# mkRPG

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# Chapter 7

# Namespace Documentation

## 7.1 src::parsing::map_parser Namespace Reference

### Functions

- def parse_cell
- def map_parser
- def get_size
- def **gen_map**

### 7.1.1 Detailed Description

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

### 7.1.2 Function Documentation

#### 7.1.2.1 def src.parsing.map_parser.get_size ( *tree* )

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

#### 7.1.2.2 def src.parsing.map_parser.map_parser ( *map_xml* )

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

#### 7.1.2.3 def src.parsing.map_parser.parse_cell ( *cell_object* )

```
Parses a CellType attribute.
```

# Chapter 8

# Class Documentation

## 8.1 src.path.Archi Class Reference

### Public Member Functions

- def **__init__**
- def get_src_file
- def get_static_file
- def get_xml_file
- def list_files
- def get_src_dir
- def get_static_dir
- def get_xml_dir

### Public Attributes

- **main_directory**

### 8.1.1 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
```

### 8.1.2 Member Function Documentation

#### 8.1.2.1 def src.path.Archi.get_src_dir ( *self*, *dir_path* )

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

#### 8.1.2.2 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.
```

#### 8.1.2.3 def src.path.Archi.get_static_dir ( *self*, *dir_path* )

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

#### 8.1.2.4 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
```

#### 8.1.2.5 def src.path.Archi.get_xml_dir ( *self*, *dir_path* )

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

#### 8.1.2.6 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.
```

#### 8.1.2.7 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

## 8.2 src.backgroundLayer.BackgroundLayer Class Reference

Inherits Layer.

### Public Member Functions

- def **__init__**
- def **init_layer**
- def **render**

- def **collision_test**
- def **click_update**
- def **get_grid_info**
- def **zoom**

### Public Attributes

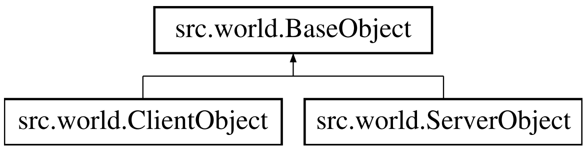
- **cell_ids**
- **grid_cell_ids**
- **g_width**
- **g_height**
- **image**
- **rect**
- **mouse_iso**
- **selected_cell**

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

- src/backgroundLayer.py

## 8.3 src.world.BaseObject Class Reference

Inheritance diagram for src.world.BaseObject:



### Public Member Functions

- def **__init__**
- def **__getattr__**
- def **load**
- def **contextEval**

### Public Attributes

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

### Static Public Attributes

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

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

- src/world.py

## 8.4 BColor Class Reference

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

```
#include <bcolor.h>
```

### 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

### 8.4.1 Detailed Description

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

## 8.4.2 Constructor & Destructor Documentation

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

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

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

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

## 8.4.3 Member Function Documentation

### 8.4.3.1 const QColor& BColor::color ( ) const

Returns the current color of the selector.

**See also**

setColor, setColorQuiet, colorChanged

### 8.4.3.2 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

### 8.4.3.3 const QString& BColor::name ( ) const

Returns the name of the selector.

**See also**

setName, setNameQuiet, nameChanged

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

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

**See also**

name, setNameQuiet

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

Sets the current color.

The signal colorChanged is emitted.

**See also**

setColorQuiet, color

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

Sets the current color.

The signal colorChanged is not emitted.

**See also**

setColor, color

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

Sets the name of the selector.

The signal nameChanged is emitted.

**See also**

setNameQuiet, name

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

Sets the name of the selector.

The signal nameChanged is not emitted.

**See also**

setName, name

### 8.4.4 Property Documentation

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

The current color that is displayed by the widget

**See also**

setColor, setColorQuiet, colorChanged.

#### 8.4.4.2 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

## 8.5 BDock Class Reference

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

`#include <bdock.h>`

### 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**

### 8.5.1 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

## 8.6 BDocksZone Class Reference

### Public Types

- enum ScrollBarMode { AlwaysVisible, Adjustable, Fixed }

  *The ScrollBarMode enum describe the way the BDocksZone reacts when a scroll bar is needed.*

### 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**

### 8.6.1 Member Enumeration Documentation

#### 8.6.1.1 enum BDocksZone::ScrollBarMode

The ScrollBarMode enum describe the way the BDocksZone reacts when a scroll bar is needed.

**Enumerator:**

***AlwaysVisible*** Always show the scroll bar, even if it is usless

***Adjustable*** Show the scroll bar when needed, adaptating the docks length

***Fixed*** Show the scroll bar when needed, keeping the docks length fixed

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

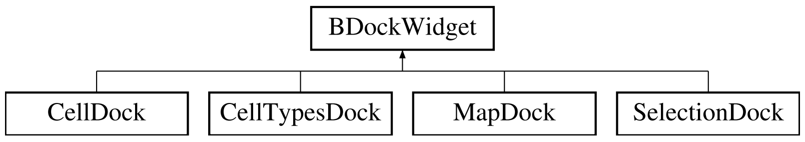
- src/editor/GUI/Tabs/Docks/bdockszone.h
- src/editor/GUI/Tabs/Docks/bdockszone.cpp

## 8.7 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**

### 8.7.1 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

## 8.8 BinaryStateMachine Class Reference

The BinaryStateMachine class is a simple QStateMachine with two states.

`#include <intertie.h>`

### 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, Q-Variant noValue)
- bool **isPositive** () const
- bool **isNegative** () const

### 8.8.1 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

## 8.9 BLayout Class Reference

### 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

## 8.10 src.world.Cell Class Reference

### Public Member Functions

- def **__init__**

### Public Attributes

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

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

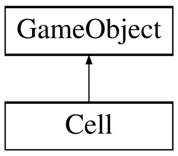
- src/world.py

## 8.11 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**

### 8.11.1 Detailed Description

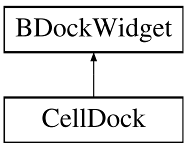
The Cell class.

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

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

## 8.12 CellDock Class Reference

Inheritance diagram for CellDock:



## Public Slots

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

## Public Member Functions

- **CellDock** (QWidget ∗parent=0)

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

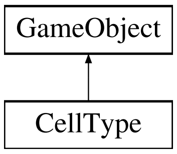
- src/editor/GUI/Tabs/celldock.h
- src/editor/GUI/Tabs/celldock.cpp

## 8.13 CellType Class Reference

The CellType class.

`#include <map.h>`

Inheritance diagram for CellType:



## Public Member Functions

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

### 8.13.1 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

## 8.14 CellTypeListModel Class Reference

The CellTypeListModel class.

```
#include <mapslistmodel.h>
```

### 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_OV-ERRIDE
- bool **removeRows** (int row, int count, const QModelIndex &parent) Q_DECL_O-VERRIDE

### 8.14.1 Detailed Description

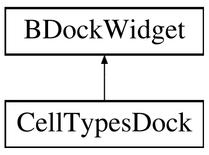
The CellTypeListModel class.

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

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

## 8.15 CellTypesDock Class Reference

Inheritance diagram for CellTypesDock:



### Public Member Functions

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

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

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

## 8.16 src.character.Character Class Reference

### Public Member Functions

- def **__init__**
- def **render**
- def **update**
- def **update_skin**
- def **zoom**
- def **set_path**
- def **make_skin**
- def **get_cell_pos_by_index**
- def **move**

### Public Attributes

- **skin**
- **name**
- **action**
- **scale**
- **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

## 8.17 src.chunk.Chunk Class Reference

### Public Member Functions

- def **__init__**

- def **init_chunk**
- def **render**
- def **scale_chunk**
- def **update**
- def **click_trigger**
- def **set_state**
- def **get_state**

### Public Attributes

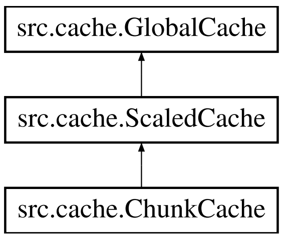
- **index**
- **cells**
- **g_width**
- **g_height**
- **scale**
- **width**
- **height**
- **pos**
- **rect**
- **layers**
- **image**

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

- src/chunk.py

## 8.18 src.cache.ChunkCache Class Reference

Inheritance diagram for src.cache.ChunkCache:



### Public Member Functions

- def **init_chunk**
- def **init_elts**
- def **init_chunks**
- def **get_chunk**
- def **add_scaled**

### Static Public Attributes

- dictionary **cache** = {}

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

- src/cache.py

## 8.19 ClCoords Class Reference

The ClCoords class describe positions with cell coordinates.

`#include <mappainter.h>`

### Public Member Functions

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

### 8.19.1 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

## 8.20 src.client.Client Class Reference

### Public Member Functions

- def __init__
- def __del__
- def run
- def frame_counter
- def update_view
- def get_conf_file
- def get_conf
- def init_cache
- def handleOrder

### Public Attributes

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

## 8.20.1 Constructor & Destructor Documentation

### 8.20.1.1 def src.client.Client.__init__ ( *self*, *path* )

```
Initialize the client
```

### 8.20.1.2 def src.client.Client.__del__ ( *self* )

```
Kill network and interface
```

## 8.20.2 Member Function Documentation

### 8.20.2.1 def src.client.Client.frame_counter ( *self*, *n* )

```
Generator that returns True every n calls
```

### 8.20.2.2 def src.client.Client.get_conf ( *self*, *conf*, *type* = `str` )

```
Return value of parameter conf in loaded conf file
```

### 8.20.2.3 def src.client.Client.get_conf_file ( *self*, *path* )

```
Load path. Path should be a .ini file
```

### 8.20.2.4 def src.client.Client.handleOrder ( *self*, *ident*, *order* )

```
Handle the given order on object ident
```

#### 8.20.2.5 def src.client.Client.init_cache ( *self* )

```
Initialize cache with the images we will need
```

#### 8.20.2.6 def src.client.Client.run ( *self* )

```
Start the game and loops until we exit it
```

#### 8.20.2.7 def src.client.Client.update_view ( *self, mouse_pos, mov_speed_x, mov_speed_y, deltat* )

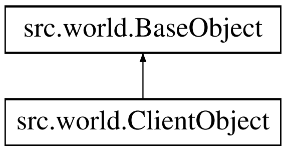
```
Returns new scrolling speed and the rectangle that have been changed
    and moves the map accordingly
```

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

- src/client.py

## 8.21 src.world.ClientObject Class Reference

Inheritance diagram for src.world.ClientObject:



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

- src/world.py

## 8.22 Editor Class Reference

The Editor class is the main window of the Editor.

```
#include <editor.h>
```

### Public Member Functions

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

### 8.22.1 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

## 8.23 src.world.Entity Class Reference

### Public Member Functions

- def **__init__**

### Public Attributes

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

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

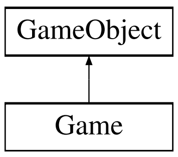
- src/world.py

## 8.24 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)

### 8.24.1 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)

### 8.24.2 Member Function Documentation

#### 8.24.2.1 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:

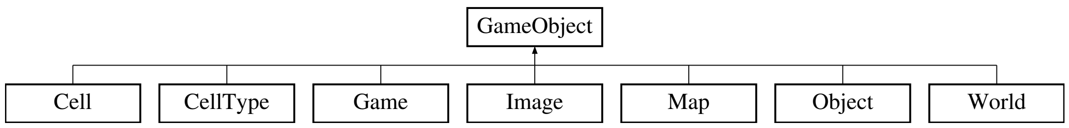
- src/editor/Game/game.h
- src/editor/Game/game.cpp

## 8.25 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**

### 8.25.1 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**

### 8.25.2 Constructor & Destructor Documentation

#### 8.25.2.1 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.

### 8.25.3 Member Function Documentation

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

Returns the list of the registered flags

**See also**

getFlag, setFlag, params

#### 8.25.3.2 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

#### 8.25.3.3 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

#### 8.25.3.4 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

#### 8.25.3.5 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

#### 8.25.3.6 int GameObject::ident ( ) const [inline]

Returns the name wide unique identifier of the object.

**See also**

init, GameObject

#### 8.25.3.7 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

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

Returns true if the object has been initialised

**See also**

init, GameObject

Reimplemented in Image.

#### 8.25.3.9 const QDateTime& GameObject::lastChildrenEdition ( ) const [inline]

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

**See also**

lastEdition, lastInternalEdition

#### 8.25.3.10 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

#### 8.25.3.11 const QDateTime& GameObject::lastInternalEdition ( ) const [inline]

Returns the last edition time.

**See also**

lastEdition, lastChildrenEdition

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

Returns the list of the registered paramters

**See also**

getParam, setParam, flags

#### 8.25.3.13 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

#### 8.25.3.14 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

#### 8.25.3.15 void GameObject::touch ( )

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

**See also**

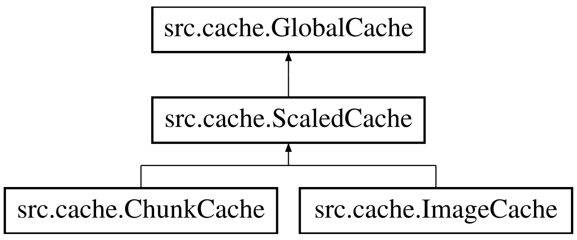
lastInternalEdition, lastChildrenEdition, lastEdition.

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

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

## 8.26 src.cache.GlobalCache Class Reference

Inheritance diagram for src.cache.GlobalCache:



### Public Member Functions

- def **__init__**
- def **set**
- def **get**
- def **clear**
- def **keys**
- def **show**

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

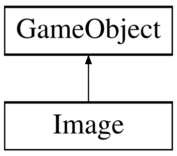
- src/cache.py

## 8.27 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** ()

### 8.27.1 Detailed Description

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

### 8.27.2 Member Function Documentation

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

Returns true if the object has been initialised

**See also**

init, GameObject

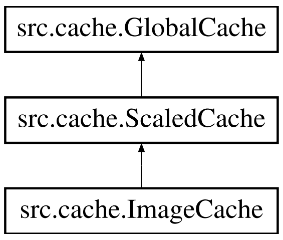
Reimplemented from GameObject.

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

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

## 8.28 src.cache.ImageCache Class Reference

Inheritance diagram for src.cache.ImageCache:



### Public Member Functions

- def **init_image_from_file**
- def **init_image_from_surface**
- def **get_image**
- def **init_elts**
- def **init_images**
- def **add_scaled**

### Static Public Attributes

- dictionary **cache** = {}

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

- src/cache.py

## 8.29 src.interactions.Interaction Class Reference

### Public Member Functions

- def **__init__**
- def **load**

### Public Attributes

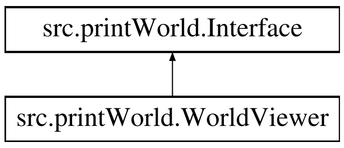
- **target**
- **type**
- **key**
- **event**

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

- src/interactions.py

## 8.30 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

## 8.31 Intertie Class Reference

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

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

### 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)

### 8.31.1 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

## 8.32 src.layer.Layer Class Reference

### Public Member Functions

- def **__init__**
- def **render**
- def **update**
- def **get_cell_pos**
- def **make_grid**
- def **update_cell**
- def **update_grid**
- def **zoom**

### Public Attributes

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

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

- src/layer.py

## 8.33 src.world.Map Class Reference

### Public Member Functions

- def **__init__**
- def fill

### Public Attributes

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

### 8.33.1 Member Function Documentation

#### 8.33.1.1 def **src.world.Map.fill** ( *self* )

```
Complète les cases par défaut
```

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

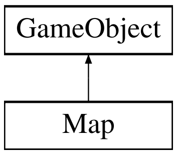
- src/world.py

## 8.34 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** ()

### 8.34.1 Detailed Description

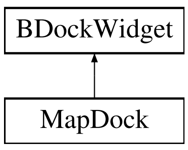
The Map class.

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

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

## 8.35 MapDock Class Reference

Inheritance diagram for MapDock:



### Public Member Functions

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

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

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

## 8.36 MapPainter Class Reference

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

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

### 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)

### 8.36.1 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

### 8.36.2 Member Enumeration Documentation

#### 8.36.2.1 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 operator| "|", operator| "&", operator| "^".

**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

### 8.36.3 Constructor & Destructor Documentation

#### 8.36.3.1 MapPainter::MapPainter ( QObject ∗ *parent* = 0 )

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

#### 8.36.3.2 MapPainter::MapPainter ( Map ∗ *m*, QObject ∗ *parent* = 0 )

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

### 8.36.4 Member Function Documentation

#### 8.36.4.1 PtCoords MapPainter::cooToPt ( ClCoords *p* ) const

Converts cells indice to virtual point coordinates

#### 8.36.4.2 PxCoords MapPainter::cooToPxl ( ClCoords *p* ) const

Convenient function equivalent to ptToPxl(cooToPt(p))

#### 8.36.4.3 bool MapPainter::hasHighlightedCell ( ) const

Returns true if a cell is highligthed.

**See also**

highlightedCell, setHighlightedCell

#### 8.36.4.4 QPoint MapPainter::highlightedCell ( ) const

Returns the integer index of the cell the is highlighted.

**See also**

setHighlightedCell, hasHighlightedCell

#### 8.36.4.5 PtCoords MapPainter::indToPt ( int *i*, int *j* ) const

Converts to coordinates

#### 8.36.4.6 bool MapPainter::isCell ( const ClCoords & *c* ) const

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

#### 8.36.4.7 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, ...).

#### 8.36.4.8 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

#### 8.36.4.9 void MapPainter::paint ( QPainter & *p* )

Draws the map in the QPaintDevice.

**See also**

render

#### 8.36.4.10 const QColor & MapPainter::preSelectedCellColor ( ) const

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

**See also**

setPreSelectedCellColor, selectedCellColor

#### 8.36.4.11 ClCoords MapPainter::ptToCoo ( PtCoords *p* ) const

Converts virtual point to cell indice

#### 8.36.4.12 PxCoords MapPainter::ptToPxl ( PtCoords *p* ) const

Converts virtual point to real pixel coordinates

#### 8.36.4.13 ClCoords MapPainter::pxlToCoo ( PxCoords *p* ) const

Convenient function equivalent to ptToCoo(pxlToPt(p))

#### 8.36.4.14 PtCoords MapPainter::pxlToPt ( PxCoords *p* ) const

Converts real pixel to virtual point coordinates

#### 8.36.4.15 const QImage & MapPainter::render ( )

Provides a QImage with a view of the map.

**See also**

paint

#### 8.36.4.16 void MapPainter::resize ( QSize *s* )

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

**See also**

size

#### 8.36.4.17 void MapPainter::resize ( int *wi,* int *he* )

This is an overload function, see resize

#### 8.36.4.18 double MapPainter::scale ( ) const

Returns the current scale of the view.

**See also**

setScale

#### 8.36.4.19 const QColor & MapPainter::selectedCellColor ( ) const

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

**See also**

setSelectedCellColor, preSelectedCellColor

#### 8.36.4.20 bool MapPainter::setHighlightedCell ( const CICoords & *p* )

Sets the highligthed cell to the one at the CICoords p

**See also**

highlightedCell, hasHighlightedCell

#### 8.36.4.21 bool MapPainter::setHighlightedCell ( int *i*, int *j* )

This is an overload function, see setViewCenter.

#### 8.36.4.22 void MapPainter::setMap ( Map ∗ *m* )

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

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

Enables or disables the render of an element.

**See also**

setPaintedElements

#### 8.36.4.24 void MapPainter::setPaintedElements ( Element *e* )

Sets the rendered elements.

**See also**

setPaintedElement

#### 8.36.4.25 void MapPainter::setPreSelectedCellColor ( const QColor & *c* )

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

**See also**

preSelectedCellColor, setSelectedCellColor

#### 8.36.4.26 void MapPainter::setScale ( double *scale* )

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

**See also**

scale, setScaleDomain

#### 8.36.4.27 void **MapPainter::setScaleDomain** ( double *scaleMin,* double *scaleMax* )

Sets the valid values for the scale.

**See also**

scale, setScale

#### 8.36.4.28 void **MapPainter::setSelectedCellColor** ( const QColor & *c* )

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

**See also**

selectedCellColor, setPreSelectedCellColor

#### 8.36.4.29 void **MapPainter::setViewCenter** ( **RICoords** *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

#### 8.36.4.30 void **MapPainter::setViewCenter** ( double *relativeCenterX,* double *relativeCenterY* )

This is an overload function, see setViewCenter.

#### 8.36.4.31 void **MapPainter::setViewCenterQuiet** ( double *x,* double *y* )

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

#### 8.36.4.32 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

#### 8.36.4.33 RlCoords MapPainter::viewCenter ( ) const

Return the relative coordinates of the current view center.

**See also**

setViewCenter

#### 8.36.4.34 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.

#### 8.36.4.35 QSize MapPainter::virtualSize ( ) const

Computes the total size of the image of the map

#### 8.36.4.36 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

## 8.37 MapsEditor Class Reference

The MapsEditor class is the tab offering map editing facilities.

`#include <mapseditor.h>`

### Public Slots

- void **updateGame** ()

### Public Member Functions

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

### 8.37.1 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

## 8.38 MapsListModel Class Reference

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

```
#include <mapslistmodel.h>
```

### 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

### 8.38.1 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

## 8.39 MapViewer Class Reference

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

```
#include <mapviewer.h>
```

### 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

### 8.39.1 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.

### 8.39.2 Member Enumeration Documentation

#### 8.39.2.1 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

## 8.40 src.map.MapViewer Class Reference

### Public Member Functions

- def **__init__**
- def **load_chunks**
- def **make_walkables**
- def **zoom**
- def **move**
- def **render**
- def neighbors_chunk
- def **onscreen_chunks**
- def **update**
- def **propagate_trigger**
- def **compute_path**
- def **load_bg**

### Public Attributes

- **map**
- **world**
- **scale**
- **cm_height**

- **width**
- **height**
- **walkablesGraph**
- **current_chunk**
- **pos_offset**
- **chunk_pos**
- **chunks_state**

### 8.40.1 Member Function Documentation

#### 8.40.1.1 def src.map.MapViewer.neighbors_chunk ( *self*, *chunk* )

```
Returns indexes of the neighbors of chunk and index of chunk
```

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

- src/map.py

## 8.41 src.network.NetworkClient Class Reference

Inherits Thread.

### Public Member Functions

- def **__init__**
- def **run**
- def **send**
- def **sendEvent**
- def **kill**

### Public Attributes

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

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

- src/network.py

## 8.42 src.networkudp.NetworkClient Class Reference

Inherits Thread.

### Public Member Functions

- def **__init__**
- def **run**
- def **send**
- def **sendEvent**
- def **kill**

### Public Attributes

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

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

- src/networkudp.py

## 8.43 src.network.NetworkServer Class Reference

Inherits Thread.

### Public Member Functions

- def **__init__**
- def **waitForClients**
- def **run**
- def **sendOrder**
- def **broadcast**
- def **kill**

### Public Attributes

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

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

- src/network.py

## 8.44 src.networkudp.NetworkServer Class Reference

Inherits Thread.

### Public Member Functions

- def **__init__**
- def **waitForClients**
- def **run**
- def **sendOrder**
- def **broadcast**
- def **kill**

### Public Attributes

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

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

- src/networkudp.py

## 8.45 NewGame Class Reference

### 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:

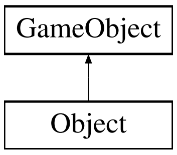
- src/editor/GUI/newgame.h
- src/editor/GUI/newgame.cpp

## 8.46 Object Class Reference

The Object class.

`#include <object.h>`

Inheritance diagram for Object:



### Public Member Functions

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

### 8.46.1 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

## 8.47 ObjectEditor Class Reference

### 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

## 8.48 ObjectFlagTableModel Class Reference

### 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

## 8.49 ObjectParamTableModel Class Reference

### 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

## 8.50 src.world.ObjectType Class Reference

### Public Member Functions

- def **__init__**
- def **create**
- def **__str__**

### Public Attributes

- **type**

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

- src/world.py

## 8.51 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 ()

### 8.51.1 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

### 8.51.2 Member Function Documentation

#### 8.51.2.1 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

#### 8.51.2.2 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

#### 8.51.2.3 Options & Options::options ( ) [static]

Returns the unique Options instance.

#### 8.51.2.4 void Options::reinitialise ( QString *group* = " " )

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

#### 8.51.2.5 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

#### 8.51.2.6 void Options::setAdjustable ( QString *group,* QString *opt,* bool *adjust* )

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

**See also**

isAdjustable

#### 8.51.2.7 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

## 8.52 src.orders.Order Class Reference

### Public Member Functions

- def **__init__**
- def **__getattr__**
- def **__setattr__**
- def **copy**
- def **load**
- def **toBytes**
- def **fromBytes**

### Public Attributes

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

### Static Public Attributes

- list **params** = [None]

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

- src/orders.py

## 8.53 src.orders.OrderDispatcher Class Reference

### Public Member Functions

- def **__init__**
- def treat

### Public Attributes

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

### 8.53.1 Detailed Description

```
pour diminuer la redondance de code client/serveur
```

### 8.53.2 Member Function Documentation

#### 8.53.2.1 def src.orders.OrderDispatcher.treat ( *self, emitter, order* )

```
-> ordre à retransmettre
```

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

- src/orders.py

## 8.54 ParamItemDelegate Class Reference

### 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 Q-ModelIndex &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

## 8.55 src.tools.Perf Class Reference

### Public Member Functions

- def **__init__**
- def tic
- def toc
- def show

### Public Attributes

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

### 8.55.1 Detailed Description

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

### 8.55.2 Member Function Documentation

#### 8.55.2.1 def src.tools.Perf.show ( *self* )

```
Affiche le rapport
```

#### 8.55.2.2 def src.tools.Perf.tic ( *self* )

```
À lancer avant la fonction
```

#### 8.55.2.3 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

## 8.56 PtCoords Class Reference

The PtCoords class describe positions with virtual point coordinates.

`#include <mappainter.h>`

### Public Member Functions

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

### 8.56.1 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

## 8.57 PxCoords Class Reference

The PxCoords class describe positions with real pixel coordinates.

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

### Public Member Functions

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

### 8.57.1 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

## 8.58 RlCoords Class Reference

The RlCoords class describe positions with relative coordinates.

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

### Public Member Functions

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

### 8.58.1 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**

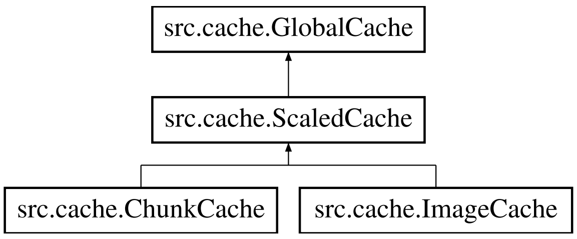
ClCoords PtCoords, PxCoords

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

- src/editor/Game/mappainter.h

## 8.59 src.cache.ScaledCache Class Reference

Inheritance diagram for src.cache.ScaledCache:



### Public Member Functions

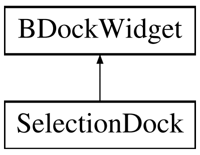
- def **add_scaled**
- def **remove**
- def **get_elt**
- def **free_cache**

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

- src/cache.py

## 8.60 SelectionDock Class Reference

Inheritance diagram for SelectionDock:



### Public Member Functions

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

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

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

## 8.61 src.server.Server Class Reference

### Public Member Functions

- def **__init__**
- def **__del__**
- def **run**
- def **handle**
- def **handleEvent**

### Public Attributes

- **net**
- **world**
- **actions**
- **persos**
- **orderDispatcher**
- **events**

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

- src/server.py

## 8.62 src.network.ServerConnection Class Reference

Inherits Thread.

### Public Member Functions

- def **__init__**
- def **run**
- def **send**

### Public Attributes

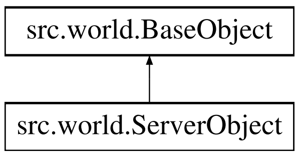
- **soc**
- **handle**

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

- src/network.py

## 8.63 src.world.ServerObject Class Reference

Inheritance diagram for src.world.ServerObject:



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

- src/world.py

## 8.64 TabAcces Class Reference

### 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

## 8.65 TabBar Class Reference

### 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

## 8.66 src.utils.WalkableGraph Class Reference

### Public Member Functions

- def **__init__**
- def **get_neighbors**
- def **dist**
- def **get_path**

### Public Attributes

- **walkables**

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

- src/utils.py

## 8.67 Welcome Class Reference

### Public Member Functions

- **Welcome** (QWidget ∗parent=0)

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

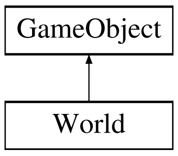
- src/editor/GUI/Tabs/welcome.h
- src/editor/GUI/Tabs/welcome.cpp

## 8.68 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**

### 8.68.1 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

## 8.69 src.world.World Class Reference

### Public Member Functions

- def **__init__**

### Public Attributes

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

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

- src/world.py

## 8.70 WorldEditor Class Reference

### Public Member Functions

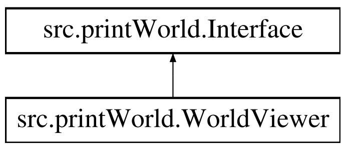
- **WorldEditor** (QWidget ∗parent=0)
- void **setGame** (Game ∗g)

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

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

## 8.71 src.printWorld.WorldViewer Class Reference

Inheritance diagram for src.printWorld.WorldViewer:



### Public Member Functions

- def __init__
- def get_event
- def end
- def update
- def render
- def move
- def move_char
- def propagate_trigger

### Public Attributes

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

### 8.71.1 Constructor & Destructor Documentation

#### 8.71.1.1 def src.printWorld.WorldViewer.__init__ ( *self,* *w* )

```
Initialize the pygame Interface
```

### 8.71.2 Member Function Documentation

#### 8.71.2.1 def src.printWorld.WorldViewer.end ( *self* )

```
End the display
```

#### 8.71.2.2 def src.printWorld.WorldViewer.get_event ( *self* )

```
Return current pygame events stack
```

#### 8.71.2.3 def src.printWorld.WorldViewer.move ( *self*, *dx*, *dy* )

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

#### 8.71.2.4 def src.printWorld.WorldViewer.move_char ( *self*, *ident*, *end_pos* )

```
Move the entitie ident to cell end_pos
```

#### 8.71.2.5 def src.printWorld.WorldViewer.propagate_trigger ( *self*, *event* )

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

#### 8.71.2.6 def src.printWorld.WorldViewer.render ( *self* )

```
Return the new image to show on screen
```

#### 8.71.2.7 def src.printWorld.WorldViewer.update ( *self* )

```
Update the view
```

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

- src/printWorld.py

## 8.72 XmlHandler Class Reference

### 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 9

# File Documentation

## 9.1 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.*

### 9.1.1 Detailed Description

Definition of the Game and World classes.

## 9.2 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.*

## Defines

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

### 9.2.1 Detailed Description

Definition of the Map, Cell and CellType classes.

### 9.2.2 Define Documentation

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

Usefull macro to set up a for on the cells

## 9.3 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.*

## Defines

- #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.*

### 9.3.1 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

### 9.3.2 Function Documentation

#### 9.3.2.1 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

## 9.4 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

### 9.4.1 Detailed Description

Definition of Model/View presentation classes.

## 9.5 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.*

### Defines

- #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) ObjectList-Getter(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) ObjectList-Modifiers(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_ARG-S__)
- #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){Attr-Free(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) Attr-Setter(attr, Attr, Type)
- #define AttrT(type, Type) Attr(type, Type, Type)

### 9.5.1 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

## 9.5.2 Define Documentation

#### 9.5.2.1 #define Attr( *attr,* Attr, *Type* ) AttrDef(Attr, Type) AttrGetter(attr,Attr,Type) AttrSetter(attr, Attr, Type)

The Attr macro defines a new <a`Attr`> 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**

```
{.cpp}
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

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

The AttrDef macro defines a private attribute name <a`Attr`>.

**Note**

To avoid redefinition error, no attribute or method name <a`Attr` > 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**

```
{.cpp}
Attr(Parent,GameObject)
    -->
    private:
        GameObject *aParent;
    public:
```

**See also**

Attr

#### 9.5.2.3 #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**

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

**See also**

Attr, AttrSetter, C

#### 9.5.2.4 #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**

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

**See also**

Attr, AttrGetter, C

#### 9.5.2.5 #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**

```
{.cpp}
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

#### 9.5.2.6 #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**

```
{.cpp}
C(Param,w,W,idth)
    --> Param(width, Width)

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

**See also**

object.h

#### 9.5.2.7 #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**

```
{.cpp}
C(Flag, v,V,isible)
    --> Flag(visible, Visible)
```

**See also**

C1

#### 9.5.2.8 #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**

```
{.cpp}
C(Attr, p,P,arent, GameObject)
    --> Attr(parent, Parent, GameObject)
```

**See also**

C0

#### 9.5.2.9 #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**

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

**See also**

FlagGetter, FlagSetter, C

#### 9.5.2.10 #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**

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

**See also**

Flag, FlagSetter, C

#### 9.5.2.11 #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**

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

**See also**

Flag, FlagGetter, C

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

**Deprecated**

#### 9.5.2.13 #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**

#### 9.5.2.14 #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**

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

**See also**

ParamGetter, ParamSetter, C

#### 9.5.2.15 #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**

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

**See also**

Param, ParamSetter

#### 9.5.2.16 #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**

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

**See also**

Param, ParamGetter, C

#### 9.5.2.17 #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**

```
{.cpp}
SetFlag(visible, false)
    --> aFlags["visible"] = false
```

**See also**

Flag, FlagSetter, object.h

#### 9.5.2.18 #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**

```
{.cpp}
SetParam(width, 42)
    --> aParams["width"] = 42
```

**See also**

Param, ParamSetter, object.h

## 9.6 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", FCRessources), Asso("World", FCWorld), Asso("Map", FCMap), Asso("Entity", FCEntity), Asso("Object", FCObject)})

### 9.6.1 Detailed Description

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

## 9.7 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> x
#include <QPoint> #include <QColor>
```

### Classes

- struct Options

  *The Options class provides session-independant options and preferences.*

### Defines

- #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"

### 9.7.1 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

### 9.7.2 Define Documentation

#### 9.7.2.1 #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.

#### 9.7.2.2 #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.

#### 9.7.2.3 #define **DIR** "Directories"

Group of paths options.

#### 9.7.2.4 #define **MAP** "MapsEditor"

Group of MapsEditor related options.

#### 9.7.2.5 #define **WIN** "Window"

Group of window related options.

## 9.8 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.*

### 9.8.1 Detailed Description

Definition of the BColor class.

**Author**

Baptiste Pauget

## 9.9 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.*

### 9.9.1 Detailed Description

Definition of the BDock class.