Arcade

Generated by Doxygen 1.10.0

1 Arcade: 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 Class Documentation 9

5.1 ADisplayModule Class Reference . . . 9

5.1.1 Member Function Documentation . . . 9

5.1.1.1 setEntities() . . . 9

5.2 AGameModule Class Reference . . . 10

5.2.1 Member Function Documentation . . . 10

5.2.1.1 setEvent() . . . 10

5.3 Exceptions::BadNumberArguments Class Reference . . . 10

5.4 Core Class Reference . . . 11

5.4.1 Detailed Description . . . 11

5.5 Dimensions Class Reference . . . 11

5.6 DLLoader< T > Class Template Reference . . . 12

5.6.1 Detailed Description . . . 12

5.7 Entity Class Reference . . . 12

5.8 EntityElement Class Reference . . . 13

5.9 Event Class Reference . . . 13

5.10 IDisplayModule Class Reference . . . 13

5.11 IGameModule Class Reference . . . 14

5.12 KeyboardEvent Class Reference . . . 14

5.13 MouseEvent Class Reference . . . 14

5.14 Position Class Reference . . . 15

5.15 WindowEvent Class Reference . . . 15

6 File Documentation 17

6.1 Arcade.hpp . . . 17

6.2 Core.hpp . . . 17

6.3 ADisplayModule.hpp . . . 18

6.4 IDisplayModule.hpp . . . 18

6.5 DLLoader.hpp . . . 18

6.6 Dimensions.hpp . . . 19

6.7 Entity.hpp . . . 19

6.8 Position.hpp . . . 20

6.9 Event.hpp . . . 20

6.10 KeyboardEvent.hpp 21
6.11 MouseEvent.hpp 21
6.12 WindowEvent.hpp 22
6.13 Exceptions.hpp 22
6.14 AGameModule.hpp 22
6.15 IGameModule.hpp 23

Index **25**

Chapter 1

Arcade:

Leaders of the 2 groups with which we have collaborated:

- yasmine.bedrane@epitech.eu
- yanis.lazreq@epitech.eu

Chapter 2

Hierarchical Index

2.1 Class Hierarchy

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

Core . . . 11
Dimensions . . . 11
DLLoader< T > . . . 12
DLLoader< IDisplayModule > . . . 12
DLLoader< IGameModule > . . . 12
Entity . . . 12
EntityElement . . . 13
Event . . . 13
std::exception
    Exceptions::BadNumberArguments . . . 10
IDisplayModule . . . 13
    ADisplayModule . . . 9
IGameModule . . . 14
    AGameModule . . . 10
KeyboardEvent . . . 14
MouseEvent . . . 14
Position . . . 15
WindowEvent . . . 15

Chapter 3

Class Index

3.1 Class List

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

ADisplayModule 9
AGameModule 10
Exceptions::BadNumberArguments 10
Core 11
Dimensions 11
DLLoader< T > 12
Entity 12
EntityElement 13
Event 13
IDisplayModule 13
IGameModule 14
KeyboardEvent 14
MouseEvent 14
Position 15
WindowEvent 15

Chapter 4

File Index

4.1 File List

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

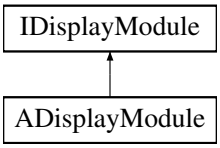
/home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/Arcade.hpp 17
/home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/Core.hpp 17
/home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/DLLoader.h 18
/home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/↩ DisplayModules/ADisplayModule.hpp . . . 18
/home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/↩ DisplayModules/IDisplayModule.hpp . . . 18
/home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/↩ Entities/Dimensions.hpp . . . 19
/home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/↩ Entities/Entity.hpp . . . 19
/home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/↩ Entities/Position.hpp . . . 20
/home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/↩ Event/Event.hpp . . . 20
/home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/↩ Event/KeyboardEvent.hpp . . . 21
/home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/↩ Event/MouseEvent.hpp . . . 21
/home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/↩ Event/WindowEvent.hpp . . . 22
/home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/↩ Exceptions/Exceptions.hpp . . . 22
/home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/↩ GameModules/AGameModule.hpp . . . 22
/home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/↩ GameModules/IGameModule.hpp . . . 23

Chapter 5

Class Documentation

5.1 ADisplayModule Class Reference

Inheritance diagram for ADisplayModule:



Public Member Functions

- void setEntities (std::unordered_map< std::string, std::shared_ptr< Entity > > entities) final

Public Member Functions inherited from IDisplayModule

- virtual void **initDisplay** ()=0
- virtual void **destroyRessources** ()=0
- virtual void **clearScreen** ()=0
- virtual void **drawEntities** (std::unordered_map< std::string, std::shared_ptr< Entity > > entities)=0
- virtual void **handleEvents** ()=0
- virtual Event & **getEvent** ()=0

5.1.1 Member Function Documentation

5.1.1.1 setEntities()

```
void ADisplayModule::setEntities (
            std::unordered_map< std::string, std::shared_ptr< Entity > > entities )  [final],
[virtual]
```

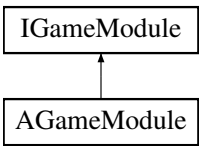
Implements IDisplayModule.

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

- /home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/↩ DisplayModules/ADisplayModule.hpp
- /home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/src/↩ DisplayModules/ADisplayModule.cpp

5.2 AGameModule Class Reference

Inheritance diagram for AGameModule:



Public Member Functions

- void setEvent (Event &event) final

Public Member Functions inherited from IGameModule

- virtual void **initGame** ()=0
- virtual void **exitGame** ()=0
- virtual void **handleEvent** (const Event &event)=0
- virtual std::unordered_map< std::string, std::shared_ptr< Entity > > **getEntities** () const =0
- virtual GameStatus **getStatus** () const =0

5.2.1 Member Function Documentation

5.2.1.1 setEvent()

```
void AGameModule::setEvent (
            Event & event )  [final], [virtual]
```

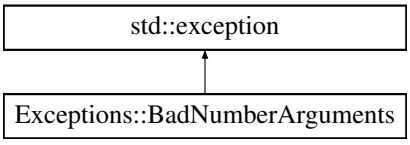
Implements IGameModule.

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

- /home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/↩ GameModules/AGameModule.hpp
- /home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/src/↩ GameModules/AGameModule.cpp

5.3 Exceptions::BadNumberArguments Class Reference

Inheritance diagram for Exceptions::BadNumberArguments:



Public Member Functions

- const char * **what** () const noexcept

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

- /home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/↩ Exceptions/Exceptions.hpp
- /home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/src/↩ Exceptions/Exceptions.cpp

5.4 Core Class Reference

`#include <Core.hpp>`

Public Member Functions

- **Core** (const std::string &displayModuleName)
- void **runArcade** ()
- void **loadModule** (const std::string &lib, ModuleType type)
- void **unloadModule** (ModuleType type)
- void **switchModule** (const std::string &lib, ModuleType type)

5.4.1 Detailed Description

Class handling communication between IDisplayModule and IGameModule

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

- /home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/Core.↩ hpp
- /home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/src/Core.↩ cpp

5.5 Dimensions Class Reference

Public Member Functions

- bool **operator==** (const Dimensions &other) const

Public Attributes

- int **_x**
- int **_y**

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

- /home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/↩ Entities/Dimensions.hpp
- /home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/src/↩ Entities/Dimensions.cpp

5.6 DLLoader< T > Class Template Reference

`#include <DLLoader.hpp>`

Public Member Functions

- void **load** (std::string libName)
- void **unload** ()
- T * **getInstance** (const std::string &entrypointName) const

5.6.1 Detailed Description

template<typename T>
class DLLoader< T >

Template class that can load a Dynamic Library

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

- /home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/DLLoade
  hpp

5.7 Entity Class Reference

Public Member Functions

- **Entity** (const std::string &name, Position &position, Dimensions &dimensions, std::unordered_map< std↩
  ::string, std::shared_ptr< EntityElement > > elements)
- std::string **getName** () const
- Position **getPosition** () const
- Dimensions **getDimensions** () const
- std::unordered_map< std::string, std::shared_ptr< EntityElement > > **getElements** () const
- void **setPosition** (Position &position)
- void **setTextureElement** (EntityElement &element, const std::string &name)
- void **addElement** (std::string &name, EntityElement &element)
- void **setPositionElement** (Position &position, const std::string &name)

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

- /home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/↩
  Entities/Entity.hpp
- /home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/src/↩
  Entities/Entity.cpp

5.8 EntityElement Class Reference

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

- /home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/↩ Entities/Entity.hpp

5.9 Event Class Reference

Public Member Functions

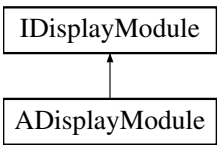
- void **setEventType** (EventType &type)
- void **setMouseEvent** (MouseEvent &event)
- void **setWindowEvent** (WindowEvent &event)
- void **setKeyboardEvent** (KeyboardEvent &event)
- EventType **getEventType** () const
- MouseEvent **getMouseEvent** () const
- WindowEvent **getWindowEvent** () const
- KeyboardEvent **getKeyboardEvent** () const

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

- /home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/↩ Event/Event.hpp
- /home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/src/↩ Event/Event.cpp

5.10 IDisplayModule Class Reference

Inheritance diagram for IDisplayModule:



Public Member Functions

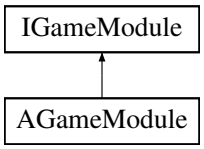
- virtual void **initDisplay** ()=0
- virtual void **destroyRessources** ()=0
- virtual void **clearScreen** ()=0
- virtual void **drawEntities** (std::unordered_map< std::string, std::shared_ptr< Entity > > entities)=0
- virtual void **handleEvents** ()=0
- virtual Event & **getEvent** ()=0
- virtual void **setEntities** (std::unordered_map< std::string, std::shared_ptr< Entity > > entities)=0

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

- /home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/↩ DisplayModules/IDisplayModule.hpp

5.11 IGameModule Class Reference

Inheritance diagram for IGameModule:



Public Member Functions

- virtual void **initGame** ()=0
- virtual void **exitGame** ()=0
- virtual void **handleEvent** (const Event &event)=0
- virtual std::unordered_map< std::string, std::shared_ptr< Entity > > **getEntities** () const =0
- virtual GameStatus **getStatus** () const =0
- virtual void **setEvent** (Event &event)=0

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

- /home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/↩ GameModules/IGameModule.hpp

5.12 KeyboardEvent Class Reference

Public Member Functions

- void **setInput** (std::string &input)
- std::string **getInput** () const

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

- /home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/↩ Event/KeyboardEvent.hpp
- /home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/src/↩ Event/KeyboardEvent.cpp

5.13 MouseEvent Class Reference

Public Member Functions

- void **setPosition** (Position &position)
- Position **getPosition** () const
- void **setState** (MouseEventType state)
- MouseEventType **getState** () const

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

- /home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/↩ Event/MouseEvent.hpp
- /home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/src/↩ Event/MouseEvent.cpp

5.14 Position Class Reference

Public Member Functions

- bool **operator==** (const Position &other) const

Public Attributes

- int **_x**
- int **_y**
- int **_z**

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

- /home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/↩ Entities/Position.hpp
- /home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/src/↩ Entities/Position.cpp

5.15 WindowEvent Class Reference

Public Member Functions

- void **setEvent** (WindowEventType event)
- WindowEventType **getEvent** () const

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

- /home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/↩ Event/WindowEvent.hpp
- /home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/src/↩ Event/WindowEvent.cpp

Chapter 6

File Documentation

6.1 Arcade.hpp

```
00001 /*
00002 ** EPITECH PROJECT, 2024
00003 ** Arcade
00004 ** File description:
00005 ** Arcade
00006 */
00007
00008 #ifndef ARCADE_HPP_
00009 #define ARCADE_HPP_
00010 #define SUCCESS 0
00011 #define ERROR 84
00012 #include "Exceptions/Exceptions.hpp"
00013 #include "Core.hpp"
00014 #include <iostream>
00015
00016 #endif /* !ARCADE_HPP_ */
```

6.2 Core.hpp

```
00001 /*
00002 ** EPITECH PROJECT, 2024
00003 ** Core.hpp
00004 ** File description:
00005 ** Arcade
00006 */
00007
00008 #ifndef CORE_HPP_
00009 #define CORE_HPP_
00010 #include <memory>
00011 #include <vector>
00012 #include "GameModules/IGameModule.hpp"
00013 #include "DisplayModules/IDisplayModule.hpp"
00014 #include "DLLoader.hpp"
00015
00016 enum ModuleType { GAME, GRAPHIC };
00017
00021 class Core {
00022     public:
00023         Core(const std::string &displayModuleName);
00024         ~Core();
00025         void runArcade();
00026         void loadModule(const std::string &lib, ModuleType type);
00027         void unloadModule(ModuleType type);
00028         void switchModule(const std::string &lib, ModuleType type);
00029
00030     private:
00031         std::shared_ptr<IGameModule> _gameModule;
00032         std::shared_ptr<IDisplayModule> _displayModule;
00033         std::shared_ptr<IGameModule> _menuModule;
00034         std::shared_ptr<IDisplayModule> _menuDisplayModule;
00035         DLLoader<IGameModule> _loaderGameModule;
00036         DLLoader<IDisplayModule> _loaderDisplayModule;
00037         std::string _nextDisplayModule;
00038         std::string _nextGameModule;
```

```
00039         std::vector<std::string> _listGameModules;
00040         std::vector<std::string> _listDisplayModules;
00041         int _score;
00042 };
00043
00044 #endif /* !CORE_HPP_ */
```

6.3 ADisplayModule.hpp

```
00001 /*
00002 ** EPITECH PROJECT, 2024
00003 ** ADisplayModule
00004 ** File description:
00005 ** Arcade
00006 */
00007
00008 #ifndef ADISPLAY_MODULE_HPP_
00009 #define ADISPLAY_MODULE_HPP_
00010 #include "IDisplayModule.hpp"
00011
00012 class ADisplayModule : public IDisplayModule {
00013     public:
00014         ADisplayModule();
00015         virtual ~ADisplayModule() = default;
00016         void setEntities(std::unordered_map<std::string , std::shared_ptr<Entity» entities) final;
00017
00018     private:
00019         std::unordered_map<std::string , std::shared_ptr<Entity» _entities;
00020         Event _event;
00021 };
00022
00023 #endif /* !ADISPLAY_MODULE_HPP_ */
```

6.4 IDisplayModule.hpp

```
00001 /*
00002 ** EPITECH PROJECT, 2024
00003 ** IDisplayModule
00004 ** File description:
00005 ** Arcade
00006 */
00007
00008 #ifndef IDISPLAY_MODULE_HPP_
00009 #define IDISPLAY_MODULE_HPP_
00010 #include <unordered_map>
00011 #include <string>
00012 #include <memory>
00013 #include "Event/Event.hpp"
00014
00015 class IDisplayModule {
00016     public:
00017         virtual ~IDisplayModule() = default;
00018         virtual void initDisplay() = 0;
00019         virtual void destroyRessources() = 0;
00020         virtual void clearScreen() = 0;
00021         virtual void drawEntities(std::unordered_map<std::string, std::shared_ptr<Entity» entities) =
      0;
00022         virtual void handleEvents() = 0;
00023         virtual Event &getEvent() = 0;
00024         virtual void setEntities(std::unordered_map<std::string , std::shared_ptr<Entity» entities) =
      0;
00025 };
00026
00027 #endif /* !IDISPLAY_MODULE_HPP_ */
```

6.5 DLLoader.hpp

```
00001 /*
00002 ** EPITECH PROJECT, 2024
00003 ** DLLoader
00004 ** File description:
00005 ** Arcade
00006 */
00007
00008 #ifndef DLLOADER_HPP_
```

```
00009 #define DLLOADER_HPP_
00010 #include <iostream>
00011 #include <string>
00012 #include <dlfcn.h>
00013
00017 template <typename T>
00018 class DLLoader
00019 {
00020     public:
00021         DLLoader() : _handle(nullptr)
00022         {
00023         }
00024
00025         ~DLLoader() = default;
00026
00027         void load(std::string libName)
00028         {
00029             _handle = dlopen(libName.c_str(), RTLD_NOW | RTLD_LAZY);
00030             if (!_handle) {
00031                 throw std::exception();
00032             }
00033         }
00034
00035         void unload()
00036         {
00037             if (dlclose(_handle) != 0) {
00038                 throw std::exception();
00039             }
00040         }
00041
00042         T *getInstance(const std::string &entrypointName) const
00043         {
00044             T *(*entrypoint)();
00045             void *pointerEntrypoint = dlsym(_handle, entrypointName.c_str());
00046
00047             if (!pointerEntrypoint) {
00048                 throw std::exception();
00049             }
00050             entrypoint = reinterpret_cast<decltype(entrypoint)>(pointerEntrypoint);
00051             return entrypoint();
00052         }
00053
00054     private:
00055         void *_handle;
00056 };
00057
00058 #endif /* !DLLOADER_HPP_ */
```

6.6 Dimensions.hpp

```
00001 /*
00002 ** EPITECH PROJECT, 2024
00003 ** Dimensions.hpp
00004 ** File description:
00005 ** Arcade
00006 */
00007
00008 #ifndef DIMENSIONS_HPP_
00009 #define DIMENSIONS_HPP_
00010
00011 class Dimensions {
00012     public:
00013         Dimensions();
00014         ~Dimensions() = default;
00015         bool operator==(const Dimensions& other) const;
00016         int _x;
00017         int _y;
00018 };
00019
00020 #endif /* !DIMENSIONS_HPP_ */
```

6.7 Entity.hpp

```
00001 /*
00002 ** EPITECH PROJECT, 2024
00003 ** Entity
00004 ** File description:
00005 ** Arcade
00006 */
```

```
00007
00008 #ifndef ENTITY_HPP_
00009 #define ENTITY_HPP_
00010 #include <string>
00011 #include <unordered_map>
00012 #include <memory>
00013 #include "Position.hpp"
00014 #include "Dimensions.hpp"
00015
00016 class EntityElement {
00017     std::string _texture;
00018     Position _position;
00019 };
00020
00021 class Entity {
00022     public:
00023         Entity(const std::string &name, Position &position, Dimensions &dimensions,
00024         std::unordered_map<std::string, std::shared_ptr<EntityElement» elements);
00025         ~Entity() = default;
00026         std::string getName() const;
00027         Position getPosition() const;
00028         Dimensions getDimensions() const;
00029         std::unordered_map<std::string, std::shared_ptr<EntityElement» getElements() const;
00030         void setPosition(Position &position);
00031         void setTextureElement(EntityElement &element, const std::string &name);
00032         void addElement(std::string &name, EntityElement &element);
00033         void setPositionElement(Position &position, const std::string &name);
00034
00035     private:
00036         std::string _name;
00037         Position _position;
00038         Dimensions _dimensions;
00039         std::unordered_map<std::string, std::shared_ptr<EntityElement» _elements;
00040 };
00041
00042 #endif /* !ENTITY_HPP_ */
```

6.8 Position.hpp

```
00001 /*
00002 ** EPITECH PROJECT, 2024
00003 ** Position.hpp
00004 ** File description:
00005 ** Arcade
00006 */
00007
00008 #ifndef POSITION_HPP_
00009 #define POSITION_HPP_
00010
00011 class Position {
00012     public:
00013         Position();
00014         ~Position() = default;
00015         bool operator==(const Position& other) const;
00016         int _x;
00017         int _y;
00018         int _z;
00019 };
00020
00021 #endif /* !POSITION_HPP_ */
```

6.9 Event.hpp

```
00001 /*
00002 ** EPITECH PROJECT, 2024
00003 ** Event.hpp
00004 ** File description:
00005 ** Event
00006 */
00007
00008 #ifndef EVENT_HPP_
00009 #define EVENT_HPP_
00010 #include "Event/KeyboardEvent.hpp"
00011 #include "Event/MouseEvent.hpp"
00012 #include "Event/WindowEvent.hpp"
00013
00014 enum EventType {
00015     MOUSE,
00016     KEYBOARD,
```

```
00017     WINDOW,
00018     NO_EVENT,
00019 };
00020
00021 class Event {
00022     public:
00023         Event();
00024         ~Event();
00025         void setEventType(EventType &type);
00026         void setMouseEvent(MouseEvent &event);
00027         void setWindowEvent(WindowEvent &event);
00028         void setKeyboardEvent(KeyboardEvent &event);
00029         EventType getEventType() const;
00030         MouseEvent getMouseEvent() const;
00031         WindowEvent getWindowEvent() const;
00032         KeyboardEvent getKeyboardEvent() const;
00033
00034     private:
00035         EventType _eventType;
00036         MouseEvent _mouseEvent;
00037         WindowEvent _windowEvent;
00038         KeyboardEvent _keyboardEvent;
00039 };
00040
00041 #endif /* !EVENT_HPP_ */
```

6.10 KeyboardEvent.hpp

```
00001 /*
00002 ** EPITECH PROJECT, 2024
00003 ** Event.hpp
00004 ** File description:
00005 ** Event
00006 */
00007
00008 #ifndef KEYBOARD_EVENT_HPP_
00009 #define KEYBOARD_EVENT_HPP_
00010 #include "Entities/Entity.hpp"
00011
00012 class KeyboardEvent {
00013     public:
00014         KeyboardEvent() = default;
00015         ~KeyboardEvent() = default;
00016         void setInput(std::string &input);
00017         std::string getInput() const;
00018
00019     private:
00020         std::string _input;
00021 };
00022
00023 #endif /* !KEYBOARD_EVENT_HPP_ */
```

6.11 MouseEvent.hpp

```
00001 /*
00002 ** EPITECH PROJECT, 2024
00003 ** Event.hpp
00004 ** File description:
00005 ** Event
00006 */
00007
00008 #ifndef MOUSE_EVENT_HPP_
00009 #define MOUSE_EVENT_HPP_
00010 #include "Entities/Entity.hpp"
00011
00012 enum MouseEventType {
00013     PRESSED,
00014     RELEASED,
00015     HOVER,
00016     NO_MOUSE_EVENT
00017 };
00018
00019 class MouseEvent {
00020     public:
00021         MouseEvent() = default;
00022         ~MouseEvent() = default;
00023         void setPosition(Position &position);
00024         Position getPosition() const;
00025         void setState(MouseEventType state);
```

```
00026         MouseEventType getState() const;
00027
00028     private:
00029         Position _position;
00030         MouseEventType _state;
00031 };
00032
00033 #endif /* !MOUSE_EVENT_HPP_ */
```

6.12 WindowEvent.hpp

```
00001 /*
00002 ** EPITECH PROJECT, 2024
00003 ** Event.hpp
00004 ** File description:
00005 ** Event
00006 */
00007
00008 #ifndef WINDOW_EVENT_HPP_
00009 #define WINDOW_EVENT_HPP_
00010
00011 enum WindowEventType {
00012     RESIZED,
00013     CLOSED,
00014     NO_WINDOW_EVENT
00015 };
00016
00017 class WindowEvent {
00018     public:
00019         WindowEvent() = default;
00020         ~WindowEvent() = default;
00021         void setEvent(WindowEventType event);
00022         WindowEventType getEvent() const;
00023
00024     private:
00025         WindowEventType _event;
00026 } ;
00027
00028 #endif /* !WINDOW_EVENT_HPP_ */
```

6.13 Exceptions.hpp

```
00001 /*
00002 ** EPITECH PROJECT, 2024
00003 ** Exceptions.hpp
00004 ** File description:
00005 ** Arcade
00006 */
00007
00008 #ifndef EXCEPTIONS_HPP_
00009 #define EXCEPTIONS_HPP_
00010 #include <exception>
00011
00012 namespace Exceptions {
00013     class BadNumberArguments : public std::exception {
00014         public:
00015             const char *what() const noexcept;
00016     };
00017 };
00018
00019 #endif /* !EXCEPTIONS_HPP_ */
```

6.14 AGameModule.hpp

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

```
00012 class AGameModule : public IGameModule {
00013     public:
00014         AGameModule();
00015         virtual ~AGameModule() = default;
00016         void setEvent(Event &event) final;
00017
00018     private:
00019         std::unordered_map<std::string , std::shared_ptr<Entity» _entities;
00020         Event _event;
00021         GameStatus _status;
00022 };
00023
00024 #endif /* !AGAME_MODULE_HPP_ */
```

6.15 IGameModule.hpp

```
00001 /*
00002 ** EPITECH PROJECT, 2024
00003 ** IGameModule
00004 ** File description:
00005 ** Arcade
00006 */
00007
00008 #ifndef IGAME_MODULE_HPP_
00009 #define IGAME_MODULE_HPP_
00010 #include <unordered_map>
00011 #include <string>
00012 #include <memory>
00013 #include "Event/Event.hpp"
00014 #include "Entities/Entity.hpp"
00015
00016 enum GameStatus {
00017     ON,
00018     OFF,
00019     LOADING_NEW_DISPLAY,
00020     LOADING_NEW_GAME
00021 };
00022
00023 class IGameModule {
00024     public:
00025         virtual ~IGameModule() = default;
00026         virtual void initGame() = 0;
00027         virtual void exitGame() = 0;
00028         virtual void handleEvent(const Event &event) = 0;
00029         virtual std::unordered_map<std::string, std::shared_ptr<Entity»getEntities() const = 0;
00030         virtual GameStatus getStatus() const = 0;
00031         virtual void setEvent(Event &event) = 0;
00032 };
00033
00034 #endif /* !IGAME_MODULE_HPP_ */
```

Index

/home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/Arcade.hpp, 17
/home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/Core.hpp, 17
/home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/DLLoader.hpp, 18
/home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/DisplayModules/ADisplayModule.hpp, 18
/home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/DisplayModules/IDisplayModule.hpp, 18
/home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/Entities/Dimensions.hpp, 19
/home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/Entities/Entity.hpp, 19
/home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/Entities/Position.hpp, 20
/home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/Event/Event.hpp, 20
/home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/Event/KeyboardEvent.hpp, 21
/home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/Event/MouseEvent.hpp, 21
/home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/Event/WindowEvent.hpp, 22
/home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/Exceptions/Exceptions.hpp, 22
/home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/GameModules/AGameModule.hpp, 22
/home/sephorahaniambossou/delivery/tek2/oop/arcade/B-OOP-400-PAR-4-1-arcade-sephorah.aniambossou/include/GameModules/IGameModule.hpp, 23

ADisplayModule, 9
    setEntities, 9
AGameModule, 10
    setEvent, 10
Arcade:, 1
Core, 11
Dimensions, 11
DLLoader< T >, 12
Entity, 12
EntityElement, 13
Event, 13
Exceptions::BadNumberArguments, 10
IDisplayModule, 13
IGameModule, 14
KeyboardEvent, 14
MouseEvent, 14
Position, 15
setEntities
    ADisplayModule, 9
setEvent
    AGameModule, 10
WindowEvent, 15