#### 6.9.2.1 clearWindow()

```
void arcade::Sdl2::clearWindow ( ) [virtual]
```

clear the window

Implements arcade::ADisplayModule.

#### 6.9.2.2 displayWindow()

```
void arcade::Sdl2::displayWindow ( ) [virtual]
```

Implements arcade::ADisplayModule.

#### 6.9.2.3 drawAllSprite()

```
void arcade::Sdl2::drawAllSprite (
          std::pair< char, std::string > sprite,
          std::vector< std::pair< int, int > > coordinates,
          int width,
          int height ) [virtual]
```

draw a sprite on the window

#### **Parameters**

sprite	sprite to display
coordinates	coordinates of the sprite
width	width of the sprite
height	height of the sprite
rotation	rotation of the sprite

Implements arcade::ADisplayModule.

## 6.9.2.4 drawSprite()

```
void arcade::Sdl2::drawSprite (
          std::pair< char, std::string > sprite,
          int x,
          int y,
          int width,
          int height ) [virtual]
```

draw a sprite on the window

#### **Parameters**

path	path to the sprite
X	x position of the sprite
У	y position of the sprite
width	width of the sprite
height	height of the sprite

Implements arcade::ADisplayModule.

# 6.9.2.5 drawText()

draw text on the window

#### **Parameters**

text	text to display
X	x position of the text
У	y position of the text
size	size of the text

Implements arcade::ADisplayModule.

### 6.9.2.6 getInput()

```
arcade::KeyboardInput arcade::Sdl2::getInput ( ) [virtual]
get the input from the window
Returns
```

arcade::KeyboardInput

Implements arcade::ADisplayModule.

# 6.9.2.7 getName()

```
std::string arcade::Sdl2::getName ( ) const [virtual]
get the name of the library
Returns
```

std::string

Implements arcade::ADisplayModule.

### 6.9.3 Member Data Documentation

## 6.9.3.1 \_renderer

```
SDL_Renderer* arcade::Sdl2::_renderer [protected]
```

# 6.9.3.2 \_window

```
SDL_Window* arcade::Sdl2::_window [protected]
```

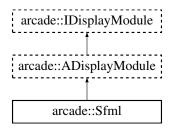
The documentation for this class was generated from the following files:

- /home/aleachlodnik/Arcade/lib/graphics/sdl2/Sdl2.hpp
- /home/aleachlodnik/Arcade/lib/graphics/sdl2/Sdl2.cpp

# 6.10 arcade::Sfml Class Reference

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

Inheritance diagram for arcade::Sfml:



30 Class Documentation

#### **Public Member Functions**

- Sfml ()
- ~Sfml ()
- std::string getName () const
- void clearWindow ()
- void displayWindow ()
- arcade::KeyboardInput getInput ()
- void drawText (const std::string text, int x, int y, int size)
- void drawSprite (std::pair < char, std::string > sprite, int x, int y, int width, int height)
- void drawAllSprite (std::pair< char, std::string > sprite, std::vector< std::pair< int, int > > coordinates, int width, int height)

# Public Member Functions inherited from arcade::ADisplayModule

• ADisplayModule ()

Construct a new arcade::ADisplayModule::ADisplayModule object.

∼ADisplayModule ()

Destroy the arcade::ADisplayModule::ADisplayModule object.

- virtual std::string getName () const =0
- void setCoreModule (arcade::CoreModule \*coreModule)

set the core module to the display module

arcade::CoreModule \* getCoreModule () const

get the core module

- virtual void clearWindow ()=0
- virtual void displayWindow ()=0
- virtual arcade::KeyboardInput getInput ()=0
- virtual void drawSprite (std::pair< char, std::string > sprite, int x, int y, int width, int height)=0
- virtual void drawAllSprite (std::pair< char, std::string > sprite, std::vector< std::pair< int, int > > coordinates, int width, int height)=0
- virtual void drawText (const std::string text, int x, int y, int size)=0

## **Protected Attributes**

- sf::RenderWindow \* \_window
- sf::Texture \_texture

## Protected Attributes inherited from arcade::ADisplayModule

```
· arcade::KeyboardInput_input
```

• arcade::CoreModule \* \_coreModule

#### 6.10.1 Constructor & Destructor Documentation

### 6.10.1.1 Sfml()

```
arcade::Sfml::Sfml ( )
```

### 6.10.1.2 ∼Sfml()

```
arcade::Sfml::~Sfml ( )
```

# 6.10.2 Member Function Documentation

## 6.10.2.1 clearWindow()

```
void arcade::Sfml::clearWindow ( ) [virtual]
```

Implements arcade::ADisplayModule.

### 6.10.2.2 displayWindow()

```
void arcade::Sfml::displayWindow ( ) [virtual]
```

Implements arcade::ADisplayModule.

## 6.10.2.3 drawAllSprite()

```
void arcade::Sfml::drawAllSprite (
    std::pair< char, std::string > sprite,
    std::vector< std::pair< int, int > > coordinates,
    int width,
    int height ) [virtual]
```

Implements arcade::ADisplayModule.

# 6.10.2.4 drawSprite()

```
void arcade::Sfml::drawSprite (
          std::pair< char, std::string > sprite,
          int x,
          int y,
          int width,
          int height ) [virtual]
```

Implements arcade::ADisplayModule.

### 6.10.2.5 drawText()

Implements arcade::ADisplayModule.

32 Class Documentation

# 6.10.2.6 getInput()

```
arcade::KeyboardInput arcade::Sfml::getInput ( ) [virtual]
```

Implements arcade::ADisplayModule.

# 6.10.2.7 getName()

```
std::string arcade::Sfml::getName ( ) const [virtual]
```

Implements arcade::ADisplayModule.

### 6.10.3 Member Data Documentation

### 6.10.3.1 \_texture

```
sf::Texture arcade::Sfml::_texture [protected]
```

# 6.10.3.2 \_window

```
sf::RenderWindow* arcade::Sfml::_window [protected]
```

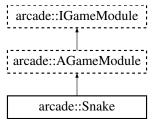
The documentation for this class was generated from the following files:

- /home/aleachlodnik/Arcade/lib/graphics/sfml/Sfml.hpp
- /home/aleachlodnik/Arcade/lib/graphics/sfml/Sfml.cpp

# 6.11 arcade::Snake Class Reference

```
#include <Snake.hpp>
```

Inheritance diagram for arcade::Snake:



### **Public Member Functions**

• Snake ()

Construct a new arcade::Snake::Snake object.

∼Snake ()

Destroy the arcade::Snake::Snake object.

- void init ()
- · void updateGame ()

update the game

• arcade::GameData moveSnake ()

move the snake

void handdleKeyEvents (arcade::KeyboardInput key)

handle key events

### Public Member Functions inherited from arcade::AGameModule

· AGameModule ()

Construct a new arcade::A Game Module::A Game Module object.

∼AGameModule ()

Destroy the arcade::A Game Module::A Game Module object.

- virtual void updateGame ()=0
- void setGameStatus (GameStatus status)
- GameStatus getGameStatus () const

get the status of the game

void setCoreModule (arcade::CoreModule \*coreModule)

set the core module to the game module

arcade::CoreModule \* getCoreModule () const

get the core module

• void setDirection (arcade::KeyboardInput direction)

set the direction of the game

• arcade::KeyboardInput getDirection () const

get the direction of the game

- virtual void init ()=0
- virtual void handdleKeyEvents (arcade::KeyboardInput key)=0
- int getLayerCell (int layer, int x, int y) const

get the cell of the actual layer

## 6.11.1 Constructor & Destructor Documentation

### 6.11.1.1 Snake()

```
arcade::Snake::Snake ( )
```

Construct a new arcade::Snake::Snake object.

# 6.11.1.2 $\sim$ Snake()

```
arcade::Snake::~Snake ( )
```

Destroy the arcade::Snake::Snake object.

34 Class Documentation

# 6.11.2 Member Function Documentation

# 6.11.2.1 handdleKeyEvents()

handle key events

**Parameters** 



Implements arcade::AGameModule.

# 6.11.2.2 init()

```
void arcade::Snake::init ( ) [virtual]
```

Implements arcade::AGameModule.

## 6.11.2.3 moveSnake()

```
arcade::GameData arcade::Snake::moveSnake ( )
```

move the snake

**Parameters** 

display\_info

# 6.11.2.4 updateGame()

```
void arcade::Snake::updateGame ( ) [virtual]
```

update the game

Implements arcade::AGameModule.

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

- /home/aleachlodnik/Arcade/lib/games/snake/Snake.hpp
- /home/aleachlodnik/Arcade/lib/games/snake/Snake.cpp

# **Chapter 7**

# **File Documentation**

# 7.1 /home/aleachlodnik/Arcade/lib/games/AGameModule.cpp File Reference

#include "AGameModule.hpp"

# 7.2 /home/aleachlodnik/Arcade/lib/games/AGameModule.hpp File Reference

#include <arcade/IGameModule.hpp>

### **Classes**

· class arcade::AGameModule

## **Namespaces**

namespace arcade

# 7.3 AGameModule.hpp

# Go to the documentation of this file.

```
00001 /*
00002 ** EPITECH PROJECT, 2024
00003 ** Arcade
00004 ** File description:
00005 ** AGameModule
00006 */
00007
00008 #ifndef AGAMEMODULE_HPP_
00009 #define AGAMEMODULE_HPP_
00010
00011 #include <arcade/IGameModule.hpp>
```

```
00013 namespace arcade
00015
        class AGameModule : virtual public arcade::IGameModule
00016
00017
        public:
00018
          AGameModule();
00019
          ~AGameModule();
00020
00021
          virtual void updateGame() = 0;
00022
00023
          void setGameStatus(GameStatus status);
00024
          GameStatus getGameStatus() const;
00025
00026
          void setCoreModule(arcade::CoreModule *coreModule);
00027
          arcade::CoreModule *getCoreModule() const;
00028
          void setDirection(arcade::KeyboardInput direction);
00029
00030
          arcade::KeyboardInput getDirection() const;
00031
00032
          virtual void init() = 0;
00033
          virtual void handdleKeyEvents(arcade::KeyboardInput key) = 0;
00034
          int getLayerCell(int layer, int x, int y) const;
00035
00036
00037
00038 }; // namespace arcade
00039
00040 #endif /* !IGAMEMODULE_HPP_ */
```

# 7.4 /home/aleachlodnik/Arcade/lib/games/pacman/Pacman.cpp File Reference

```
#include "Pacman.hpp"
```

# Classes

struct CompareNode

#### **Functions**

- std::unique\_ptr< arcade::IGameModule > entryPoint ()
   generate entry point for the game library
- arcade::ModuleType getType ()
- std::string getName ()
- int manhattanDistance (const arcade::Node a, const arcade::Node b)
- bool isValid (const std::vector< std::vector< int > > map, arcade::Node p)
- std::vector< arcade::Node > getNeighbors (const std::vector< std::vector< int > > map, arcade::Node p)
- std::vector< std::vector< int > > layersToMap (std::vector< arcade::entity > layer)
- std::vector< arcade::Node > aStar (std::vector< std::vector< arcade::entity > > layers, arcade::Node start, arcade::Node end)
- arcade::Node pairToNode (std::pair< int, int > pair)

### 7.4.1 Function Documentation

### 7.4.1.1 aStar()

```
std::vector< arcade::Node > aStar (
          std::vector< std::vector< arcade::entity > > layers,
          arcade::Node start,
          arcade::Node end )
```

# 7.4.1.2 entryPoint()

```
std::unique_ptr< arcade::IGameModule > entryPoint ( )
generate entry point for the game library
```

# 7.4.1.3 getName()

```
std::string getName ( )
```

## 7.4.1.4 getNeighbors()

## 7.4.1.5 getType()

```
arcade::ModuleType getType ( )
```

# 7.4.1.6 isValid()

```
bool is
Valid ( \mbox{const std::vector} < \mbox{std::vector} < \mbox{int } > > \mbox{\it map,} \\ \mbox{arcade::Node } p \mbox{ )}
```

## 7.4.1.7 layersToMap()

# 7.4.1.8 manhattanDistance()

# 7.4.1.9 pairToNode()

```
arcade::Node pairToNode (
          std::pair< int, int > pair )
```

# 7.5 /home/aleachlodnik/Arcade/lib/games/pacman/Pacman.hpp File Reference

```
#include "../AGameModule.hpp"
#include <queue>
#include <cmath>
#include <iostream>
#include <limits>
#include <algorithm>
#include <chrono>
```

#### Classes

struct arcade::Node

• struct arcade::DataPacman

- · struct arcade::DataGhost
- · class arcade::Pacman

### **Namespaces**

· namespace arcade

#### **Macros**

• #define SPEED\_PACMAN 1

## 7.5.1 Macro Definition Documentation

# 7.5.1.1 SPEED\_PACMAN

```
#define SPEED_PACMAN 1
```

# 7.6 Pacman.hpp

### Go to the documentation of this file.

```
00001 /*
00002 ** EPITECH PROJECT, 2024
00003 ** Arcade
00004 ** File description:
00005 ** Pacman
00006 */
00007
00008 #ifndef PACMAN_HPP_
00009 #define PACMAN_HPP_
00010 #define SPEED_PACMAN 1
00011
00012 #include "../AGameModule.hpp"
0013 #include <queue>
00014 #include <cmath>
00015 #include <ioostream>
00016 #include inits>
00017 #include <algorithm>
00018 #include <algorithm>
00018 #include <chrono>
```

```
00019
00020 namespace arcade {
00021
00022 struct Node {
      std::pair<int, int> position;
00023
00024
        float f, g, h;
00026
00027 struct DataPacman {
       bool isBoosted:
00028
00029
       std::chrono::time_point<std::chrono::system_clock> _pacmanTimer;
00030 };
00031
00032 struct DataGhost {
00033 bool isScared;
00034 bool isDead;
00035
       std::pair<int, int> initialPos;
00036 std::vector<arcade::Node> path;
00037 int actualPathIndex;
00038 std::chrono::time_point<std::ch
        std::chrono::time_point<std::chrono::system_clock> ghostTimer;
00039 };
00040
00041 class Pacman : virtual public arcade::AGameModule {
00042 public:
00043
        Pacman();
00044
        ~Pacman();
00045
        void init();
00046 void updateGame();
00047
        std::vector<std::vector<arcade::entity» moveEntities(std::vector<std::vector<arcade::entity»
      layers);
00048 void handdleKeyEvents(arcade::KeyboardInput key);
       bool isOver(std::vector<std::vector<arcade::entity» layers);</pre>
00050
        void updateTimers(std::vector<std::vector<arcade::entity» layers);</pre>
00051
        bool isPacgumEaten(std::pair<int, int> pos, std::vector<std::vector<arcade::entity» layers);</pre>
00052
       bool isCoinEaten(std::pair<int, int> pos, std::vector<std::vector<arcade::entity» layers);</pre>
00053
00054 protected:
00055 private:
00056 int _levelSpeed = 0;
00057 arcade::DataD
       arcade::DataPacman _pacmanData;
00058 std::vector<arcade::DataGhost> _ghostData;
00059 }:
00060 \}; // namespace arcade
00061
00062 #endif /* !PACMAN_HPP_ */
```

# 7.7 /home/aleachlodnik/Arcade/lib/games/snake/Snake.cpp File Reference

```
#include "Snake.hpp"
```

### **Functions**

- std::unique\_ptr< arcade::IGameModule > entryPoint ()
   generate entry point for the game library
- arcade::ModuleType getType ()
- std::string getName ()

### 7.7.1 Function Documentation

## 7.7.1.1 entryPoint()

```
\verb|std::unique_ptr<| arcade::IGameModule| > entryPoint ()| |
```

generate entry point for the game library

# 7.7.1.2 getName()

```
std::string getName ( )
7.7.1.3 getType()
```

```
arcade::ModuleType getType ( )
```

# 7.8 /home/aleachlodnik/Arcade/lib/games/snake/Snake.hpp File Reference

```
#include "../AGameModule.hpp"
```

### Classes

· class arcade::Snake

# Namespaces

namespace arcade

### **Macros**

- #define SPEED SNAKE 1
- #define MAX\_SNAKE\_SIZE 361

# 7.8.1 Macro Definition Documentation

# 7.8.1.1 MAX\_SNAKE\_SIZE

```
#define MAX_SNAKE_SIZE 361
```

# 7.8.1.2 SPEED\_SNAKE

#define SPEED\_SNAKE 1

7.9 Snake.hpp 41

# 7.9 Snake.hpp

## Go to the documentation of this file.

```
00001 /*
00002 ** EPITECH PROJECT, 2024
00003 ** Arcade
00004 ** File description:
00005 ** Snake
00006 */
00007
00008 #ifndef SNAKE_HPP_
00009 #define SNAKE_HPP
00010 #define SPEED_SNAKE 1
00011 #define MAX_SNAKE_SIZE 361
00012
00013 #include "../AGameModule.hpp"
00014
00015 namespace arcade {
00016 class Snake : virtual public arcade::AGameModule {
00017 public:
00018 Snake();
00019 ~Snake()
       ~Snake();
00024
00025 protected:
00026 };
00027 }; // namespace arcade
00028
00029 #endif /* !SNAKE_HPP_ */
```

# 7.10 /home/aleachlodnik/Arcade/lib/graphics/ADisplayModule.cpp File Reference

#include "ADisplayModule.hpp"

# 7.11 /home/aleachlodnik/Arcade/lib/graphics/ADisplayModule.hpp File Reference

#include <arcade/IDisplayModule.hpp>

#### Classes

• class arcade::ADisplayModule

# Namespaces

· namespace arcade

# 7.12 ADisplayModule.hpp

```
Go to the documentation of this file.
```

```
00002 ** EPITECH PROJECT, 2024
00003 ** bsArcade
00004 ** File description:
00005 ** ADisplayModule
00006 */
00007
80000
00009 #ifndef ADISPLAYMODILE HPP
00010 #define ADISPLAYMODULE_HPP_
00011
00012 #include <arcade/IDisplayModule.hpp>
00013
00014 namespace arcade {
00015
       class CoreModule;
00016 class ADisplayModule : virtual public arcade::IDisplayModule {
00017 public:
00018 ADisplayModule();
00019
        ~ADisplayModule();
00020
00021
       virtual std::string getName() const = 0;
00022
00023
       void setCoreModule(arcade::CoreModule *coreModule);
00024
       arcade::CoreModule *getCoreModule() const;
00025
00026
       virtual void clearWindow() = 0;
       virtual void displayWindow() = 0;
virtual arcade::KeyboardInput getInput() = 0;
00027
00028
00029
       virtual void drawSprite(std::pair<char, std::string> sprite, int x, int y, int width, int height) =
00030
        virtual void drawAllSprite(std::pair<char, std::string> sprite, std::vector<std::pair<int, int>
     coordinates, int width, int height) = 0;
00031
        virtual void drawText(const std::string text, int x, int y, int size) = 0;
00032
00033 protected:
00034 arcade::KeyboardInput _input;
00035 arcade::CoreModule *_coreModule;
00036 };
00037 }; // namespace arcade
00038
00039 #endif /* !ADISPLAYMODULE HPP */
```

# 7.13 /home/aleachlodnik/Arcade/lib/graphics/ncurses/NCurses.cpp File Reference

```
#include "NCurses.hpp"
```

### **Functions**

- std::unique\_ptr< arcade::IDisplayModule > entryPoint ()
   entry point
- arcade::ModuleType getType ()
- std::string getName ()

#### 7.13.1 Function Documentation

# 7.13.1.1 entryPoint()

entry point

```
std::unique_ptr< arcade::IDisplayModule > entryPoint ( )
```

### 7.13.1.2 getName()

```
std::string getName ( )
7.13.1.3 getType()
arcade::ModuleType getType ( )
```

# 7.14 /home/aleachlodnik/Arcade/lib/graphics/ncurses/NCurses.hpp File Reference

```
#include "../ADisplayModule.hpp"
#include <ncurses.h>
```

#### Classes

· class arcade::NCurses

#### **Namespaces**

· namespace arcade

# 7.15 NCurses.hpp

## Go to the documentation of this file.

```
00001 /*
00002 ** EPITECH PROJECT, 2024
00003 ** Arcade
00004 ** File description:
00005 ** NCurses
00006 */
00007
00008 #ifndef NCURSES_HPP_
00009 #define NCURSES_HPP_
00010
00011 #include "../ADisplayModule.hpp"
00012 #include <ncurses.h>
00013
00014 namespace arcade {
00015 class NCurses : virtual public arcade::ADisplayModule {
00016 public:
00017 NCurses();
00018 ~NCurses()
        ~NCurses();
00024 void drawSprite(std::pair<char, std::string> sprite, int x, int y, int width, int height);
00025 void drawAllSprite(std::pair<char, std::string> sprite, std::vector<std::pair<int, int» coordinates,
      int width, int height);
00026
00027 protected:
00028 WINDOW *_window;
00029 };
00030 }; // namespace arcade
00032 #endif /* !NCURSES_HPP_ */
```

# 7.16 /home/aleachlodnik/Arcade/lib/graphics/sdl2/Sdl2.cpp File Reference

```
#include "Sdl2.hpp"
#include <iostream>
```

### **Functions**

- std::unique\_ptr< arcade::IDisplayModule > entryPoint ()
   entry point for the library
- arcade::ModuleType getType ()
- std::string getName ()

# 7.16.1 Function Documentation

## 7.16.1.1 entryPoint()

```
std::unique_ptr< arcade::IDisplayModule > entryPoint ( )
entry point for the library
```

# Returns

arcade::Sdl2 \*

# 7.16.1.2 getName()

```
std::string getName ( )
```

## 7.16.1.3 getType()

```
arcade::ModuleType getType ( )
```

# 7.17 /home/aleachlodnik/Arcade/lib/graphics/sdl2/Sdl2.hpp File Reference

```
#include "../ADisplayModule.hpp"
#include <SDL2/SDL.h>
#include <SDL2/SDL_ttf.h>
#include <SDL2/SDL_image.h>
```

7.18 Sdl2.hpp 45

#### **Classes**

class arcade::Sdl2

#### **Namespaces**

· namespace arcade

# 7.18 Sdl2.hpp

#### Go to the documentation of this file.

```
00001 /*
00002 ** EPITECH PROJECT, 2024
00003 ** Arcade
00004 ** File description:
00005 ** SDL2
00006 */
00007
00008 #ifndef SDL2_HPP_
00009 #define SDL2_HPP_
00011 #include "../ADisplayModule.hpp"
00012 #include <SDL2/SDL.h>
00013 #include <SDL2/SDL_ttf.h>
00014 #include <SDL2/SDL_image.h>
00015
00016 namespace arcade {
00017 class Sdl2: virtual public arcade::ADisplayModule {
00018 public:
          Sd12();
00019
00020
            ~Sd12();
           std::string getName() const;
00021 std::string getName() const;
00022 void clearWindow();
00023 void displayWindow();
00024 arcade::KeyboardInput getInput();
00025 void drawText(const std::string text, int x, int y, int size);
00026 void drawSprite(std::pair<char, std::string> sprite, int x, int y, int width, int height);
00027 void drawAllSprite(std::pair<char, std::string> sprite, std::vector<std::pair<int, int» coordinates,</pre>
         int width, int height);
00028
00029 protected:
00030 SDL_Renderer *_renderer;
00031 SDL_Window *_window;
00032 private:
00033 };
00034 }; // namespace arcade
00035
00036 #endif /* !SDL2_HPP_ */
```

# 7.19 /home/aleachlodnik/Arcade/lib/graphics/sfml/Sfml.cpp File Reference

```
#include "Sfml.hpp"
```

### **Functions**

- std::unique\_ptr< arcade::IDisplayModule > entryPoint ()
   entry point for the library
- arcade::ModuleType getType ()
- std::string getName ()

# 7.19.1 Function Documentation

# 7.19.1.1 entryPoint()

```
std::unique_ptr< arcade::IDisplayModule > entryPoint ( )
entry point for the library

Returns
    arcade::Sfml*

7.19.1.2 getName()
std::string getName ( )
```

# arcade::ModuleType getType ( )

# 7.20 /home/aleachlodnik/Arcade/lib/graphics/sfml/Sfml.hpp File Reference

```
#include "../ADisplayModule.hpp"
#include <SFML/Graphics.hpp>
```

### Classes

· class arcade::Sfml

## **Namespaces**

· namespace arcade

7.21 Sfml.hpp 47

# 7.21 Sfml.hpp

#### Go to the documentation of this file.

```
00001 /*
00002 ** EPITECH PROJECT, 2024
00003 ** Arcade
00004 ** File description:
00005 ** SFML
00006 */
00007
00008 #ifndef SFML_HPP_
00009 #define SFML_HPP_
00010
00011 #include "../ADisplayModule.hpp"
00012 #include <SFML/Graphics.hpp>
00013
00014 namespace arcade {
00015 class Sfml : virtual public arcade::ADisplayModule {
00016 public:
           Sfml();
00018
           ~Sfml();
00019
00020 std::string getName() const;
00021
00021
00022 void clearWindow();
00023 void displayWindow();
00024 arcade::KeyboardInput getInput();
00025 void drawText(const std::string text, int x, int y, int size);
00026 void drawSprite(std::pair<char, std::string> sprite, int x, int y, int width, int height);
00027 void drawAllSprite(std::pair<char, std::string> sprite, std::vector<std::pair<int, int> coordinates,
00028
00029 protected:
00030 sf::RenderWindow *_window;
00031 sf::Texture _texture;
00032 };
00033 }; // namespace arcade
00034
00035 #endif /* !SFML_HPP_ */
```

# 7.22 /home/aleachlodnik/Arcade/src/CoreModule.cpp File Reference

```
#include <CoreModule.hpp>
```

# 7.23 /home/aleachlodnik/Arcade/src/ErrorHandling.cpp File Reference

```
#include <dlfcn.h>
#include <iostream>
#include <ErrorHandling.hpp>
```

### **Functions**

void checkPath (const char \*path)

## 7.23.1 Function Documentation

### 7.23.1.1 checkPath()

# 7.24 /home/aleachlodnik/Arcade/src/Main.cpp File Reference

```
#include <iostream>
#include <arcade/IShell.hpp>
#include <Shell.hpp>
#include <ErrorHandling.hpp>
```

# **Functions**

• int main (int const argc, char const \*const \*argv)

check param launch arcade

# 7.24.1 Function Documentation

# 7.24.1.1 main()

check param launch arcade

### **Parameters**

argc	
argv	

# Returns

int

# Index

```
/home/aleachlodnik/Arcade/lib/games/AGameModule.cpp,
                                                           arcade::Sdl2, 29
                                                           arcade::Sfml, 32
/home/aleachlodnik/Arcade/lib/games/AGameModule.hpp, ~ADisplayModule
                                                           arcade::ADisplayModule, 12
/home/aleachlodnik/Arcade/lib/games/pacman/Pacman.cpp_{Y}AGameModule
                                                           arcade::AGameModule, 15
/home/aleachlodnik/Arcade/lib/games/pacman/Pacman.hpp; NCurses
                                                           arcade::NCurses, 20
/home/aleachlodnik/Arcade/lib/games/snake/Snake.cpp, ~Pacman
                                                           arcade::Pacman, 24
/home/aleachlodnik/Arcade/lib/games/snake/Snake.hpp, ~Sdl2
         40.41
                                                           arcade::Sdl2, 27
/home/aleachlodnik/Arcade/lib/graphics/ADisplayModule.cppSfml
                                                           arcade::Sfml, 30
/home/aleachlodnik/Arcade/lib/graphics/ADisplayModule.hpp$nake
                                                           arcade::Snake, 33
/home/aleachlodnik/Arcade/lib/graphics/ncurses/NCurses.cpp,
                                                      actualPathIndex
/home/aleachlodnik/Arcade/lib/graphics/ncurses/NCurses.hpp, arcade::DataGhost, 18
                                                      ADisplayModule
                                                           arcade::ADisplayModule, 12
/home/aleachlodnik/Arcade/lib/graphics/sdl2/Sdl2.cpp,
                                                      AGameModule
                                                           arcade::AGameModule, 15
/home/aleachlodnik/Arcade/lib/graphics/sdl2/Sdl2.hpp,
                                                      arcade, 9
         44, 45
                                                      arcade::ADisplayModule, 11
/home/aleachlodnik/Arcade/lib/graphics/sfml/Sfml.cpp,
                                                           coreModule, 14
                                                           _input, 14
/home/aleachlodnik/Arcade/lib/graphics/sfml/Sfml.hpp,
                                                           ~ADisplayModule, 12
         46, 47
                                                           ADisplayModule, 12
/home/aleachlodnik/Arcade/src/CoreModule.cpp, 47
                                                           clearWindow, 12
/home/aleachlodnik/Arcade/src/ErrorHandling.cpp, 47
                                                           displayWindow, 12
/home/aleachlodnik/Arcade/src/Main.cpp, 48
                                                           drawAllSprite, 12
coreModule
                                                           drawSprite, 12
     arcade::ADisplayModule, 14
                                                           drawText, 13
ghostData
                                                           getCoreModule, 13
    arcade::Pacman, 25
                                                           getInput, 13
_input
                                                           getName, 13
    arcade::ADisplayModule, 14
                                                           setCoreModule, 13
levelSpeed
                                                      arcade::AGameModule, 14
    arcade::Pacman, 25
                                                           ~AGameModule, 15
_pacmanData
                                                           AGameModule, 15
    arcade::Pacman, 25
                                                           getCoreModule, 15
pacmanTimer
                                                           getDirection, 15
    arcade::DataPacman, 19
                                                           getGameStatus, 15
renderer
                                                           getLayerCell, 16
    arcade::Sdl2, 29
                                                           handdleKeyEvents, 16
texture
                                                           init, 16
    arcade::Sfml, 32
                                                           setCoreModule, 16
window
                                                           setDirection, 17
    arcade::NCurses, 22
                                                           setGameStatus, 17
```

50 INDEX

updateGame, 17	displayWindow, 31
arcade::DataGhost, 18	drawAllSprite, 31
actualPathIndex, 18	drawSprite, 31
ghostTimer, 18	drawText, 31
initialPos, 18	getInput, 31
isDead, 18	getName, 32
isScared, 18	Sfml, 30
path, 18	arcade::Snake, 32
arcade::DataPacman, 19	$\sim$ Snake, 33
_pacmanTimer, 19	handdleKeyEvents, 34
isBoosted, 19	init, 34
arcade::NCurses, 19	moveSnake, 34
_window, 22	Snake, 33
~NCurses, 20	updateGame, 34
clearWindow, 20	aStar
displayWindow, 20	Pacman.cpp, 36
drawAllSprite, 21	r domainopp, oo
drawSprite, 21	checkPath
drawText, 21	ErrorHandling.cpp, 47
getInput, 21	clearWindow
getName, 21	arcade::ADisplayModule, 12
_	arcade::NCurses, 20
NCurses, 20	arcade::Sdl2, 27
arcade::Node, 22	arcade::Sfml, 31
f, 22	CompareNode, 17
g, 22	•
h, 22	operator(), 17
position, 22	displayWindow
arcade::Pacman, 23	arcade::ADisplayModule, 12
_ghostData, 25	arcade::NCurses, 20
_levelSpeed, 25	arcade::Nourses, 20
D : 0F	
_pacmanData, 25	
∼Pacman, 24	arcade::Sfml, 31
<del></del>	arcade::Sfml, 31 drawAllSprite
∼Pacman, 24	arcade::Sfml, 31 drawAllSprite arcade::ADisplayModule, 12
∼Pacman, 24 handdleKeyEvents, 24	arcade::Sfml, 31 drawAllSprite arcade::ADisplayModule, 12 arcade::NCurses, 21
∼Pacman, 24 handdleKeyEvents, 24 init, 24	arcade::Sfml, 31 drawAllSprite arcade::ADisplayModule, 12 arcade::NCurses, 21 arcade::Sdl2, 27
~Pacman, 24 handdleKeyEvents, 24 init, 24 isCoinEaten, 24	arcade::Sfml, 31 drawAllSprite arcade::ADisplayModule, 12 arcade::NCurses, 21 arcade::Sdl2, 27 arcade::Sfml, 31
~Pacman, 24 handdleKeyEvents, 24 init, 24 isCoinEaten, 24 isOver, 24	arcade::Sfml, 31 drawAllSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 27     arcade::Sfml, 31 drawSprite
~Pacman, 24 handdleKeyEvents, 24 init, 24 isCoinEaten, 24 isOver, 24 isPacgumEaten, 24	arcade::Sfml, 31 drawAllSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 27     arcade::Sfml, 31 drawSprite     arcade::ADisplayModule, 12
~Pacman, 24 handdleKeyEvents, 24 init, 24 isCoinEaten, 24 isOver, 24 isPacgumEaten, 24 moveEntities, 25	arcade::Sfml, 31 drawAllSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 27     arcade::Sfml, 31 drawSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21
~Pacman, 24 handdleKeyEvents, 24 init, 24 isCoinEaten, 24 isOver, 24 isPacgumEaten, 24 moveEntities, 25 Pacman, 24	arcade::Sfml, 31 drawAllSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 27     arcade::Sfml, 31 drawSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 28
~Pacman, 24 handdleKeyEvents, 24 init, 24 isCoinEaten, 24 isOver, 24 isPacgumEaten, 24 moveEntities, 25 Pacman, 24 updateGame, 25	arcade::Sfml, 31 drawAllSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 27     arcade::Sfml, 31 drawSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 28     arcade::Sfml, 31
~Pacman, 24 handdleKeyEvents, 24 init, 24 isCoinEaten, 24 isOver, 24 isPacgumEaten, 24 moveEntities, 25 Pacman, 24 updateGame, 25 updateTimers, 25	arcade::Sfml, 31 drawAllSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 27     arcade::Sfml, 31 drawSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 28     arcade::Sfml, 31 drawText
~Pacman, 24 handdleKeyEvents, 24 init, 24 isCoinEaten, 24 isOver, 24 isPacgumEaten, 24 moveEntities, 25 Pacman, 24 updateGame, 25 updateTimers, 25 arcade::Sdl2, 26 _renderer, 29	arcade::Sfml, 31 drawAllSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 27     arcade::Sfml, 31 drawSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 28     arcade::Sfml, 31 drawText     arcade::ADisplayModule, 13
~Pacman, 24 handdleKeyEvents, 24 init, 24 isCoinEaten, 24 isOver, 24 isPacgumEaten, 24 moveEntities, 25 Pacman, 24 updateGame, 25 updateTimers, 25 arcade::Sdl2, 26 _renderer, 29 _window, 29	arcade::Sfml, 31 drawAllSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 27     arcade::Sfml, 31 drawSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 28     arcade::Sfml, 31 drawText     arcade::ADisplayModule, 13     arcade::NCurses, 21
~Pacman, 24 handdleKeyEvents, 24 init, 24 isCoinEaten, 24 isOver, 24 isPacgumEaten, 24 moveEntities, 25 Pacman, 24 updateGame, 25 updateTimers, 25 arcade::Sdl2, 26 _renderer, 29 _window, 29 ~Sdl2, 27	arcade::Sfml, 31 drawAllSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 27     arcade::Sfml, 31 drawSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 28     arcade::Sfml, 31 drawText     arcade::ADisplayModule, 13
~Pacman, 24 handdleKeyEvents, 24 init, 24 isCoinEaten, 24 isOver, 24 isPacgumEaten, 24 moveEntities, 25 Pacman, 24 updateGame, 25 updateTimers, 25 arcade::Sdl2, 26 _renderer, 29 _window, 29 ~Sdl2, 27 clearWindow, 27	arcade::Sfml, 31 drawAllSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 27     arcade::Sfml, 31 drawSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 28     arcade::Sfml, 31 drawText     arcade::ADisplayModule, 13     arcade::NCurses, 21
~Pacman, 24 handdleKeyEvents, 24 init, 24 isCoinEaten, 24 isOver, 24 isPacgumEaten, 24 moveEntities, 25 Pacman, 24 updateGame, 25 updateTimers, 25 arcade::Sdl2, 26 _renderer, 29 _window, 29 ~Sdl2, 27 clearWindow, 27 displayWindow, 27	arcade::Sfml, 31 drawAllSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 27     arcade::Sfml, 31 drawSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 28     arcade::Sfml, 31 drawText     arcade::ADisplayModule, 13     arcade::ADisplayModule, 13     arcade::Sdl2, 28     arcade::Sdl2, 28     arcade::Sdl2, 28     arcade::Sdl2, 28     arcade::Sdl2, 28     arcade::Sdl2, 28
~Pacman, 24 handdleKeyEvents, 24 init, 24 isCoinEaten, 24 isOver, 24 isPacgumEaten, 24 moveEntities, 25 Pacman, 24 updateGame, 25 updateTimers, 25 arcade::Sdl2, 26 _renderer, 29 _window, 29 ~Sdl2, 27 clearWindow, 27 displayWindow, 27 drawAllSprite, 27	arcade::Sfml, 31 drawAllSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 27     arcade::Sfml, 31 drawSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 28     arcade::Sfml, 31 drawText     arcade::ADisplayModule, 13     arcade::NCurses, 21     arcade::Sfml, 31 entryPoint
~Pacman, 24 handdleKeyEvents, 24 init, 24 isCoinEaten, 24 isOver, 24 isPacgumEaten, 24 moveEntities, 25 Pacman, 24 updateGame, 25 updateTimers, 25 arcade::Sdl2, 26 _renderer, 29 _window, 29 ~Sdl2, 27 clearWindow, 27 displayWindow, 27 drawAllSprite, 27 drawSprite, 28	arcade::Sfml, 31 drawAllSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 27     arcade::Sfml, 31 drawSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 28     arcade::Sfml, 31 drawText     arcade::ADisplayModule, 13     arcade::NCurses, 21     arcade::Sfml, 31 drawText     arcade::Sdl2, 28     arcade::Sdl2, 28     arcade::Sfml, 31 entryPoint     NCurses.cpp, 42
~Pacman, 24 handdleKeyEvents, 24 init, 24 isCoinEaten, 24 isOver, 24 isPacgumEaten, 24 moveEntities, 25 Pacman, 24 updateGame, 25 updateTimers, 25 arcade::Sdl2, 26 _renderer, 29 _window, 29 ~Sdl2, 27 clearWindow, 27 displayWindow, 27 drawAllSprite, 27 drawSprite, 28 drawText, 28	arcade::Sfml, 31 drawAllSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 27     arcade::Sfml, 31 drawSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 28     arcade::Sfml, 31 drawText     arcade::ADisplayModule, 13     arcade::NCurses, 21     arcade::Sfml, 31 drawText     arcade::Sdl2, 28     arcade::Sdl2, 28     arcade::Sdl2, 28     arcade::Sdl2, 31 entryPoint     NCurses.cpp, 42     Pacman.cpp, 36
~Pacman, 24 handdleKeyEvents, 24 init, 24 isCoinEaten, 24 isOver, 24 isPacgumEaten, 24 moveEntities, 25 Pacman, 24 updateGame, 25 updateTimers, 25 arcade::Sdl2, 26 _renderer, 29 _window, 29 ~Sdl2, 27 clearWindow, 27 displayWindow, 27 drawAllSprite, 27 drawSprite, 28 drawText, 28 getInput, 28	arcade::Sfml, 31 drawAllSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 27     arcade::Sfml, 31 drawSprite     arcade::ADisplayModule, 12     arcade::ADisplayModule, 12     arcade::Sdl2, 28     arcade::Sfml, 31 drawText     arcade::ADisplayModule, 13     arcade::NCurses, 21     arcade::Sfml, 31 drawText     arcade::Sdl2, 28     arcade::Sdl2, 28     arcade::Sfml, 31 entryPoint     NCurses.cpp, 42     Pacman.cpp, 36     Sdl2.cpp, 44
~Pacman, 24 handdleKeyEvents, 24 init, 24 isCoinEaten, 24 isOver, 24 isPacgumEaten, 24 moveEntities, 25 Pacman, 24 updateGame, 25 updateTimers, 25 arcade::Sdl2, 26renderer, 29window, 29     ~Sdl2, 27 clearWindow, 27 displayWindow, 27 drawAllSprite, 27 drawSprite, 28 drawText, 28 getInput, 28 getName, 29	arcade::Sfml, 31 drawAllSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 27     arcade::Sfml, 31 drawSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 28     arcade::Sfml, 31 drawText     arcade::ADisplayModule, 13     arcade::ADisplayModule, 13     arcade::Sfml, 31 drawText     arcade::Sdl2, 28     arcade::Sdl2, 28     arcade::Sfml, 31 entryPoint     NCurses.cpp, 42     Pacman.cpp, 36     Sdl2.cpp, 44     Sfml.cpp, 46
~Pacman, 24 handdleKeyEvents, 24 init, 24 isCoinEaten, 24 isOver, 24 isPacgumEaten, 24 moveEntities, 25 Pacman, 24 updateGame, 25 updateTimers, 25 arcade::Sdl2, 26 _renderer, 29 _window, 29 ~Sdl2, 27 clearWindow, 27 displayWindow, 27 drawAllSprite, 27 drawSprite, 28 drawText, 28 getName, 29 Sdl2, 27	arcade::Sfml, 31 drawAllSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 27     arcade::Sfml, 31 drawSprite     arcade::ADisplayModule, 12     arcade::ADisplayModule, 12     arcade::Sdl2, 28     arcade::Sfml, 31 drawText     arcade::ADisplayModule, 13     arcade::NCurses, 21     arcade::Sfml, 31 drawText     arcade::Sdl2, 28     arcade::Sdl2, 28     arcade::Sfml, 31 entryPoint     NCurses.cpp, 42     Pacman.cpp, 36     Sdl2.cpp, 44
~Pacman, 24 handdleKeyEvents, 24 init, 24 isCoinEaten, 24 isOver, 24 isPacgumEaten, 24 moveEntities, 25 Pacman, 24 updateGame, 25 updateTimers, 25 arcade::Sdl2, 26 _renderer, 29 _window, 29 ~Sdl2, 27 clearWindow, 27 displayWindow, 27 drawAllSprite, 27 drawSprite, 28 drawText, 28 getInput, 28 getName, 29 Sdl2, 27 arcade::Sfml, 29	arcade::Sfml, 31 drawAllSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 27     arcade::Sfml, 31 drawSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 28     arcade::Sfml, 31 drawText     arcade::ADisplayModule, 13     arcade::ADisplayModule, 13     arcade::Sfml, 31 drawText     arcade::Sdl2, 28     arcade::Sdl2, 28     arcade::Sfml, 31 entryPoint     NCurses.cpp, 42     Pacman.cpp, 36     Sdl2.cpp, 44     Sfml.cpp, 46
~Pacman, 24 handdleKeyEvents, 24 init, 24 isCoinEaten, 24 isOver, 24 isPacgumEaten, 24 moveEntities, 25 Pacman, 24 updateGame, 25 updateTimers, 25 arcade::Sdl2, 26 _renderer, 29 _window, 29 ~Sdl2, 27 clearWindow, 27 displayWindow, 27 drawAllSprite, 27 drawSprite, 28 drawText, 28 getName, 29 Sdl2, 27 arcade::Sfml, 29 _texture, 32	arcade::Sfml, 31 drawAllSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 27     arcade::Sfml, 31 drawSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 28     arcade::Sfml, 31 drawText     arcade::ADisplayModule, 13     arcade::ADisplayModule, 13     arcade::Sdl2, 28     arcade::Sdl2, 28     arcade::Sdl3, 28     arcade::Sdl3, 28     arcade::Sdl3, 28     arcade::Sdl3, 28     arcade::Sdl2, 28     arcade::Sfml, 31 entryPoint     NCurses.cpp, 42     Pacman.cpp, 36     Sdl2.cpp, 44     Sfml.cpp, 46     Snake.cpp, 39
~Pacman, 24 handdleKeyEvents, 24 init, 24 isCoinEaten, 24 isOver, 24 isPacgumEaten, 24 moveEntities, 25 Pacman, 24 updateGame, 25 updateTimers, 25 arcade::Sdl2, 26 _renderer, 29 _window, 29 ~Sdl2, 27 clearWindow, 27 displayWindow, 27 drawAllSprite, 27 drawSprite, 28 drawText, 28 getInput, 28 getName, 29 Sdl2, 27 arcade::Sfml, 29 _texture, 32 _window, 32	arcade::Sfml, 31 drawAllSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 27     arcade::Sfml, 31 drawSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 28     arcade::Sfml, 31 drawText     arcade::ADisplayModule, 13     arcade::Curses, 21     arcade::Sfml, 31 drawText     arcade::Sdl2, 28     arcade::Sdl2, 28     arcade::Sfml, 31 entryPoint     NCurses.cpp, 42     Pacman.cpp, 36     Sdl2.cpp, 44     Sfml.cpp, 46     Snake.cpp, 39 ErrorHandling.cpp     checkPath, 47
~Pacman, 24 handdleKeyEvents, 24 init, 24 isCoinEaten, 24 isOver, 24 isPacgumEaten, 24 moveEntities, 25 Pacman, 24 updateGame, 25 updateTimers, 25 arcade::Sdl2, 26 _renderer, 29 _window, 29 ~Sdl2, 27 clearWindow, 27 displayWindow, 27 drawAllSprite, 27 drawSprite, 28 drawText, 28 getInput, 28 getName, 29 Sdl2, 27 arcade::Sfml, 29 _texture, 32 _window, 32 ~Sfml, 30	arcade::Sfml, 31 drawAllSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 27     arcade::Sfml, 31 drawSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 28     arcade::Sfml, 31 drawText     arcade::ADisplayModule, 13     arcade::NCurses, 21     arcade::Sfml, 31 drawText     arcade::Sdl2, 28     arcade::Sfml, 31 entryPoint     NCurses.cpp, 42     Pacman.cpp, 36     Sdl2.cpp, 44     Sfml.cpp, 46     Snake.cpp, 39 ErrorHandling.cpp     checkPath, 47
~Pacman, 24 handdleKeyEvents, 24 init, 24 isCoinEaten, 24 isOver, 24 isPacgumEaten, 24 moveEntities, 25 Pacman, 24 updateGame, 25 updateTimers, 25 arcade::Sdl2, 26 _renderer, 29 _window, 29 ~Sdl2, 27 clearWindow, 27 displayWindow, 27 drawAllSprite, 27 drawSprite, 28 drawText, 28 getInput, 28 getName, 29 Sdl2, 27 arcade::Sfml, 29 _texture, 32 _window, 32	arcade::Sfml, 31 drawAllSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 27     arcade::Sfml, 31 drawSprite     arcade::ADisplayModule, 12     arcade::NCurses, 21     arcade::Sdl2, 28     arcade::Sfml, 31 drawText     arcade::ADisplayModule, 13     arcade::Curses, 21     arcade::Sfml, 31 drawText     arcade::Sdl2, 28     arcade::Sdl2, 28     arcade::Sfml, 31 entryPoint     NCurses.cpp, 42     Pacman.cpp, 36     Sdl2.cpp, 44     Sfml.cpp, 46     Snake.cpp, 39 ErrorHandling.cpp     checkPath, 47

INDEX 51

g	arcade::Pacman, 24
arcade::Node, 22	isScared
getCoreModule	arcade::DataGhost, 18
arcade::ADisplayModule, 13	isValid
arcade::AGameModule, 15	Pacman.cpp, 37
getDirection	layersToMap
arcade::AGameModule, 15	Pacman.cpp, 37
getGameStatus	гасшап.срр, 37
arcade::AGameModule, 15	main
getInput	Main.cpp, 48
arcade::ADisplayModule, 13	Main.cpp
arcade::NCurses, 21	main, 48
arcade::Sdl2, 28	manhattanDistance
arcade::Sfml, 31	Pacman.cpp, 37
getLayerCell	MAX SNAKE SIZE
arcade::AGameModule, 16	Snake.hpp, 40
getName	moveEntities
arcade::ADisplayModule, 13	arcade::Pacman, 25
arcade::NCurses, 21	moveSnake
arcade::Sdl2, 29	arcade::Snake, 34
arcade::Sfml, 32	arcadeSriake, 54
NCurses.cpp, 42	NCurses
Pacman.cpp, 37	arcade::NCurses, 20
Sdl2.cpp, 44	NCurses.cpp
Sfml.cpp, 46	entryPoint, 42
Snake.cpp, 39	getName, 42
getNeighbors	getType, 43
Pacman.cpp, 37	gerrype, re
getType	operator()
NCurses.cpp, 43	CompareNode, 17
Pacman.cpp, 37	•
Sdl2.cpp, 44	Pacman
Sfml.cpp, 46	arcade::Pacman, 24
Snake.cpp, 40	Pacman.cpp
ghostTimer	aStar, <mark>36</mark>
arcade::DataGhost, 18	entryPoint, 36
	getName, 37
h	getNeighbors, 37
arcade::Node, 22	getType, 37
handdleKeyEvents	isValid, 37
arcade::AGameModule, 16	layersToMap, 37
arcade::Pacman, 24	manhattanDistance, 37
arcade::Snake, 34	pairToNode, 37
	Pacman.hpp
init	SPEED_PACMAN, 38
arcade::AGameModule, 16	pairToNode
arcade::Pacman, 24	Pacman.cpp, 37
arcade::Snake, 34	path
initialPos	arcade::DataGhost, 18
arcade::DataGhost, 18	position
isBoosted	arcade::Node, 22
arcade::DataPacman, 19	0.110
isCoinEaten	Sdl2
arcade::Pacman, 24	arcade::Sdl2, 27
isDead	Sdl2.cpp
arcade::DataGhost, 18	entryPoint, 44
isOver	getName, 44
arcade::Pacman, 24	getType, 44
isPacgumEaten	setCoreModule

52 INDEX

```
arcade::ADisplayModule, 13
    arcade::AGameModule, 16
setDirection
    arcade::AGameModule, 17
setGameStatus
    arcade::AGameModule, 17
Sfml
    arcade::Sfml, 30
Sfml.cpp
    entryPoint, 46
    getName, 46
    getType, 46
Snake
    arcade::Snake, 33
Snake.cpp
    entryPoint, 39
    getName, 39
    getType, 40
Snake.hpp
    MAX_SNAKE_SIZE, 40
    SPEED_SNAKE, 40
SPEED_PACMAN
    Pacman.hpp, 38
SPEED_SNAKE
    Snake.hpp, 40
updateGame
    arcade::AGameModule, 17
    arcade::Pacman, 25
    arcade::Snake, 34
updateTimers
    arcade::Pacman, 25
```