mkRPG

Generated by Doxygen 1.8.12

Contents

Chapter 1

L'éditeur

Compilation

Pour compiler l'éditeur, il est nécessaire de disposer de Qt 5.6.1 (ou version plus récentes). Le plus facile est d'ouvrir le projet avec QtCreator (le fichier .pro) et de demander gentiment une compilation (Ctrl + R).

Test

Pas besoin d'ouvrir ou de créer de jeu pour pouvoir voir les quelques éléments implémentés : un "jeu" est (temporairement) prédéfini dans le code. Seules quelques fonctionnalités d'affichage existent, ainsi que la modification des angles. Pour l'instant...

Contrôles

Dans l'onglet Maps (le seul qui est vraiment intéressant pour le moment) les commandes sont :

Zoom : Roulette de la souris

Déplacement : Clic droit + et déplacement

Séléction : Clic gauche ou Alt + déplacement

Chapter 2

readme

run `py client.py` to try.

Commands :

- Move map around by putting the mouse cursor on the edges of the screen
- Mouse wheel allows you to zoom in or out

Chapter 3

Todo List

Class GameObject

Chapter 4

Deprecated List

Member ObjectsMap (pref, ini, lni, body, sg, pl)

Member ObjectsMapC (name, names, Type, Types, pref, arg)

Chapter 5

Namespace Index

5.1 Namespace List

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

Chapter 6

Hierarchical Index

6.1 Class Hierarchy

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

Chapter 7

Class Index

7.1 Class List

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

Chapter 8

File Index

8.1 File List

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

Chapter 9

Namespace Documentation

9.1 src.parsing.map_parser Namespace Reference

Functions

- def parse_cell (cell_object)
- def map_parser (map_xml)
- def get_size (tree)
- def **gen_map** (cells_specs)

9.1.1 Detailed Description

```
This module handles xml parsing for maps description files.
```

9.1.2 Function Documentation

9.1.2.1 get_size()

```
def src.parsing.map_parser.get_size (
              tree )
```

```
Gets the size of the map.
```

9.1.2.2 map_parser()

```
def src.parsing.map_parser.map_parser (
              map_xml )
```

```
The main parser for the map xml file.
```

9.1.2.3 parse_cell()

```
def src.parsing.map_parser.parse_cell (
              cell_object )
```

```
Parses a CellType attribute.
```

Chapter 10

Class Documentation

10.1 src.path.Archi Class Reference

Public Member Functions

- def **__init__** (self, prefix=None)
- def get_src_file (self, file_path, mode='r')
- def get_static_file (self, file_path, mode='r')
- def get_xml_file (self, file_path, mode='r')
- def list_files (self, dir_path)
- def get_src_dir (self, dir_path)
- def get_static_dir (self, dir_path)
- def get_xml_dir (self, dir_path)

Public Attributes

- **main_directory**

10.1.1 Detailed Description

```
This class manages the arhitecture of the project.
It allows the user to travel in the file system of the game, to get
the XML files and others (PNG, configuration files...)
Moreover, it should be cross-platform compliant
```

10.1.2 Member Function Documentation

10.1.2.1 get_src_dir()

```
def src.path.Archi.get_src_dir (
              self,
              dir_path )
```

```
Gets the given dir_path with respect to the src folder.
```

10.1.2.2 get_src_file()

```
def src.path.Archi.get_src_file (
              self,
              file_path,
              mode = 'r' )
```

Gets the path of the src directory.
At least used by the src scripts.

10.1.2.3 get_static_dir()

```
def src.path.Archi.get_static_dir (
              self,
              dir_path )
```

Gets the given dir_path with respect to the static folder.

10.1.2.4 get_static_file()

```
def src.path.Archi.get_static_file (
              self,
              file_path,
              mode = 'r' )
```

Gets the path of the static files directory. Static files are
basically all graphical files, and a description of the common world

10.1.2.5 get_xml_dir()

```
def src.path.Archi.get_xml_dir (
              self,
              dir_path )
```

Gets the given dir_path with respect to the xml folder.

10.1.2.6 get_xml_file()

```
def src.path.Archi.get_xml_file (
              self,
              file_path,
              mode = 'r' )
```

Gets the path of a xml file describing a world, a scenario, or a
campaign.

10.1.2.7 list_files()

```
def src.path.Archi.list_files (
              self,
              dir_path )
```

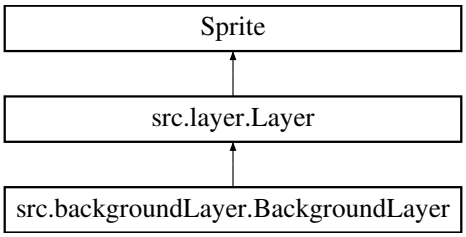
```
List all the files present in the dir_path, if it is a dir.
Else raise a FileNotFoundError.
```

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

- src/path.py

10.2 src.backgroundLayer.BackgroundLayer Class Reference

Inheritance diagram for src.backgroundLayer.BackgroundLayer:



Public Member Functions

- def **__init__** (self, cell_ids, size)
- def **init_layer** (self)
- def **render** (self)
- def **collision_test** (self, mouse_pos)
- def **click_update** (self, mouse_pos)
- def **get_grid_info** (self, cell_ids)

Public Attributes

- **cell_ids**
- **grid_cell_ids**
- **g_width**
- **g_height**
- **image**
- **rect**
- **mouse_iso**
- **selected_cell**

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

- src/backgroundLayer.py

10.3 src.world.BaseObject Class Reference

Public Member Functions

- def **__init__** (self)
- def **__getattr__** (self, attr)
- def **__setattr__** (self, attr, val)
- def load (self, data)
- def contextEval (self, value)

Public Attributes

- **params**
- **ident**
- **conditions**

Static Public Attributes

- int **ident** = 0
- dictionary **ids** = {}

10.3.1 Detailed Description

```
Tout objet du monde
```

10.3.2 Member Function Documentation

10.3.2.1 contextEval()

```
def src.world.BaseObject.contextEval (
              self,
              value )
```

```
Évalue une expression dans le contexte de l'objet pour les ordres
```

10.3.2.2 load()

```
def src.world.BaseObject.load (
              self,
              data )
```

```
Charge l'objet depuis une structure Xml
```

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

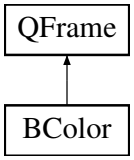
- src/world.py

10.4 BColor Class Reference

The BColor class is a simple frame that offers color selection.

`#include <bcolor.h>`

Inheritance diagram for BColor:



Public Slots

- void setColor (const QColor &c)
- void setColorQuiet (const QColor &c)
- void setName (const QString &s)
- void setNameQuiet (const QString &s)

Signals

- void colorChanged (const QColor &)
- void nameChanged (const QString &)

Public Member Functions

- BColor (QWidget *parent=0)
- BColor (QColor c, QWidget *parent=0)
- const QString & name () const
- const QColor & color () const

Properties

- QColor color
- QString name

10.4.1 Detailed Description

The BColor class is a simple frame that offers color selection.

10.4.2 Constructor & Destructor Documentation

10.4.2.1 BColor() [1/2]

```
BColor::BColor (
            QWidget * parent = 0 )  [explicit]
```

Constructs a new BColor object, with white as current color.

10.4.2.2 BColor() [2/2]

```
BColor::BColor (
            QColor c,
            QWidget * parent = 0 )  [explicit]
```

Constructs a new BColor object and sets the color to c.

10.4.3 Member Function Documentation

10.4.3.1 color()

```
const QColor& BColor::color ( ) const
```

Returns the current color of the selector.

See also

setColor, setColorQuiet, colorChanged

10.4.3.2 colorChanged

```
void BColor::colorChanged (
            const QColor &  )  [signal]
```

This signal is emitted when the color change, both when the user edit it or when setColor is called.

See also

color, setColorQuiet

10.4.3.3 name()

```
const QString& BColor::name ( ) const
```

Returns the name of the selector.

See also

setName, setNameQuiet, nameChanged

10.4.3.4 nameChanged

```
void BColor::nameChanged (
            const QString &  )  [signal]
```

This signal is emitted when the name change, when setColor is called.

See also

name, setNameQuiet

10.4.3.5 setColor

```
void BColor::setColor (
            const QColor & c )  [slot]
```

Sets the current color.

The signal colorChanged is emitted.

See also

setColorQuiet, color

10.4.3.6 setColorQuiet

```
void BColor::setColorQuiet (
            const QColor & c )  [slot]
```

Sets the current color.

The signal colorChanged is not emitted.

See also

setColor, color

10.4.3.7 setName

```
void BColor::setName (
            const QString & s )  [slot]
```

Sets the name of the selector.

The signal nameChanged is emitted.

See also

setNameQuiet, name

10.4.3.8 setNameQuiet

```
void BColor::setNameQuiet (
            const QString & s )  [slot]
```

Sets the name of the selector.

The signal nameChanged is not emitted.

See also

setName, name

10.4.4 Property Documentation

10.4.4.1 color

```
const QColor & BColor::color  [read], [write]
```

The current color that is displayed by the widget

See also

setColor, setColorQuiet, colorChanged.

10.4.4.2 name

```
const QString & BColor::name  [read], [write]
```

The name that is shown as title for the color chooser dialog used for user color definition purpose.

see also setName, setNameQuiet, and nameChanged.

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

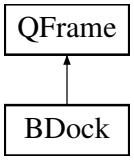
- src/editor/GUI/Tabs/bcolor.h
- src/editor/GUI/Tabs/bcolor.cpp

10.5 BDock Class Reference

The BDock class is the container for widget to display in a BDocksZone.

```
#include <bdock.h>
```

Inheritance diagram for BDock:



Public Slots

- void **setTitle** (QString s)
- void **setUnfold** (bool v)

Signals

- void **mouseClick** (int i, const QPoint &p)
- void **mouseMove** (int i, const QPoint &p)
- void **mouseRelease** (int i, const QPoint &p)
- void **movementFinished** (int i)

Public Member Functions

- **BDock** (QString title, BDockWidget ∗dock, QWidget ∗parent=0)
- bool **unfold** () const
- int **currentSize** () const
- void **setCurrentSize** (int t)
- void **setIndex** (int i)
- int **index** () const
- void **moveTo** (int i, bool inert=true)
- void **setLength** (int l)

Properties

- bool **unfold**
- int **currentSize**

10.5.1 Detailed Description

The BDock class is the container for widget to display in a BDocksZone.

A BDock is composed of a title and a QScrollArea in which a BDockWidget is displayed.

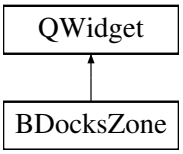
This container is movable within the BDocksZone it belongs to, and it can be hide.

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

- src/editor/GUI/Tabs/Docks/bdock.h
- src/editor/GUI/Tabs/Docks/bdock.cpp

10.6 BDocksZone Class Reference

Inheritance diagram for BDocksZone:



Public Slots

- void **swap** (bool anim=true)

Public Member Functions

- **BDocksZone** (QWidget ∗parent=0)
- void **setUnfold** (bool u, bool anim=true)
- const BinaryStateMachine ∗ **states** () const
- int **length** () const
- void **setLength** (int t)
- ScrollBarMode **scrollBarMode** () const
- void **setScrollBarMode** (ScrollBarMode m)
- int **currentLength** () const
- void **addDock** (QString title, BDockWidget ∗dock)

Protected Slots

- void **setCurrentLenght** (int t)

Properties

- int **length**
- int **currentLength**

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

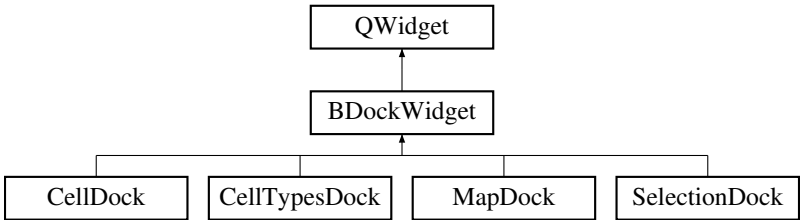
- src/editor/GUI/Tabs/Docks/bdockszone.h
- src/editor/GUI/Tabs/Docks/bdockszone.cpp

10.7 BDockWidget Class Reference

The BDockWidget class is the base class for game-related docks.

`#include <bdockwidget.h>`

Inheritance diagram for BDockWidget:



Public Slots

- virtual void **updateGame** ()

Signals

- void **gameModified** ()
- void **changeDockName** (QString)

Public Member Functions

- **BDockWidget** (QWidget ∗parent=0)
- void **setGame** (Game ∗g)

Protected Attributes

- Game ∗ **game**

10.7.1 Detailed Description

The BDockWidget class is the base class for game-related docks.

It provides common functions for set game, update, ...

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

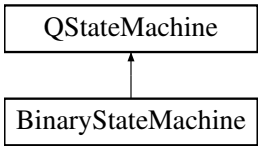
- src/editor/GUI/Tabs/Docks/bdockwidget.h
- src/editor/GUI/Tabs/Docks/bdockwidget.cpp

10.8 BinaryStateMachine Class Reference

The BinaryStateMachine class is a simple QStateMachine with two states.

```
#include <intertie.h>
```

Inheritance diagram for BinaryStateMachine:



Public Slots

- void **swap** ()
- void **setPositive** (bool p)
- void **setNegative** (bool n)

Signals

- void **swapped** (bool)
- void **__swap** ()

Public Member Functions

- **BinaryStateMachine** (QObject ∗parent=0)
- void **defineProperty** (QObject ∗obj, const char ∗prop)
- void **defineProperty** (QObject ∗obj, const char ∗prop, QVariant yesValue, QVariant noValue)
- bool **isPositive** () const
- bool **isNegative** () const

10.8.1 Detailed Description

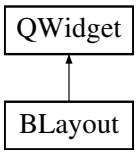
The BinaryStateMachine class is a simple QStateMachine with two states.

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

- src/editor/GUI/Tabs/Docks/intertie.h
- src/editor/GUI/Tabs/Docks/intertie.cpp

10.9 BLayout Class Reference

Inheritance diagram for BLayout:



Signals

- void **sizeChanged** (int)
- void **showPoint** (int, int)

Public Member Functions

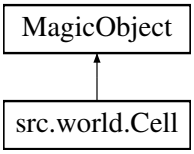
- **BLayout** (QWidget ∗parent=0)
- void **setOrientation** (Qt::Orientation o)
- void **insert** (BDock ∗d, int ind=-1)
- void **setSpacing** (int e)
- void **setLength** (int t)
- int **spacing** () const

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

- src/editor/GUI/Tabs/Docks/bdockszone.h
- src/editor/GUI/Tabs/Docks/bdockszone.cpp

10.10 src.world.Cell Class Reference

Inheritance diagram for src.world.Cell:



Public Member Functions

- def **__init__** (self)

Public Attributes

- **entities**
- **objects**

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

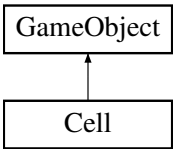
- src/world.py

10.11 Cell Class Reference

The Cell class.

`#include <map.h>`

Inheritance diagram for Cell:



Public Member Functions

- **Cell** (Game *g=nullptr, GameObject *parent=nullptr)
- bool **isSelected** () const
- void **setSelected** (bool s=true)
- void **invertSelected** ()
- void **addSelection** ()
- bool **isPreSelected** () const
- void **confirmPreSelection** (bool add=true)
- void **clearPreSelection** ()

Public Attributes

- ObjectListD(o, O, bject„ s, Object) private int **nbSel**
- bool **selectMod**

Additional Inherited Members

10.11.1 Detailed Description

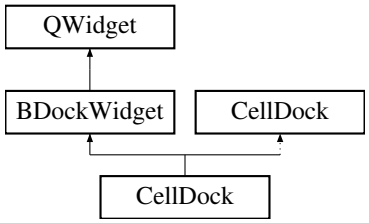
The Cell class.

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

- src/editor/Game/map.h
- src/editor/Game/map.cpp

10.12 CellDock Class Reference

Inheritance diagram for CellDock:



Public Slots

- void **updateGame** ()
- void **selectionChanged** ()

Public Member Functions

- **CellDock** (QWidget ∗parent=0)

Additional Inherited Members

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

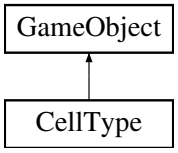
- src/editor/GUI/Tabs/celldock.h
- src/editor/GUI/Tabs/celldock.cpp

10.13 CellType Class Reference

The CellType class.

`#include <map.h>`

Inheritance diagram for CellType:



Public Member Functions

- **CellType** (Game *g, GameObject *parent)

Additional Inherited Members

10.13.1 Detailed Description

The CellType class.

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

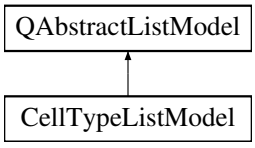
- src/editor/Game/map.h
- src/editor/Game/map.cpp

10.14 CellTypeListModel Class Reference

The CellTypeListModel class.

`#include <mapslistmodel.h>`

Inheritance diagram for CellTypeListModel:



Public Member Functions

- **CellTypeListModel** (World *w, QObject *parent=0)
- int **rowCount** (const QModelIndex &parent) const Q_DECL_OVERRIDE
- QVariant **data** (const QModelIndex &index, int role) const Q_DECL_OVERRIDE
- bool **insertRows** (int row, int count, const QModelIndex &parent) Q_DECL_OVERRIDE
- bool **removeRows** (int row, int count, const QModelIndex &parent) Q_DECL_OVERRIDE

10.14.1 Detailed Description

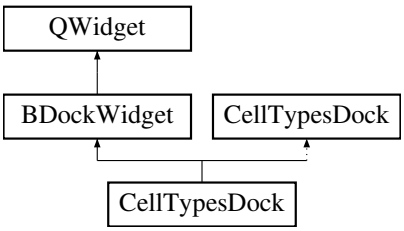
The CellTypeListModel class.

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

- src/editor/Game/mapslistmodel.h
- src/editor/Game/mapslistmodel.cpp

10.15 CellTypesDock Class Reference

Inheritance diagram for CellTypesDock:



Public Member Functions

- **CellTypesDock** (QWidget *parent=0)
- void **updateGame** ()

Additional Inherited Members

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

- src/editor/GUI/Tabs/celltypesdock.h
- src/editor/GUI/Tabs/celltypesdock.cpp

10.16 src.cursescli.CellViewer Class Reference

Public Member Functions

- def **__init__** (self, cell)
- def **display** (self, win)

Public Attributes

- **cell**

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

- src/cursescli.py

10.17 src.character.Character Class Reference

Public Member Functions

- def **__init__** (self, name, start_pos, skin)
- def **render** (self)
- def **update** (self)
- def **update_skin** (self)
- def **set_path** (self, path)
- def **make_skin** (self, skin)
- def **get_cell_pos_by_index** (self, index)
- def **move** (self)

Public Attributes

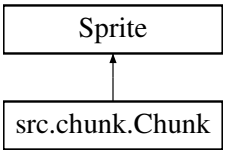
- **skin**
- **name**
- **action**
- **orientation**
- **image**
- **current_image**
- **game_frame_count**
- **anim_frame_count**
- **current_cell**
- **path**
- **pos_offset**

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

- src/character.py

10.18 src.chunk.Chunk Class Reference

Inheritance diagram for src.chunk.Chunk:



Public Member Functions

- def **__init__** (self, index, cells, map_size)
- def **init_chunk** (self)
- def **render** (self)
- def **scale_chunk** (self, scale)
- def **update** (self, state, mouse_pos)
- def **click_trigger** (self, mouse_pos)
- def **set_state** (self, state)
- def **get_state** (self)

Public Attributes

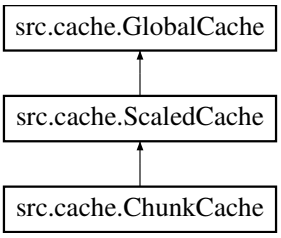
- **index**
- **cells**
- **g_width**
- **g_height**
- **g_map_height**
- **width**
- **height**
- **pos**
- **base_rect**
- **layers**
- **image**

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

- src/chunk.py

10.19 src.cache.ChunkCache Class Reference

Inheritance diagram for src.cache.ChunkCache:



Public Member Functions

- def **init_chunk** (cls, chunk)
- def **init_elts** (cls, elts)
- def **init_chunks** (cls, chunks)
- def **get_chunk** (cls, chunk_index, scale=1)
- def **add_scaled** (cls, chunk_index, scale=1)

Static Public Attributes

- dictionary **cache** = {}

Additional Inherited Members

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

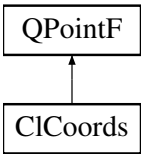
- src/cache.py

10.20 ClCoords Class Reference

The ClCoords class describe positions with cell coordinates.

`#include <mappainter.h>`

Inheritance diagram for ClCoords:



Public Member Functions

- **ClCoords** (qreal x, qreal y)
- **ClCoords** (const QPointF &p)

10.20.1 Detailed Description

The ClCoords class describe positions with cell coordinates.

Theses coordinates describe each point relatively to the cell grid. They correspond to the isometric 3D world.

See also

RlCoords, PtCoords, PxCoords

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

- src/editor/Game/mappainter.h

10.21 src.pygamecli.Client Class Reference

Public Member Functions

- def **__init__** (self, path)
- def **__del__** (self)
- def **run** (self)
- def **frame_counter** (self, n)
- def **update_view** (self, mouse_pos, mov_speed_x, mov_speed_y, deltat)
- def **get_conf_file** (self, path)
- def **get_conf** (self, conf, type=str)
- def **init_cache** (self)
- def **handleOrder** (self, ident, order)

Public Attributes

- **net**
- **screen_size**
- **screen**
- **world**
- **interface**
- **interactions**
- **perso**
- **orderDispatcher**
- **background**
- **conf**

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

- src/pygamecli.py

10.22 src.client.Client Class Reference

Public Member Functions

- def **__init__** (self, path, Interface)
- def __del__ (self)
- def **run** (self)
- def **getEntity** (self)
- def **main** (self)
- def **handleOrder** (self, ident, order)

Public Attributes

- **loop**
- **net**
- **world**
- **interface**
- **interactions**
- **perso**
- **orderDispatcher**
- **netTask**

10.22.1 Detailed Description

```
Main class of the client process, gathering interface, world and networking
```

10.22.2 Constructor & Destructor Documentation

10.22.2.1 __del__()

```
def src.client.Client.__del__ (
              self )
```

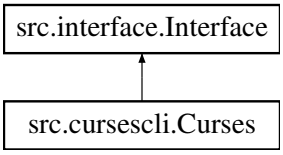
Kill network and interface

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

- src/client.py

10.23 src.cursescli.Curses Class Reference

Inheritance diagram for src.cursescli.Curses:



Public Member Functions

- def **__init__** (self, w)
- def **repaint** (self)
- def **end** (self)
- def **getEvent** (self)

Public Attributes

- **win**
- **mv**

10.23.1 Detailed Description

ncurses-based UI

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

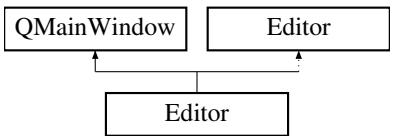
- src/cursescli.py

10.24 Editor Class Reference

The Editor class is the main window of the Editor.

`#include <editor.h>`

Inheritance diagram for Editor:



Public Member Functions

- **Editor** (QStringList args, QWidget ∗parent=0)

10.24.1 Detailed Description

The Editor class is the main window of the Editor.

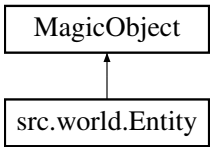
It is composed of tabs that offer editing facilities.

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

- src/editor/GUI/editor.h
- src/editor/GUI/editor.cpp

10.25 src.world.Entity Class Reference

Inheritance diagram for src.world.Entity:



Public Member Functions

- def **__init__** (self)

Public Attributes

- **quests**
- **inventory**
- **user**

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

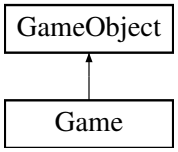
- src/world.py

10.26 Game Class Reference

The Game class gather the differents parts needed to describe a game.

`#include <game.h>`

Inheritance diagram for Game:



Public Member Functions

- int newIdent ()
- World ∗ **world** ()
- Map ∗ **currentMap** ()
- void **setCurrentMap** (Map ∗m)
- void **addImage** (Image ∗im)

Additional Inherited Members

10.26.1 Detailed Description

The Game class gather the differents parts needed to describe a game.

It contains mainly the World, and the ressources used by it (images and strings)

For editing purposes, it contains also the active map (the one being editing)

10.26.2 Member Function Documentation

10.26.2.1 newIdent()

```
int Game::newIdent ( )  [inline]
```

Returns a new unused identifiers

Note

It should only be used by GameObject methods GameObject::init and GameObject::GameObject.

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

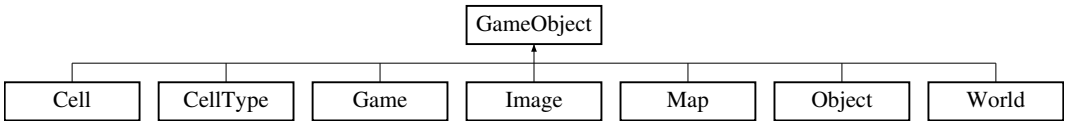
- src/editor/Game/game.h
- src/editor/Game/game.cpp

10.27 GameObject Class Reference

The GameObject class is the base class for every part of games.

```
#include <object.h>
```

Inheritance diagram for GameObject:



Public Member Functions

- GameObject (Game *g=nullptr, GameObject *parent=nullptr)
- void init (Game *g, GameObject *p)
- virtual bool isValid () const
- int ident () const
- const QDateTime & lastInternalEdition () const
- const QDateTime & lastChildrenEdition () const
- const QDateTime & lastEdition () const
- int getParam (const QString &p) const
- void setParam (const QString &p, int v)
- bool hasParam (const QString &p) const
- QList< QString > params () const
- bool getFlag (const QString &f) const
- void setFlag (const QString &f, bool v)
- bool hasFlag (const QString &f) const
- QList< QString > flags () const
- void touch ()
- void **addReference** ()
- void **removeReference** ()
- void **setParent** (GameObject *p)

Protected Member Functions

- void **addChild** (GameObject *c)
- void **removeChild** (GameObject *c)
- void **childrenTouched** (const QDateTime &d)

Protected Attributes

- GameObject * **parent**
- QMap< int, GameObject * > **children**
- Game * **game**
- int **id**
- int **nbRef**
- QMap< QString, int > **aParams**
- QMap< QString, bool > **aFlags**
- QString **fileName**
- QDateTime **lastEdit**
- QDateTime **lastChildEdit**

10.27.1 Detailed Description

The GameObject class is the base class for every part of games.

Each instance is identified by a game-wide unique identifier.

Object edition notification mechanism

To make the edition easier, each GameObject contains two QDateTime values :

- The most recent edition time, which is updated by the touch method
- The most recent chidl edition time, also updated by the touch method

Note

If the changes that are made in the object have to be detected by display/edition widgets, the touch function should be called.
To prevent the notification chain to be broken, the existing objects should always have a parent (except for the root object). This can be acheived using the init or setParent method, when the parent have not been given in the constructor. (see object.h for details)

References count

Todo

10.27.2 Constructor & Destructor Documentation

10.27.2.1 GameObject()

```
GameObject::GameObject (
            Game * g = nullptr,
            GameObject * parent = nullptr )
```

Constructs a new GameObject with parent `parent` and the reference to the game `g`.

Note

If these objects cannot be given to the constructor (case of an array of objects), the init method must be called after the creation to make the GameObject valid.

10.27.3 Member Function Documentation

10.27.3.1 flags()

```
QList<QString> GameObject::flags ( ) const  [inline]
```

Returns the list of the registered flags

See also

getFlag, setFlag, params

10.27.3.2 getFlag()

```
bool GameObject::getFlag (
            const QString & f ) const  [inline]
```

Returns the value of the `f` flag.

Note

If the requested parameter does not exists, a `false` value is returned, and the flags map stay unchanged

See also

flags, hasFlag, setFlag, getParam

10.27.3.3 getParam()

```
int GameObject::getParam (
            const QString & p ) const  [inline]
```

Returns the value of the p parameter.

Note

If the requested parameter does not exists, a null value is returned, and the parameters map stay unchanged

See also

params, hasParam, setParam, getFlag

10.27.3.4 hasFlag()

```
bool GameObject::hasFlag (
            const QString & f ) const  [inline]
```

Returns true if the falg f is register in the object's flags.

See also

getFlag, setFlag, hasParam

10.27.3.5 hasParam()

```
bool GameObject::hasParam (
            const QString & p ) const  [inline]
```

Returns true if the parameter is register in the object's parameters.

See also

getParam, setParam, hasFlag

10.27.3.6 ident()

```
int GameObject::ident ( ) const  [inline]
```

Returns the name wide unique identifier of the object.

See also

init, GameObject

10.27.3.7 init()

```
void GameObject::init (
            Game * g,
            GameObject * p )
```

Initialises the object in case it had been construct with a NULL pointer (array of objects)

See also

isValid, GameObject

10.27.3.8 isValid()

```
virtual bool GameObject::isValid ( ) const  [inline], [virtual]
```

Returns true if the object has been initialised

See also

init, GameObject

Reimplemented in Image.

10.27.3.9 lastChildrenEdition()

```
const QDateTime& GameObject::lastChildrenEdition ( ) const  [inline]
```

Returns the last time one of the object's children has been modified.

See also

lastEdition, lastInternalEdition

10.27.3.10 lastEdition()

```
const QDateTime& GameObject::lastEdition ( ) const  [inline]
```

Returns the last time a modification was made on the object or one of its children.

See also

lastInternalEdition, lastChildrenEdition

10.27.3.11 lastInternalEdition()

```
const QDateTime& GameObject::lastInternalEdition ( ) const  [inline]
```

Returns the last edition time.

See also

lastEdition, lastChildrenEdition

10.27.3.12 params()

```
QList<QString> GameObject::params ( ) const  [inline]
```

Returns the list of the registered paramters

See also

getParam, setParam, flags

10.27.3.13 setFlag()

```
void GameObject::setFlag (
            const QString & f,
            bool v )  [inline]
```

Set the value of the `f` flag.

Note

If the requested flag does not exists, it is created.

See also

flags, hasFlag, getFlag, setParam

10.27.3.14 setParam()

```
void GameObject::setParam (
            const QString & p,
            int v )  [inline]
```

Set the value of the `p` parameter.

Note

If the requested parameter does not exists, it is created.

See also

params, hasParam, getParam, setFlag

10.27.3.15 touch()

```
void GameObject::touch ( )
```

Notify the object and its parent that it has been modified.

See also

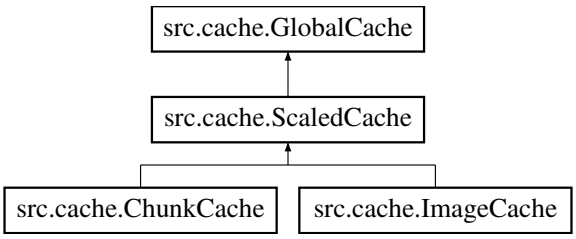
lastInternalEdition, lastChildrenEdition, lastEdition.

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

- src/editor/Game/object.h
- src/editor/Game/object.cpp

10.28 src.cache.GlobalCache Class Reference

Inheritance diagram for src.cache.GlobalCache:



Public Member Functions

- def **__init__** (self)
- def **set** (cls, key, value)
- def **get** (cls, key)
- def **clear** (cls)
- def **keys** (cls)
- def **show** (cls)

Public Attributes

- **cache**

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

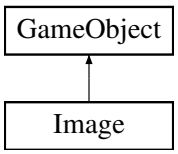
- src/cache.py

10.29 Image Class Reference

The Image class stores an external file in a QImage, and gives each image ressources a unique identifier.

`#include <object.h>`

Inheritance diagram for Image:



Public Member Functions

- **Image** (Game *g, GameObject *parent, const QString &fileName)
- bool isValid () const
- const QImage & **image** () const
- const QSize **size** () const
- void **update** ()

Additional Inherited Members

10.29.1 Detailed Description

The Image class stores an external file in a QImage, and gives each image ressources a unique identifier.

10.29.2 Member Function Documentation

10.29.2.1 isValid()

```
bool Image::isValid ( ) const  [inline], [virtual]
```

Returns true if the object has been initialised

See also

init, GameObject

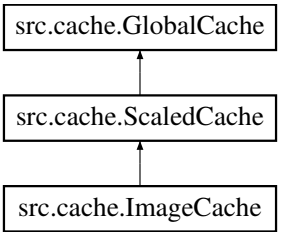
Reimplemented from GameObject.

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

- src/editor/Game/object.h
- src/editor/Game/object.cpp

10.30 src.cache.ImageCache Class Reference

Inheritance diagram for src.cache.ImageCache:



Public Member Functions

- def **init_image_from_file** (cls, image)
- def **init_image_from_surface** (cls, key, image)
- def **get_image** (cls, image, scale=1)
- def **init_elts** (cls, elts)
- def **init_images** (cls, images)
- def **add_scaled** (cls, image, scale=1)

Static Public Attributes

- dictionary **cache** = {}

Additional Inherited Members

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

- src/cache.py

10.31 src.interactions.Interaction Class Reference

Public Member Functions

- def **__init__** (self)
- def **load** (self, dat)

Public Attributes

- **target**
- **type**
- **key**
- **event**

10.31.1 Detailed Description

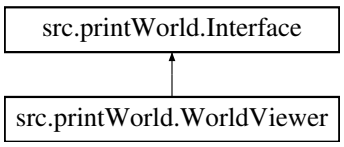
```
Représente une connection entre une entrée utilisateur
    et un événement à déclencher sur une cible
```

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

- src/interactions.py

10.32 src.printWorld.Interface Class Reference

Inheritance diagram for src.printWorld.Interface:

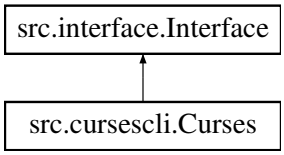


The documentation for this class was generated from the following file:

- src/printWorld.py

10.33 src.interface.Interface Class Reference

Inheritance diagram for src.interface.Interface:



Public Member Functions

- def **__init__** (self, w)
- def **update** (self)
- def **repaint** (self)
- def **end** (self)
- def **getEvent** (self)

Public Attributes

- **world**
- **lastUpdate**

10.33.1 Detailed Description

```
UI base-class, can be used as a dummy interface
```

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

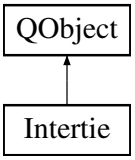
- src/interface.py

10.34 Intertie Class Reference

The Intertie class provide int that move smoothly from their value to an objective.

```
#include <intertie.h>
```

Inheritance diagram for Intertie:



Public Slots

- void **setValue** (int v, bool inert=true)
- void **setMaximumSpeed** (int vM)
- void **setAcceleration** (int a)
- void **setUpdateInterval** (int d)

Signals

- void **modificationFinished** (int)
- void **valueChanged** (int)

Public Member Functions

- **Intertie** (QObject ∗parent=0)
- int **value** () const
- void **link** (QObject ∗obj, const char ∗prop)

10.34.1 Detailed Description

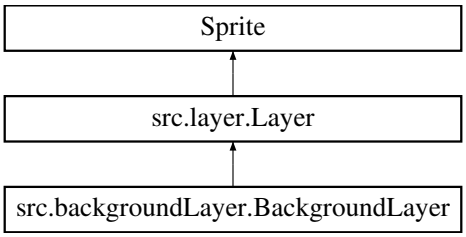
The Intertie class provide int that move smoothly from their value to an objective.

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

- src/editor/GUI/Tabs/Docks/intertie.h
- src/editor/GUI/Tabs/Docks/intertie.cpp

10.35 src.layer.Layer Class Reference

Inheritance diagram for src.layer.Layer:



Public Member Functions

- def **__init__** (self, size)
- def **render** (self, surf)
- def **update** (self)
- def **get_cell_pos** (self, c_line, c_col, size_image)
- def **make_grid** (self, img_set, cell_ids)

Public Attributes

- **cells**
- **g_width**
- **g_height**
- **size**

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

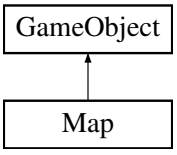
- src/layer.py

10.36 Map Class Reference

The Map class.

```
#include <map.h>
```

Inheritance diagram for Map:



Public Member Functions

- **Map** (Game ∗g, GameObject ∗parent)
- **ParamGetter** (width) ParamGetter(height) QSize size() const
- void **setWidth** (int w)
- void **setHeight** (int h)
- void **resize** (int w, int h)
- Cell & **cell** (int i, int j) const
- Cell & **cell** (const QPoint &p) const
- void **selectAll** ()
- void **unSelectAll** ()
- void **confirmPreSelection** (bool add=true)
- void **clearPreSelection** ()

Additional Inherited Members

10.36.1 Detailed Description

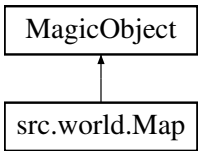
The Map class.

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

- src/editor/Game/map.h
- src/editor/Game/map.cpp

10.37 src.world.Map Class Reference

Inheritance diagram for src.world.Map:



Public Member Functions

- def **__init__** (self)
- def fill (self)

Public Attributes

- **cells**
- **cellsGrid**

10.37.1 Member Function Documentation

10.37.1.1 fill()

```
def src.world.Map.fill (
              self )
```

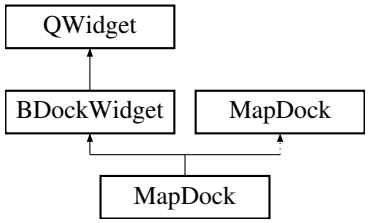
Complète les cases par défaut

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

- src/world.py

10.38 MapDock Class Reference

Inheritance diagram for MapDock:



Public Member Functions

- **MapDock** (QWidget ∗parent=0)
- void **updateGame** ()

Additional Inherited Members

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

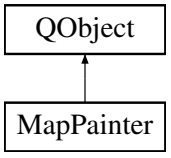
- src/editor/GUI/Tabs/mapdock.h
- src/editor/GUI/Tabs/mapdock.cpp

10.39 MapPainter Class Reference

The MapPainter class that can paint a Map using a QPainter.

```
#include <mappainter.h>
```

Inheritance diagram for MapPainter:



Public Types

- enum Element {
  Nothing = 0, CellBackground = 1, Grid = 2, CellSelection = 4,
  CellHighlighting = 8, Objects = 16, All = 31 }

  The Element enum discribes the different elements that can be render.

Signals

- void mapSizeChanged (QSize)
- void viewCenterChanged (QPoint)

Public Member Functions

- MapPainter (QObject ∗parent=0)
- MapPainter (Map ∗m, QObject ∗parent=0)
- void setPaintedElement (Element e, bool painted=true)
- void setPaintedElements (Element e)
- void setMap (Map ∗m)
- void paint (QPainter &p)
- const QImage & render ()
- RlCoords viewCenter () const
- void setViewCenter (RlCoords relativeCenter)
- void setViewCenter (double relativeCenterX, double relativeCenterY)
- void setViewCenterQuiet (double x, double y)
- double scale () const
- void setScale (double scale)
- void setScaleDomain (double scaleMin, double scaleMax)
- bool setHighlightedCell (const ClCoords &p)
- bool setHighlightedCell (int i, int j)
- QPoint highlightedCell () const
- bool hasHighlightedCell () const
- bool isCell (const ClCoords &c) const
- void resize (QSize s)
- void resize (int wi, int he)
- QSize size () const
- void zoom (double factor, QPointF fixedPoint)
- QPair< bool, bool > move (PxCoords delta, QPointF center)
- QSize virtualSize () const
- PxCoords ptToPxl (PtCoords p) const
- PtCoords pxlToPt (PxCoords p) const
- PtCoords cooToPt (ClCoords p) const
- ClCoords ptToCoo (PtCoords p) const
- PxCoords cooToPxl (ClCoords p) const
- ClCoords pxlToCoo (PxCoords p) const
- PtCoords indToPt (int i, int j) const
- const QColor & selectedCellColor () const
- const QColor & preSelectedCellColor () const
- void setSelectedCellColor (const QColor &c)
- void setPreSelectedCellColor (const QColor &c)

10.39.1 Detailed Description

The MapPainter class that can paint a Map using a QPainter.

The class take charge of the different ratios of the map rendering and the area in which it will be rendered.

Note

The view is kept updated with the associated map at each paint or render call. It is thus just needed to call one of these functions to update the view after a modification.

To ensure a type checking security about the different types of coordinates that are used, four different types that inherit from QPointF are used : RlCoords, ClCoords, PtCoords and PxCoords

10.39.2 Member Enumeration Documentation

10.39.2.1 Element

```
enum MapPainter::Element
```

The Element enum discribes the different elements that can be render.

This includes both map's objects and user interaction and editing elements.

Element value can be used as flags using the operators |, &, ^.

See also

Cell, CellType

Enumerator

Nothing	Represent no elements
CellBackground	The bacground associated to the cell type
Grid	A thin grid that separate cells
CellSelection	Graphical information about the selection state
CellHighlighting	Graphical visualisation of the cells the mouse is over
Objects	The objects that lay on the cells
All	Represent all elements

10.39.3 Constructor & Destructor Documentation

10.39.3.1 MapPainter() [1/2]

```
MapPainter::MapPainter (
            QObject * parent = 0 )
```

Constructs a new MapPainter with a default size of (42,42).

10.39.3.2 MapPainter() [2/2]

```
MapPainter::MapPainter (
            Map * m,
            QObject * parent = 0 )
```

Constructs a new MapPainter with a default size of (42,42), and loads the map m.

10.39.4 Member Function Documentation

10.39.4.1 cooToPt()

```
PtCoords MapPainter::cooToPt (
            ClCoords p ) const
```

Converts cells indice to virtual point coordinates

10.39.4.2 cooToPxl()

```
PxCoords MapPainter::cooToPxl (
            ClCoords p ) const
```

Convenient function equivalent to ptToPxl(cooToPt(p))

10.39.4.3 hasHighlightedCell()

```
bool MapPainter::hasHighlightedCell ( ) const
```

Returns true if a cell is highligthed.

See also

highlightedCell, setHighlightedCell

10.39.4.4 highlightedCell()

```
QPoint MapPainter::highlightedCell ( ) const
```

Returns the integer index of the cell the is highlighted.

See also

setHighlightedCell, hasHighlightedCell

10.39.4.5 indToPt()

```
PtCoords MapPainter::indToPt (
            int i,
            int j ) const
```

Converts to coordinates

10.39.4.6 isCell()

```
bool MapPainter::isCell (
            const ClCoords & c ) const
```

Returns true if the coordinate `c` correspond to a cell.

10.39.4.7 mapSizeChanged

```
void MapPainter::mapSizeChanged (
            QSize  )  [signal]
```

This signal is emitted when the total size of the map's view change.

It appends mainly during scale change and modification on the map (resize, angles setting, ...).

10.39.4.8 move()

```
QPair< bool, bool > MapPainter::move (
            PxCoords delta,
            QPointF center )
```

Change the center position from the given center and a pixel difference.

The return value indicate if the expected center was valid (regarding x or y coordinate).

See also

setViewCenter

10.39.4.9 paint()

```
void MapPainter::paint (
            QPainter & p )
```

Draws the map in the QPaintDevice.

See also

render

10.39.4.10 preSelectedCellColor()

```
const QColor & MapPainter::preSelectedCellColor ( ) const
```

Returns the color of the filter that is applied to pre-selected cells.

See also

setPreSelectedCellColor, selectedCellColor

10.39.4.11 ptToCoo()

```
ClCoords MapPainter::ptToCoo (
            PtCoords p ) const
```

Converts virtual point to cell indice

10.39.4.12 ptToPxl()

```
PxCoords MapPainter::ptToPxl (
            PtCoords p ) const
```

Converts virtual point to real pixel coordinates

10.39.4.13 pxlToCoo()

```
ClCoords MapPainter::pxlToCoo (
            PxCoords p ) const
```

Convenient function equivalent to ptToCoo(pxlToPt(p))

10.39.4.14 pxlToPt()

```
PtCoords MapPainter::pxlToPt (
            PxCoords p ) const
```

Converts real pixel to virtual point coordinates

10.39.4.15 render()

```
const QImage & MapPainter::render ( )
```

Provides a QImage with a view of the map.

See also

paint

10.39.4.16 resize() [1/2]

```
void MapPainter::resize (
            QSize s )
```

Change the size of the view, *ie* the rectangle in which the map will be render.

See also

size

10.39.4.17 resize() [2/2]

```
void MapPainter::resize (
            int wi,
            int he )
```

This is an overload function, see resize

10.39.4.18 scale()

```
double MapPainter::scale ( ) const
```

Returns the current scale of the view.

See also

setScale

10.39.4.19 selectedCellColor()

```
const QColor & MapPainter::selectedCellColor ( ) const
```

Returns the color of the filter that is applied to selected cells.

See also

setSelectedCellColor, preSelectedCellColor

10.39.4.20 setHighlightedCell() [1/2]

```
bool MapPainter::setHighlightedCell (
            const ClCoords & p )
```

Sets the highligthed cell to the one at the ClCoords p

See also

highlightedCell, hasHighlightedCell

10.39.4.21 setHighlightedCell() [2/2]

```
bool MapPainter::setHighlightedCell (
            int i,
            int j )
```

This is an overload function, see setViewCenter.

10.39.4.22 setMap()

```
void MapPainter::setMap (
            Map * m )
```

Loads the map, computing the new size of the view area.

10.39.4.23 setPaintedElement()

```
void MapPainter::setPaintedElement (
            MapPainter::Element e,
            bool painted = true )
```

Enables or disables the render of an element.

See also

setPaintedElements

10.39.4.24 setPaintedElements()

```
void MapPainter::setPaintedElements (
            Element e )
```

Sets the rendered elements.

See also

setPaintedElement

10.39.4.25 setPreSelectedCellColor()

```
void MapPainter::setPreSelectedCellColor (
            const QColor & c )
```

Sets the color of the filter that is applied to pre-selected cells.

See also

preSelectedCellColor, setSelectedCellColor

10.39.4.26 setScale()

```
void MapPainter::setScale (
            double scale )
```

Sets the current view scale. This closest value in the scale domain will be used.

See also

scale, setScaleDomain

10.39.4.27 setScaleDomain()

```
void MapPainter::setScaleDomain (
            double scaleMin,
            double scaleMax )
```

Sets the valid values for the scale.

See also

scale, setScale

10.39.4.28 setSelectedCellColor()

```
void MapPainter::setSelectedCellColor (
            const QColor & c )
```

Sets the color of the filter that is applied to selected cells.

See also

selectedCellColor, setPreSelectedCellColor

10.39.4.29 setViewCenter() [1/2]

```
void MapPainter::setViewCenter (
            RlCoords relativeCenter )
```

Change the view center, using relative coordinates.

If the new center is invalid (the view exceed the map area), the closest valid center is used.

See also

viewCenter

10.39.4.30 setViewCenter() [2/2]

```
void MapPainter::setViewCenter (
            double relativeCenterX,
            double relativeCenterY )
```

This is an overload function, see setViewCenter.

10.39.4.31 setViewCenterQuiet()

```
void MapPainter::setViewCenterQuiet (
            double x,
            double y )
```

does the same as setViewCenter, without emitting the signal viewCenterChanged to avoid event loop.

10.39.4.32 size()

```
QSize MapPainter::size ( ) const
```

Return the size of the rectangle in which the map is render. This is also the size of the image returned by render.

See also

resize

10.39.4.33 viewCenter()

```
RlCoords MapPainter::viewCenter ( ) const
```

Return the relative coordinates of the current view center.

See also

setViewCenter

10.39.4.34 viewCenterChanged

```
void MapPainter::viewCenterChanged (
            QPoint  )  [signal]
```

This signal is emitted when the center of the map change.

It appends mainly during moving on the view and zooming.

10.39.4.35 virtualSize()

```
QSize MapPainter::virtualSize ( ) const
```

Computes the total size of the image of the map

10.39.4.36 zoom()

```
void MapPainter::zoom (
            double factor,
            QPointF fixedPoint )
```

Multiplying the scale of the view by factor, trying to leave the point center at the same position.

Note

It is not always possible to keep this point fixed, in particulary when the view is resulting view would exceed the map region. In that case, the center is adapt to minimise the difference.

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

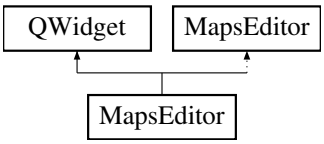
- src/editor/Game/mappainter.h
- src/editor/Game/mappainter.cpp

10.40 MapsEditor Class Reference

The MapsEditor class is the tab offering map editing facilities.

```
#include <mapseditor.h>
```

Inheritance diagram for MapsEditor:



Public Slots

- void **updateGame** ()

Public Member Functions

- **MapsEditor** (QWidget *parent=0)
- void **setGame** (Game *g)

10.40.1 Detailed Description

The MapsEditor class is the tab offering map editing facilities.

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

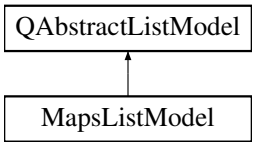
- src/editor/GUI/Tabs/mapseditor.h
- src/editor/GUI/Tabs/mapseditor.cpp

10.41 MapsListModel Class Reference

The MapsListModel class provides a presentation class for the Qt Model-View framework.

`#include <mapslistmodel.h>`

Inheritance diagram for MapsListModel:



Public Slots

- void **update** ()

Public Member Functions

- **MapsListModel** (World ∗w, QObject ∗parent=0)
- int **rowCount** (const QModelIndex &parent) const Q_DECL_OVERRIDE
- QVariant **data** (const QModelIndex &index, int role) const Q_DECL_OVERRIDE
- bool **insertRows** (int row, int count, const QModelIndex &parent) Q_DECL_OVERRIDE
- bool **removeRows** (int row, int count, const QModelIndex &parent) Q_DECL_OVERRIDE

10.41.1 Detailed Description

The MapsListModel class provides a presentation class for the Qt Model-View framework.

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

- src/editor/Game/mapslistmodel.h
- src/editor/Game/mapslistmodel.cpp

10.42 src.cursescli.MapViewer Class Reference

Public Member Functions

- def **__init__** (self, m, w)
- def **display** (self, win)

Public Attributes

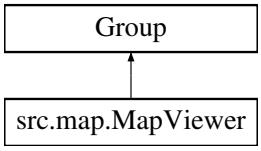
- **map**
- **world**
- **cellViews**

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

- src/cursescli.py

10.43 src.map.MapViewer Class Reference

Inheritance diagram for src.map.MapViewer:



Public Member Functions

- def **__init__** (self, currentMap, w)
- def **load_chunks** (self, bg)
- def **make_walkables** (self, bg)
- def **zoom** (self, dz)
- def **move** (self, dx, dy)
- def **render** (self)
- def **onscreen_chunks** (self)
- def **update** (self)
- def **update_chunks** (self)
- def **propagate_trigger** (self, event)
- def **compute_path** (self, start_pos, end_pos)
- def **load_bg** (self, path)

Public Attributes

- **map**
- **world**
- **cm_height**
- **width**
- **height**
- **screen_cgwidth**
- **screen_cgheight**
- **walkablesGraph**
- **last_curr_chunk**
- **current_chunk**
- **pos_offset**
- **chunk_pos**
- **chunks_state**

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

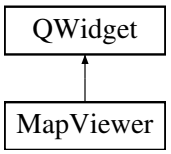
- src/map.py

10.44 MapViewer Class Reference

The MapViewer class provides a widget to display and edit a Map using a MapPainter.

`#include <mapviewer.h>`

Inheritance diagram for MapViewer:



Public Types

- enum SelectionMode { PencilSelection, RectangleSelection, RegionSelection }

  The SelectionMode enum describes the different behaviour the cell selection can have.

Public Slots

- void **updateRequest** ()

Signals

- void **viewSizeChanged** (QSize)
- void **selectionChanged** ()

Public Member Functions

- **MapViewer** (QWidget *parent=0)
- void **setMap** (Map *m)
- void **updateMap** ()
- MapPainter & **mapPainter** ()
- void **setSelectionMode** (SelectionMode m)
- SelectionMode **selectionMode** () const

10.44.1 Detailed Description

The MapViewer class provides a widget to display and edit a Map using a MapPainter.

Several selection modes are available. Combined with the `Ctrl` and `Shift` modifiers, a colossal amount of selection possibilities is offered. See SelectionMode for more information.

10.44.2 Member Enumeration Documentation

10.44.2.1 SelectionMode

`enum MapViewer::SelectionMode`

The SelectionMode enum describes the different behaviour the cell selection can have.

The selection's behaviour in based on to parameters :

- The keyboard modifiers that are pressed during selection.
- The current selection mode

If the `Ctrl` modifier is pressed, the past selected cells stay selected otherwise, they are all unselected

If the `Shift` modifier is pressed, the selection is inverted.

Three modes of selection exists :

Enumerator

PencilSelection	The cells under the cursor are selected
RectangleSelection	The cells inside the rectangle defined by the clicked cell and the cell under the cursor are selected
RegionSelection	The cells inside the region drawn by cursor's moves are selected

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

- src/editor/GUI/Tabs/mapviewer.h
- src/editor/GUI/Tabs/mapviewer.cpp

10.45 src.network.NetworkClient Class Reference

Public Member Functions

- def **__init__** (self, handle)
- def askEntity (self, ent)
- def **connect** (self)
- def run (self)
- def **send** (self, m)
- def sendEvent (self, obj, event)
- def **kill** (self)

Public Attributes

- **handle**
- **alive**
- **writer**

10.45.1 Detailed Description

```
This class manages the network activities of the client.
It allows the client to send messages (describing events) to the server.
```

10.45.2 Member Function Documentation

10.45.2.1 askEntity()

```
def src.network.NetworkClient.askEntity (
              self,
              ent )
```

```
Ask for an entity
```

10.45.2.2 run()

```
def src.network.NetworkClient.run (
              self )
```

```
Main loop of the client's network task.  After connecting the socket
to the server, wait for orders and handle them immediately until
connection ends.
```

10.45.2.3 sendEvent()

```
def src.network.NetworkClient.sendEvent (
              self,
              obj,
              event )
```

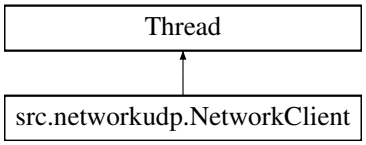
```
Send an event to the server in a formatted way, specifying the id
of the object to affect.
```

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

- src/network.py

10.46 src.networkudp.NetworkClient Class Reference

Inheritance diagram for src.networkudp.NetworkClient:



Public Member Functions

- def **__init__** (self, handle)
- def **run** (self)
- def **send** (self, m)
- def **sendEvent** (self, obj, eve)
- def **kill** (self)

Public Attributes

- **handle**
- **soc**
- **alive**

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

- src/networkudp.py

10.47 src.network.NetworkServer Class Reference

Public Member Functions

- def __init__ (self, handle, loop)
- def waitForClients (self, n)
- def **connect** (self, reader, writer)
- def run (self)
- def sendOrder (self, ident, order)
- def **broadcast** (self, m)

Public Attributes

- **handle**
- **loop**
- **alive**
- **connections**
- **server**

10.47.1 Detailed Description

```
This class is the task of the server that manages clients connections on
his port.  It keeps the list of connected clients and provides method to
broadcast messages to all the clients.
```

10.47.2 Constructor & Destructor Documentation

10.47.2.1 __init__()

```
def src.network.NetworkServer.__init__ (
              self,
              handle,
              loop )
```

```
The server listen on the port specified in const.py.
```

10.47.3 Member Function Documentation

10.47.3.1 run()

```
def src.network.NetworkServer.run (
              self )
```

```
When a client tries to connect, the server adds him to the list and
creates a new task managing communications with this client.
```

10.47.3.2 sendOrder()

```
def src.network.NetworkServer.sendOrder (
              self,
              ident,
              order )
```

```
Send an order to all connected clients by broadcasting messages to
all threads in the list.
```

10.47.3.3 waitForClients()

```
def src.network.NetworkServer.waitForClients (
              self,
              n )
```

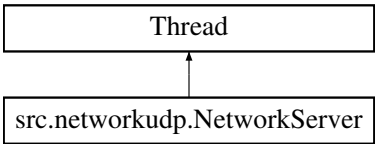
```
Block until n clients are connected
```

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

- src/network.py

10.48 src.networkudp.NetworkServer Class Reference

Inheritance diagram for src.networkudp.NetworkServer:



Public Member Functions

- def **__init__** (self, handle)
- def **waitForClients** (self, n)
- def **run** (self)
- def **sendOrder** (self, ident, order)
- def **broadcast** (self, m)
- def **kill** (self)

Public Attributes

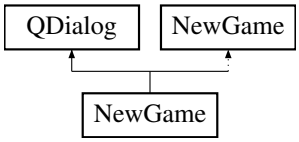
- **handle**
- **soc**
- **alive**
- **addr**

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

- src/networkudp.py

10.49 NewGame Class Reference

Inheritance diagram for NewGame:



Public Member Functions

- **NewGame** (QWidget *parent=0)
- QString **name** () const
- QString **folder** () const
- bool **createFolder** () const

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

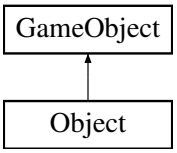
- src/editor/GUI/newgame.h
- src/editor/GUI/newgame.cpp

10.50 Object Class Reference

The Object class.

`#include <object.h>`

Inheritance diagram for Object:



Public Member Functions

- **Object** (Game *g, GameObject *parent)

Additional Inherited Members

10.50.1 Detailed Description

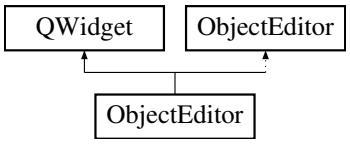
The Object class.

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

- src/editor/Game/object.h
- src/editor/Game/object.cpp

10.51 ObjectEditor Class Reference

Inheritance diagram for ObjectEditor:



Public Member Functions

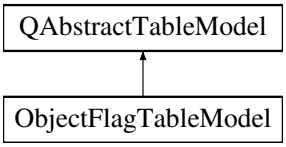
- **ObjectEditor** (QWidget ∗parent=0)
- void **setGame** (Game ∗g)

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

- src/editor/GUI/Tabs/objecteditor.h
- src/editor/GUI/Tabs/objecteditor.cpp

10.52 ObjectFlagTableModel Class Reference

Inheritance diagram for ObjectFlagTableModel:



Public Member Functions

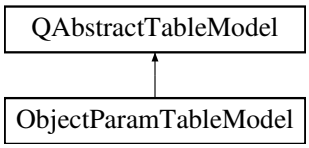
- **ObjectFlagTableModel** (GameObject ∗obj, QObject ∗parent=0)
- int **rowCount** (const QModelIndex &parent) const Q_DECL_OVERRIDE
- int **columnCount** (const QModelIndex &parent) const Q_DECL_OVERRIDE
- QVariant **data** (const QModelIndex &index, int role) const Q_DECL_OVERRIDE
- Qt::ItemFlags **flags** (const QModelIndex &index) const
- bool **setData** (const QModelIndex &index, const QVariant &value, int role)
- QVariant **headerData** (int section, Qt::Orientation orientation, int role) const

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

- src/editor/Game/mapslistmodel.h
- src/editor/Game/mapslistmodel.cpp

10.53 ObjectParamTableModel Class Reference

Inheritance diagram for ObjectParamTableModel:



Public Member Functions

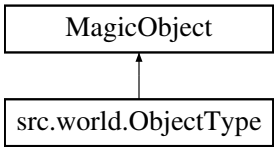
- **ObjectParamTableModel** (GameObject ∗obj, QObject ∗parent=0)
- int **rowCount** (const QModelIndex &parent) const Q_DECL_OVERRIDE
- int **columnCount** (const QModelIndex &parent) const Q_DECL_OVERRIDE
- QVariant **data** (const QModelIndex &index, int role) const Q_DECL_OVERRIDE
- Qt::ItemFlags **flags** (const QModelIndex &index) const
- bool **setData** (const QModelIndex &index, const QVariant &value, int role)
- QVariant **headerData** (int section, Qt::Orientation orientation, int role) const

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

- src/editor/Game/mapslistmodel.h
- src/editor/Game/mapslistmodel.cpp

10.54 src.world.ObjectType Class Reference

Inheritance diagram for src.world.ObjectType:



Public Member Functions

- def **__init__** (self, typ=MagicObject)
- def create (self)
- def **__str__** (self)

Public Attributes

- **type**

10.54.1 Detailed Description

```
Les types d'objets (au sens informatique)
```

10.54.2 Member Function Documentation

10.54.2.1 create()

```
def src.world.ObjectType.create (
              self )
```

```
Instanticiation d'un objet à partir du type
```

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

- src/world.py

10.55 Options Struct Reference

The Options class provides session-independant options and preferences.

```
#include <options.h>
```

Public Member Functions

- template<class T >
  T load (QString group, QString opt)
- template<class T >
  void save (QString group, QString opt, T val)
- template<class T >
  void setDefault (QString group, QString opt, T val)
- bool isAdjustable (QString group, QString opt, bool adjust=true)
- void setAdjustable (QString group, QString opt, bool adjust)
- void reinitialise (QString group="")

Static Public Member Functions

- static Options & options ()

10.55.1 Detailed Description

The Options class provides session-independant options and preferences.

Features

The Options class aims at storing global options, that are available at any place in the entire application. The preferences are permanantly stored and remain bewteen the separate sessions and windows.

Two sorts of options exist :

- The adjustable ones : the value of the option change when save is called.
- The non-adjustable ones : the value of the option doesn't change is save is called, the option must be modified with .

The sort of option can be set with the setAdjustable function.

Design

The Options class is designed following the **Singleton design pattern**. The constructor is thus private, and the only Options instance is created at the first call of options.

QSetting is used internaly, see Qt's documentation for details about the storing mechanisms.

Reading and writting existing options

To read or write options, the Options instance must be retreived, using the options function, then the load and save functions can be called.

Adding options

To add a new option, it is only needed to add a default hard coded value, uisng the Default and DefaultF macros in the Options constructor.

It is strongly advice to use macro to define new options group (see WIN, for an example).

Note

To use Options with custom types (other than C++ standard), the defining header of the type must be included at the top of the options.h file, in order to be used in the default value declaration.

Warning

Pointer objects are not supported, and the result of the use of the Options class with such values is undefined.

See also

options.h

10.55.2 Member Function Documentation

10.55.2.1 isAdjustable()

```
bool Options::isAdjustable (
            QString group,
            QString opt,
            bool adjust = true )
```

Returns `true` if the option defined by its group and name is adjustable, `false` elsewhere.

See also

setAdjustable

10.55.2.2 load()

```
template<class T >
T Options::load (
            QString group,
            QString opt )  [inline]
```

Reads an option defined by its group and name.

Note

The template argument must be precised since it can't be deduced from arguments' types.

Warning

If the option type and the reading type mismatch, an default null value is returned.

See also

save

10.55.2.3 options()

```
Options & Options::options ( )  [static]
```

Returns the unique Options instance.

10.55.2.4 reinitialise()

```
void Options::reinitialise (
            QString group = "" )
```

Clear all options from the group. If `group == ""`, all entries are deleted.

10.55.2.5 save()

```
template<class T >
void Options::save (
            QString group,
            QString opt,
            T val )  [inline]
```

Writes the new value of the options defined by its group and name, if the option is adjustable. See Options for details about options types.

Note

The template argument can be omitted since it would be deduced from the value argument.

See also

setDefault, load

10.55.2.6 setAdjustable()

```
void Options::setAdjustable (
            QString group,
            QString opt,
            bool adjust )
```

Sets if the option defined by its group and name is adjustable.

See also

isAdjustable

10.55.2.7 setDefault()

```
template<class T >
void Options::setDefault (
            QString group,
            QString opt,
            T val )  [inline]
```

Writes the new value of the options defined by its group and name, whatever the option type is. See Options for details about options types.

Note

The template argument can be omitted since it would be deduced from the value argument.

See also

save, load

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

- src/editor/GUI/options.h
- src/editor/GUI/options.cpp

10.56 src.orders.Order Class Reference

Public Member Functions

- def **__init__** (self)
- def **__getattr__** (self, attr)
- def **__setattr__** (self, attr, val)
- def **copy** (self)
- def load (self, dat, named)
- def toBytes (self)
- def fromBytes (self, b)

Public Attributes

- **type**
- **args**

Static Public Attributes

- list **params** = [None] ∗ (len(OrderType)+1)

10.56.1 Detailed Description

```
Représente une modification à apporter au monde
```

10.56.2 Member Function Documentation

10.56.2.1 fromBytes()

```
def src.orders.Order.fromBytes (
              self,
              b )
```

```
Récupère l'ordre à partir d'un bytes réseau
```

10.56.2.2 load()

```
def src.orders.Order.load (
              self,
              dat,
              named )
```

```
Initialise l'ordre avec une structure provenant d'un Xml
```

10.56.2.3 toBytes()

```
def src.orders.Order.toBytes (
              self )
```

Bytes pour envoyer l'ordre sur le réseau

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

- src/orders.py

10.57 src.orders.OrderDispatcher Class Reference

Public Member Functions

- def **__init__** (self, world, handle, timer)
- def treat (self, emitter, order)

Public Attributes

- **world**
- **handle**
- **timer**

10.57.1 Detailed Description

Traite les ordres pour le client ou le serveur

10.57.2 Member Function Documentation

10.57.2.1 treat()

```
def src.orders.OrderDispatcher.treat (
              self,
              emitter,
              order )
```

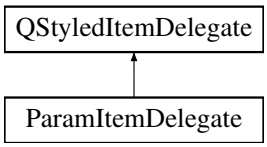
Traite un ordre et renvoie l'éventuel ordre à retransmettre

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

- src/orders.py

10.58 ParamItemDelegate Class Reference

Inheritance diagram for ParamItemDelegate:



Public Member Functions

- **ParamItemDelegate** (QObject ∗parent=nullptr)
- QWidget ∗ **createEditor** (QWidget ∗parent, const QStyleOptionViewItem &option, const QModelIndex &index) const
- void **setEditorData** (QWidget ∗editor, const QModelIndex &index) const
- void **updateEditorGeometry** (QWidget ∗editor, const QStyleOptionViewItem &option, const QModelIndex &index) const
- void **setModelData** (QWidget ∗editor, QAbstractItemModel ∗model, const QModelIndex &index) const

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

- src/editor/GUI/Tabs/objecteditor.h
- src/editor/GUI/Tabs/objecteditor.cpp

10.59 src.tools.Perf Class Reference

Public Member Functions

- def **__init__** (self)
- def tic (self)
- def toc (self)
- def show (self)

Public Attributes

- **num**
- **avg**
- **min**
- **max**
- **t**

10.59.1 Detailed Description

```
Calcule les performances d'un morceau de code
```

10.59.2 Member Function Documentation

10.59.2.1 show()

```
def src.tools.Perf.show (
              self )
```

```
Affiche le rapport
```

10.59.2.2 tic()

```
def src.tools.Perf.tic (
              self )
```

```
À lancer avant la fonction
```

10.59.2.3 toc()

```
def src.tools.Perf.toc (
              self )
```

```
À lancer après la fonction
```

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

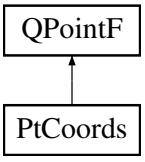
- src/tools.py

10.60 PtCoords Class Reference

The PtCoords class describe positions with virtual point coordinates.

```
#include <mappainter.h>
```

Inheritance diagram for PtCoords:



Public Member Functions

- **PtCoords** (qreal x, qreal y)
- **PtCoords** (const QPointF &p)

10.60.1 Detailed Description

The PtCoords class describe positions with virtual point coordinates.

Theses coordinates describe each point relatively to the view. They correspond to a point in the image containing the entire map.

See also

RlCoords, ClCoords, PxCoords

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

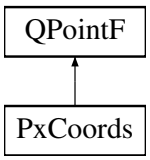
- src/editor/Game/mappainter.h

10.61 PxCoords Class Reference

The PxCoords class describe positions with real pixel coordinates.

```
#include <mappainter.h>
```

Inheritance diagram for PxCoords:



Public Member Functions

- **PxCoords** (qreal x, qreal y)
- **PxCoords** (const QPointF &p)
- **PxCoords** (const QPoint &p)
- **PxCoords** (int x, int y)

10.61.1 Detailed Description

The PxCoords class describe positions with real pixel coordinates.

Theses coordinates describe the pixel position.

See also

RlCoords, ClCoords, PtCoords

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

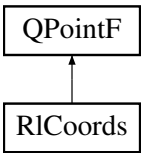
- src/editor/Game/mappainter.h

10.62 RlCoords Class Reference

The RlCoords class describe positions with relative coordinates.

`#include <mappainter.h>`

Inheritance diagram for RlCoords:



Public Member Functions

- **RlCoords** (qreal x, qreal y)
- **RlCoords** (const QPointF &p)

10.62.1 Detailed Description

The RlCoords class describe positions with relative coordinates.

Theses coordinates have values in $[0, 1]$, for every point in the view.

See also

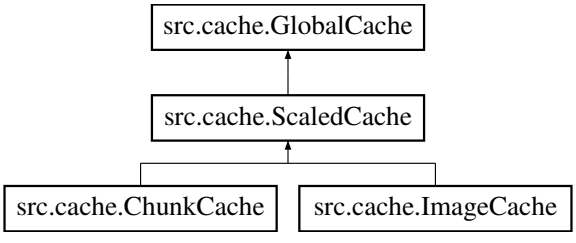
ClCoords PtCoords, PxCoords

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

- src/editor/Game/mappainter.h

10.63 src.cache.ScaledCache Class Reference

Inheritance diagram for src.cache.ScaledCache:



Public Member Functions

- def **add_scaled** (cls, elt, scale=1)
- def **remove** (cls, elt, scale=1)
- def **get_elt** (cls, elt, scale=1)
- def **free_cache** (cls)

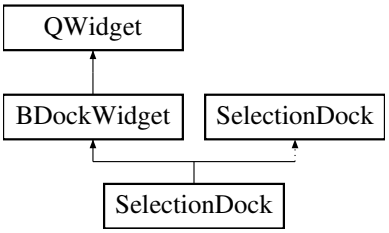
Additional Inherited Members

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

- src/cache.py

10.64 SelectionDock Class Reference

Inheritance diagram for SelectionDock:



Public Member Functions

- **SelectionDock** (MapViewer ∗mv, QWidget ∗parent=0)

Additional Inherited Members

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

- src/editor/GUI/Tabs/selectiondock.h
- src/editor/GUI/Tabs/selectiondock.cpp

10.65 src.server.Server Class Reference

Public Member Functions

- def **__init__** (self, path)
- def **__del__** (self)
- def **run** (self)
- def **main** (self)
- def **handleEvent** (self, emitter, event)

Public Attributes

- **loop**
- **net**
- **world**
- **actions**
- **timer**
- **orderDispatcher**
- **events**
- **pause**
- **coEntities**

10.65.1 Detailed Description

```
Classe principale du processus serveur, concilie réseau, monde, actions et timer
```

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

- src/server.py

10.66 src.network.ServerConnection Class Reference

Public Member Functions

- def **__init__** (self, reader, writer, handle, parent)
- def run (self)
- def **send** (self, m)
- def **end** (self)

Public Attributes

- **reader**
- **writer**
- **handle**
- **entity**
- **server**

10.66.1 Detailed Description

```
This thread manages the communications with one particular client (one
thread is created by client).
```

10.66.2 Member Function Documentation

10.66.2.1 run()

```
def src.network.ServerConnection.run (
              self )
```

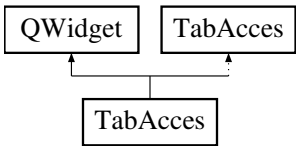
Wait for messages from the client and handle them immediately.

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

- src/network.py

10.67 TabAcces Class Reference

Inheritance diagram for TabAcces:



Signals

- void **activated** (int i)

Public Member Functions

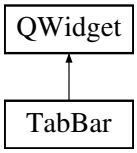
- **TabAcces** (int i, const QString &n, const QPixmap &p, QWidget ∗parent=0)
- void **setActive** (bool a)

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

- src/editor/GUI/tabacces.h
- src/editor/GUI/tabacces.cpp

10.68 TabBar Class Reference

Inheritance diagram for TabBar:



Public Slots

- void **setCurrentTab** (int t)

Signals

- void **currentTabChanged** (int)

Public Member Functions

- **TabBar** (QWidget ∗parent=0)
- void **addTabAcces** (const QString &n, const QPixmap &p)
- int **currentTab** () const
- void **setTabsEnabled** (bool e)

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

- src/editor/GUI/tabbar.h
- src/editor/GUI/tabbar.cpp

10.69 src.tools.Timer Class Reference

Public Member Functions

- def **__init__** (self, timeFunc=time)
- def add (self, time, func, args)
- def **run** (self)

Public Attributes

- **dt**
- **step**
- **heap**
- **pause**
- **count**
- **time**

10.69.1 Detailed Description

```
Déclenche des appels différés de couroutine
```

10.69.2 Member Function Documentation

10.69.2.1 add()

```
def src.tools.Timer.add (
              self,
              time,
              func,
              args )
```

```
Inscrit l'appel de func avec les arguments args
```

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

- src/tools.py

10.70 src.utils.WalkableGraph Class Reference

Public Member Functions

- def **__init__** (self, walkables)
- def **get_neighbors** (self, index)
- def **dist** (self, u, v)
- def **get_path** (self, source, dest)

Public Attributes

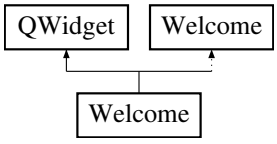
- **walkables**

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

- src/utils.py

10.71 Welcome Class Reference

Inheritance diagram for Welcome:



Public Member Functions

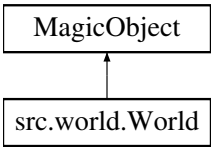
- **Welcome** (QWidget ∗parent=0)

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

- src/editor/GUI/Tabs/welcome.h
- src/editor/GUI/Tabs/welcome.cpp

10.72 src.world.World Class Reference

Inheritance diagram for src.world.World:



Public Member Functions

- def **__init__** (self)

Public Attributes

- **maps**
- **entities**
- **objects**

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

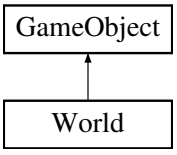
- src/world.py

10.73 World Class Reference

The World class.

```
#include <game.h>
```

Inheritance diagram for World:



Public Member Functions

- **World** (Game ∗g, GameObject ∗parent)
- **ObjectListD** (m, M, ap„ s, Map) ObjectListD(o

Public Attributes

- **O**
- **bject**
- **s**

Additional Inherited Members

10.73.1 Detailed Description

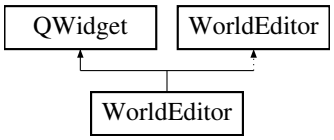
The World class.

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

- src/editor/Game/game.h
- src/editor/Game/game.cpp

10.74 WorldEditor Class Reference

Inheritance diagram for WorldEditor:



Public Member Functions

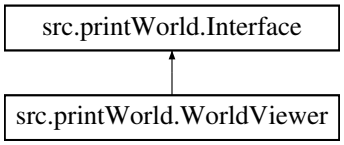
- **WorldEditor** (QWidget ∗parent=0)
- void **setGame** (Game ∗g)

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

- src/editor/GUI/Tabs/worldeditor.h
- src/editor/GUI/Tabs/worldeditor.cpp

10.75 src.printWorld.WorldViewer Class Reference

Inheritance diagram for src.printWorld.WorldViewer:



Public Member Functions

- def __init__ (self, w)
- def get_event (self)
- def end (self)
- def update (self)
- def render (self)
- def move (self, dx, dy)
- def move_char (self, ident, end_pos)
- def propagate_trigger (self, event)

Public Attributes

- **screen_size**
- **current_map**
- **main_char**
- **characters**

10.75.1 Constructor & Destructor Documentation

10.75.1.1 __init__()

```
def src.printWorld.WorldViewer.__init__ (
              self,
              w )
```

Initialize the pygame Interface

10.75.2 Member Function Documentation

10.75.2.1 end()

```
def src.printWorld.WorldViewer.end (
              self )
```

End the display

10.75.2.2 get_event()

```
def src.printWorld.WorldViewer.get_event (
              self )
```

Return current pygame events stack

10.75.2.3 move()

```
def src.printWorld.WorldViewer.move (
              self,
              dx,
              dy )
```

Move the current map by dx,dy, return the rectangle of
    modifications

10.75.2.4 move_char()

```
def src.printWorld.WorldViewer.move_char (
              self,
              ident,
              end_pos )
```

Move the entitie ident to cell end_pos

10.75.2.5 propagate_trigger()

```
def src.printWorld.WorldViewer.propagate_trigger (
              self,
              event )
```

Propagate event to next objects in the arborescence, here its the
    current map

10.75.2.6 render()

```
def src.printWorld.WorldViewer.render (
              self )
```

Return the new image to show on screen

10.75.2.7 update()

```
def src.printWorld.WorldViewer.update (
              self )
```

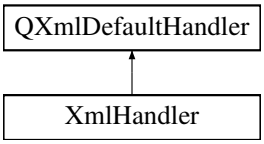
Update the view

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

- src/printWorld.py

10.76 XmlHandler Class Reference

Inheritance diagram for XmlHandler:



Public Member Functions

- **XmlHandler** (Game *g)
- bool **startElement** (const QString &, const QString &localName, const QString &, const QXmlAttributes &atts)
- bool **endElement** (const QString &, const QString &localName, const QString &)

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

- src/editor/Game/xmlhandler.h
- src/editor/Game/xmlhandler.cpp

Chapter 11

File Documentation

11.1 src/editor/Game/game.h File Reference

Definition of the Game and World classes.

```
#include "object.h"
#include "map.h"
```

Classes

- class World

  The World class.
- class Game

  The Game class gather the differents parts needed to describe a game.

11.1.1 Detailed Description

Definition of the Game and World classes.

11.2 src/editor/Game/map.h File Reference

Definition of the Map, Cell and CellType classes.

```
#include "object.h"
```

Classes

- class CellType

  The CellType class.
- class Cell

  The Cell class.
- class Map

  The Map class.

Macros

- #define forCells(i) int nbCell = width()∗height(); for(int i(0); i<nbCell; ++i)

11.2.1 Detailed Description

Definition of the Map, Cell and CellType classes.

11.2.2 Macro Definition Documentation

11.2.2.1 forCells

```
#define forCells(
              i ) int nbCell = width()*height(); for(int i(0); i<nbCell; ++i)
```

Usefull macro to set up a for on the cells

11.3 src/editor/Game/mappainter.h File Reference

Definition of the MapPainter class and other related classes to render maps.

```
#include "map.h"
#include "GUI/options.h"
```

Classes

- class RlCoords

  The RlCoords class describe positions with relative coordinates.
- class ClCoords

  The ClCoords class describe positions with cell coordinates.
- class PtCoords

  The PtCoords class describe positions with virtual point coordinates.
- class PxCoords

  The PxCoords class describe positions with real pixel coordinates.
- class MapPainter

  The MapPainter class that can paint a Map using a QPainter.

Macros

- #define **MINMAX**(a, x, b) std::min(std::max(a,x),b)

Functions

- MapPainter::Element operator| (MapPainter::Element a, MapPainter::Element b)

  The operator | is the flag OR operation.
- MapPainter::Element operator & (MapPainter::Element a, MapPainter::Element b)

  The operator & is the flag AND operation.
- MapPainter::Element operator^ (MapPainter::Element a, MapPainter::Element b)

  The operator ^ is the flag substraction operation.

11.3.1 Detailed Description

Definition of the MapPainter class and other related classes to render maps.

This file defines four types of coordinates : RlCoords, ClCoords, PtCoords and PxCoords. They all inherit from QPointF, and give a static type checking for the consistency of the coordinates which are used.

Author

Baptiste Pauget

11.3.2 Function Documentation

11.3.2.1 operator^()

```
MapPainter::Element operator^ (
            MapPainter::Element a,
            MapPainter::Element b )  [inline]
```

The operator ^ is the flag substraction operation.

Warning

This is not a XOR operation, it corresponds to a&!b

11.4 src/editor/Game/mapslistmodel.h File Reference

Definition of Model/View presentation classes.

```
#include <QAbstractListModel>
#include <QAbstractTableModel>
#include "game.h"
#include "mappainter.h"
```

Classes

- class MapsListModel

  The MapsListModel class provides a presentation class for the Qt Model-View framework.
- class CellTypeListModel

  The CellTypeListModel class.
- class ObjectParamTableModel
- class ObjectFlagTableModel

11.4.1 Detailed Description

Definition of Model/View presentation classes.

11.5 src/editor/Game/object.h File Reference

Definition of the base class GameObject, and some inherited classes.

```
#include <QtCore>
#include <QtGui>
#include <assert.h>
```

Classes

- class GameObject

  The GameObject class is the base class for every part of games.
- class Image

  The Image class stores an external file in a QImage, and gives each image ressources a unique identifier.
- class Object

  The Object class.

Macros

- #define ObjectsMapC(name, names, Type, Types, pref, arg)
- #define ObjectsMap(pref, ini, Ini, body, sg, pl) ObjectsMapC(ini##body##sg, ini##body##pl, Ini##body##sg, Ini##body##pl, pref,ini)
- #define **ObjectListDef**(Objects, Type) private: QMap<int, Type*> a##Objects; public:
- #define **ObjectListAdd**(Object, Objects, Type) void add##Object(Type* new##Object){a##Objects[new##Object->ident()] = new##Object; touch();}
- #define **ObjectListTake**(Object, Objects, Type) Type* take##Object(int id){touch(); return a##Objects.take(id);}
- #define **ObjectListGetter**(object, Objects, Type) inline Type* object(int id) const{return a##Objects.value(id, nullptr);}
- #define **ObjectListValues**(objects, Objects, Type) inline QList<Type*> objects() const{return a##Objects.values();}
- #define **ObjectListGetters**(object, Object, objects, Objects, Type) ObjectListGetter(object,Objects, Type) ObjectListValues(objects,Objects, Type)
- #define **ObjectListModifiers**(Object, Objects, Type) ObjectListAdd(Object,Objects, Type) ObjectListTake(Object, Objects, Type)
- #define **ObjectList**(object, Object, objects, Objects, Type) ObjectListDef(Objects,Type) ObjectListGetters(object,Object,objects,Objects,Type) ObjectListModifiers(Object, Objects, Type)
- #define **ObjectListD**(init, Init, body, sg, pl, Type) ObjectList(init##body##sg,Init##body##sg,init##body##pl,Init##body##pl,Type)
- #define C(Macro, init, Init, body, ...) Macro(init##body, Init##body, ##__VA_ARGS__)
- #define C0(Macro, init, Init, body) Macro(init##body, Init##body)
- #define C1(Macro, init, Init, body, arg) Macro(init##body, Init##body, arg)
- #define SetFlag(flag, value) aFlags[#flag] = value
- #define FlagGetter(flag, Flag) inline bool is##Flag() const{return aFlags[#flag];}
- #define FlagSetter(flag, Flag) inline void set##Flag(bool flag){SetFlag(flag,flag); touch();}
- #define Flag(flag, Flag) FlagGetter(flag, Flag) FlagSetter(flag, Flag)

- #define SetParam(param, value) aParams[#param] = value
- #define ParamGetter(param) inline int param() const{return aParams[#param];}
- #define ParamSetter(param, Param) inline void set##Param(int param##Value){SetParam(param,param##Value); touch();}
- #define Param(param, Param) ParamGetter(param) ParamSetter(param, Param)
- #define AttrGetter(attr, Attr, Type) inline Type* attr() const{return a##Attr;}
- #define **AttrFree**(Attr) if(a##Attr) a##Attr->removeReference();
- #define **AttrLink**(Attr) if(a##Attr) a##Attr->addReference();
- #define AttrSetter(attr, Attr, Type) inline void set##Attr(Type* new##Attr){AttrFree(Attr); a##Attr = new##Attr; AttrLink(Attr); touch();}
- #define AttrDef(Attr, Type) private: Type* a##Attr = nullptr; public:
- #define Attr(attr, Attr, Type) AttrDef(Attr, Type) AttrGetter(attr,Attr,Type) AttrSetter(attr, Attr, Type)
- #define AttrT(type, Type) Attr(type, Type, Type)

11.5.1 Detailed Description

Definition of the base class GameObject, and some inherited classes.

The objects structure

Objects destructors

The Macro System

To add conveniently attributes and flags to GameObject subclassed objects, a set of macro is provided.

Name conventions

For a attribute named `attr`, the following conventions are observed :

- `attr()` is the getter method
- `setAttr()` is the setter method
- `aAttr` is the name of the attribut (if any)

A specific convention is applied for flags (boolean attributes) :

- isAttr() is the getter method

Macros

To define a new attribute, a global macro can be used in the class declaration. The provided basic implementations keep the object edition synchronization.

If a cleverer process is needed, custom getter or setter can be implemented, and the getter and setter macros can be used separately to define the obvious methods

Provided macros

Attribute Type	Complete declaration	Getter	Setter
Flags (bool)	Flag	FlagGetter	FlagSetter
Parameters (int)	Param	ParamGetter	ParamSetter
GameObject based Attributes	Attr	AttrGetter	AttrSetter

The case of attributes

An additionnal AttrT macro is provided, that deduce a default name from the type.

Name tools

To make the definition easier and avoid the name repetition that is introduced by the name convention, a C macro is provided to construct the names with lower and upper initial letter from theses letter and the end of the name.

Author

Baptiste Pauget

11.5.2 Macro Definition Documentation

11.5.2.1 Attr

```
#define Attr(
              attr,
              Attr,
              Type ) AttrDef(Attr, Type) AttrGetter(attr,Attr,Type) AttrSetter(attr, Attr,
Type)
```

The Attr macro defines a new <aAttr> named attribute of type Type, with its generic getter and setter methods.

With respect to the name convention, this macro needs the parameter's name with lower and upper initial letter case.

Example

```
Attr(parent,Parent, GameObject)
    -->
    private:
        GameObject *aParent;
    public:
        inline GameObject* parent() const{return aParent;}
        inline void setParent(GameObject* parentObject){aParent = parentObject; touch();}
```

See also

AttrT, AttrDef, AttrSetter, AttrGetter, C

11.5.2.2 AttrDef

```
#define AttrDef(
              Attr,
              Type ) private:  Type* a##Attr = nullptr; public:
```

The AttrDef macro defines a private attribute name <aAttr>.

Note

To avoid redefinition error, no attribute or method name <aAttr > must exist.

Warning

This macro is designed to be used in a public part of the class. Please note that inserting this macro in a private or protected part will change the visibility of the next declaration to public.

Example

```
Attr(Parent,GameObject)
    -->
    private:
        GameObject *aParent;
    public:
```

See also

Attr

11.5.2.3 AttrGetter

```
#define AttrGetter(
              attr,
              Attr,
              Type ) inline Type* attr() const{return a##Attr;}
```

The AttrGetter macro defines a generic getter method for the attribute named attr of type Type.

With respect to the name convention, this macro needs the attribute's name with lower and upper initial letter case.

Example

```
AttrGetter(parent,Parent,GameObject)
    --> inline GameObject* parent() const{return aParent;}
```

See also

Attr, AttrSetter, C

11.5.2.4 AttrSetter

```
#define AttrSetter(
              attr,
              Attr,
              Type ) inline void set##Attr(Type* new##Attr){AttrFree(Attr); a##Attr = new##Attr;
AttrLink(Attr); touch();}
```

The AttrSetter macro defines a generic setter method for the attribute named `attr` of type `Type`.

With respect to the name convention, this macro needs the attribute's name with lower and upper initial letter case.

Example

```
AttrSetter(parent,Parent,GameObject)
    --> inline void setParent(GameObject* &parentObject){aParent = parentObject; touch();}
```

See also

Attr, AttrGetter, C

11.5.2.5 AttrT

```
#define AttrT(
              type,
              Type ) Attr(type, Type, Type)
```

The AttrT macro defines a new attribute of type `Type`, named after the type name, with its generic getter and setter methods.

With respect to the name convention, this macro needs the parameter's type with lower and upper initial letter case.

Example

```
AttrT(cellType,CellType)
    -->
    private:
        CellType *aCellType;
    public:
        inline CellType* cellType() const{return aCellType;}
        inline void setCellType(CellType* cellTypeObject){aCellType = cellTypeObject; touch();}
```

See also

Attr, AttrDef, AttrSetter, AttrGetter, C

11.5.2.6 C

```
#define C(
              Macro,
              init,
              Init,
              body,
              ...  ) Macro(init##body, Init##body, ##__VA_ARGS__)
```

The C macro calls the Macro argument with argument tokens formed by the concatenation of init and body, and Init and body.

This enables to call a macro with the same argument, with the initial letter in lower and upper case.

A custom number of arguments can be added after the `body` one.

Note

This use of variadic arguments follow the `gcc specification`, but can be not supported by some compilers.
As some IDE does not fully support variadic macro expansion, the C0 and C1 macros can be used to avoid some inconvenience due to uncomplete code undersanding.

Example

```
C(Param,w,W,idth)
    --> Param(width, Width)

C(Attr, p,P,arent, GameObject)
    --> Attr(parent, Parent, GameObject)
```

See also

object.h

11.5.2.7 C0

```
#define C0(
              Macro,
              init,
              Init,
              body ) Macro(init##body, Init##body)
```

The C0 macro is equivalent to the C macro, with no additional argument.

This macro is provided to avoid the use of variadic arguments that are currently not totally supported by some IDE.
Example

```
C(Flag, v,V,isible)
    --> Flag(visible, Visible)
```

See also

C1

11.5.2.8 C1

```
#define C1(
              Macro,
              init,
              Init,
              body,
              arg ) Macro(init##body, Init##body, arg)
```

The C1 macro is equivalent to the C macro, with one additional argument.

This macro is provided to avoid the use of variadic arguments that are currently not totally supported by some IDE.

Example

```
C(Attr, p,P,arent, GameObject)
    --> Attr(parent, Parent, GameObject)
```

See also

C0

11.5.2.9 Flag

```
#define Flag(
              flag,
              Flag ) FlagGetter(flag, Flag) FlagSetter(flag, Flag)
```

The Flag macro defines generic getter and setter methods for the flag named `flag`.

With respect to the name convention, this macro needs the flag's name with lower and upper initial letter case.

Example

```
Flag(visible,Visible)
    --> inline bool isVisible() const{return aFlags["visible"];}
        inline void setVisible(bool visible){aFlags["visible"] = visible; touch()}
```

See also

FlagGetter, FlagSetter, C

11.5.2.10 FlagGetter

```
#define FlagGetter(
              flag,
              Flag ) inline bool is##Flag() const{return aFlags[#flag];}
```

The FlagGetter macro defines a generic getter method for the flag named `flag`.

With respect to the name convention, this macro needs the flag's name with lower and upper initial letter case.

Warning

The default getter method does not check wether the `flag` named flag really exist. To avoid runtime access error, it is strongly advice to initialize the flag in the object's contructor, using the setter method or the SetFlag macro.

Example

```
FlagGetter(visible,Visible)
    --> inline bool isVisible() const{return aFlags["visible"];}
```

See also

Flag, FlagSetter, C

11.5.2.11 FlagSetter

```
#define FlagSetter(
              flag,
              Flag ) inline void set##Flag(bool flag){SetFlag(flag,flag); touch();}
```

The FlagSetter macro defines a generic setter method for the flag named `flag`.

With respect to the name convention, this macro needs the flag's name with lower and upper initial letter case.

Example

```
FlagSetter(visible,Visible)
    --> inline void setVisible(bool visible){aFlags["visible"] = visible; touch()}
```

See also

Flag, FlagGetter, C

11.5.2.12 ObjectsMap

```
#define ObjectsMap(
              pref,
              ini,
              Ini,
              body,
              sg,
              pl ) ObjectsMapC(ini##body##sg, ini##body##pl, Ini##body##sg, Ini##body##pl,
pref,ini)
```

Deprecated

11.5.2.13 ObjectsMapC

```
#define ObjectsMapC(
              name,
              names,
              Type,
              Types,
              pref,
              arg )
```

Value:

```
private: \
    QMap<int, Type*> pref##Types; \
public: \
    void add##Type(Type* arg){pref##Types[arg->ident()] = arg; touch();} \
    void remove##Type(Type* arg){if(pref##Types.contains(arg->ident()))pref##Types.remove(arg->ident());
      touch();} \
    inline Type* name(int id) const{return pref##Types.value(id, nullptr);} \
    inline QList<Type*> names() const{return pref##Types.values();}
```

Deprecated

11.5.2.14 Param

```
#define Param(
              param,
              Param ) ParamGetter(param) ParamSetter(param, Param)
```

The Param macro defines generic getter and setter methods for the parameter named `param`.

With respect to the name convention, this macro needs the parameter's name with lower and upper initial letter case.

Example

```
Param(width,Width)
    --> inline int width() const{return aParams["width"];}
        inline void setWidth(int widthValue){aParams["width"] = widthValue; touch();}
```

See also

ParamGetter, ParamSetter, C

11.5.2.15 ParamGetter

```
#define ParamGetter(
              param ) inline int param() const{return aParams[#param];}
```

The ParamGetter macro defines a generic getter method for the parameter named `param`.

Warning

The default getter method does not check wether the `param` named parameter really exist. To avoid runtime access error, it is strongly advice to initialize the parameter in the object's contructor, using the setter method or the SetParam macro.

Example

```
ParamGetter(width)
    --> inline int width() const{return aParams["width"];}
```

See also

Param, ParamSetter

11.5.2.16 ParamSetter

```
#define ParamSetter(
              param,
              Param ) inline void set##Param(int param##Value){SetParam(param,param##Value);
touch();}
```

The ParamSetter macro defines a generic setter method for the parameter named `param`.

With respect to the name convention, this macro needs the parameter's name with lower and upper initial letter case.

Example

```
ParamSetter(width,Width)
    --> inline void setWidth(bool widthValue){aParams["width"] = widthValue; touch();}
```

See also

Param, ParamGetter, C

11.5.2.17 SetFlag

```
#define SetFlag(
              flag,
              value ) aFlags[#flag] = value
```

Conveniant macro to set a flag directly.

This is usefull in custom setters, to avoid call loops.

Warning

The touch function isn't called. After this macro use, the object is no longer synchronised.

Example

```
SetFlag(visible, false)
    --> aFlags["visible"] = false
```

See also

Flag, FlagSetter, object.h

11.5.2.18 SetParam

```
#define SetParam(
              param,
              value ) aParams[#param] = value
```

Conveniant macro to set a param directly.

This is usefull in custom setters, to avoid call loops.

Warning

The touch function isn't called. After this macro use, the object is no longer synchronised.

Example

```
SetParam(width, 42)
    --> aParams["width"] = 42
```

See also

Param, ParamSetter, object.h

11.6 src/editor/Game/xmlhandler.h File Reference

Definition og the XmlHandler class and other related classes to read XML game's files.

```
#include <QtXml>
#include "game.h"
```

Classes

- class XmlHandler

Typedefs

- typedef std::pair< QString, FileContent > **Asso**

Enumerations

- enum **FileContent** {
  FCUnknown, **FCGame**, **FCRessources**, **FCWorld**,
  FCMap, **FCEntity**, **FCObject** }

Functions

- const QMap< QString, FileContent > **overHead** ({ Asso("Game", FCGame), Asso("Ressources", FC↩ Ressources), Asso("World", FCWorld), Asso("Map", FCMap), Asso("Entity", FCEntity), Asso("Object", F↩ CObject) })

11.6.1 Detailed Description

Definition og the XmlHandler class and other related classes to read XML game's files.

11.7 src/editor/GUI/options.h File Reference

Definition of the Options class, and the constants that are used in this class.

```
#include <QSettings>
#include <QDir>
#include <QSize>
#include <QPoint>
#include <QColor>
```

Classes

- struct Options

  The Options class provides session-independant options and preferences.

Macros

- #define WIN "Window"
- #define DIR "Directories"
- #define MAP "MapsEditor"
- #define DefaultF(group, opt, val) defaultValues[group][opt] = QPair<QVariant, bool>(val, false)
- #define Default(group, opt, val) defaultValues[group][opt] = QPair<QVariant, bool>(val, true)

Variables

- const QString **ADAPT** = "Adjustable"
- const QString **VAL** = "Value"

11.7.1 Detailed Description

Definition of the Options class, and the constants that are used in this class.

The headers of types which are used in the application must be include here. See Options for details.

Author

Baptiste Pauget

11.7.2 Macro Definition Documentation

11.7.2.1 Default

```
#define Default(
              group,
              opt,
              val ) defaultValues[group][opt] = QPair<QVariant, bool>(val, true)
```

This macro defines a new adaptati option identified by its group and name.

11.7.2.2 DefaultF

```
#define DefaultF(
              group,
              opt,
              val ) defaultValues[group][opt] = QPair<QVariant, bool>(val, false)
```

This macro defines a new unadaptati option identified by its group and name.

11.7.2.3 DIR

```
#define DIR "Directories"
```

Group of paths options.

11.7.2.4 MAP

```
#define MAP "MapsEditor"
```

Group of MapsEditor related options.

11.7.2.5 WIN

```
#define WIN "Window"
```

Group of window related options.

11.8 src/editor/GUI/Tabs/bcolor.h File Reference

Definition of the BColor class.

```
#include <QtWidgets>
```

Classes

- class BColor

  The BColor class is a simple frame that offers color selection.

11.8.1 Detailed Description

Definition of the BColor class.

Author

Baptiste Pauget

11.9 src/editor/GUI/Tabs/Docks/bdock.h File Reference

Definition of the BDock class.

```
#include <QtWidgets>
#include "intertie.h"
#include "bdockwidget.h"
```

Classes

- class BDock

  The BDock class is the container for widget to display in a BDocksZone.

11.9.1 Detailed Description

Definition of the BDock class.

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