

LifeGame

0.1

Generated by Doxygen 1.8.11

Contents

1	Class Index	1
1.1	Class List	1
2	File Index	3
2.1	File List	3
3	Class Documentation	5
3.1	LGCell Class Reference	5
3.1.1	Detailed Description	5
3.1.2	Constructor & Destructor Documentation	5
3.1.2.1	LGCell(bool IsAlive)	5
3.1.3	Member Function Documentation	6
3.1.3.1	setIsAlive(bool IsAlive)	6
3.2	LGGrid Class Reference	6
3.2.1	Constructor & Destructor Documentation	7
3.2.1.1	LGGrid()	7
3.2.1.2	LGGrid(int XSize, int YSize)	7
3.2.1.3	LGGrid(const LGGrid &Grid)	7
3.2.1.4	~LGGrid()	7
3.2.2	Member Function Documentation	7
3.2.2.1	displayStats() const	7
3.2.2.2	getTotalAliveCells() const	8
3.2.2.3	getXSize() const	8
3.2.2.4	getYSize() const	8
3.2.2.5	isCellAlive(int X, int Y) const	8
3.2.2.6	setCellAlive(int X, int Y, bool IsAlive)	8
3.2.2.7	updateStats()	9

4 File Documentation	11
4.1 D:/MyDocuments/Visual Studio 2015/Projects/LifeGame/LifeGame/sources/cpp/LGCell.cpp File Reference	11
4.1.1 Detailed Description	11
4.2 D:/MyDocuments/Visual Studio 2015/Projects/LifeGame/LifeGame/sources/cpp/LGGrid.cpp File Reference	11
4.2.1 Detailed Description	12
4.3 D:/MyDocuments/Visual Studio 2015/Projects/LifeGame/LifeGame/sources/cpp/LifeGame.cpp File Reference	12
4.3.1 Detailed Description	12
4.4 D:/MyDocuments/Visual Studio 2015/Projects/LifeGame/LifeGame/sources/header/LGCell.h File Reference	12
4.4.1 Detailed Description	13
4.5 D:/MyDocuments/Visual Studio 2015/Projects/LifeGame/LifeGame/sources/header/LGGrid.h File Reference	13
4.5.1 Detailed Description	13
Index	15

Chapter 1

Class Index

1.1 Class List

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

LGCell	Class representing a cell	5
LGGrid	6

Chapter 2

File Index

2.1 File List

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

D:/MyDocuments/Visual Studio 2015/Projects/LifeGame/LifeGame/sources/cpp/ LGCell.cpp	
Cell implementation	11
D:/MyDocuments/Visual Studio 2015/Projects/LifeGame/LifeGame/sources/cpp/ LGGrid.cpp	
Grid implementation	11
D:/MyDocuments/Visual Studio 2015/Projects/LifeGame/LifeGame/sources/cpp/ LifeGame.cpp	
Main for test	12
D:/MyDocuments/Visual Studio 2015/Projects/LifeGame/LifeGame/sources/header/ LGCell.h	
Cell definition	12
D:/MyDocuments/Visual Studio 2015/Projects/LifeGame/LifeGame/sources/header/ LGGrid.h	
Grid definition	13

Chapter 3

Class Documentation

3.1 LGCell Class Reference

Class representing a cell.

```
#include <LGCell.h>
```

Public Member Functions

- [LGCell](#) ()
Default constructor.
- [LGCell](#) (bool *IsAlive*)
Constructor with parameters.
- **LGCell** (const [LGCell](#) &Cell)
- bool [isAlive](#) () const
Is this cell alive?
- void [setIsAlive](#) (bool *IsAlive*)
Modify cell's status.

3.1.1 Detailed Description

Class representing a cell.

Class managing a grod of cells and it's behavior.

3.1.2 Constructor & Destructor Documentation

3.1.2.1 LGCell::LGCell (bool *IsAlive*)

Constructor with parameters.

Parameters

<i>IsAlive</i>	: if true, the cell is setted as alive
----------------	--

3.1.3 Member Function Documentation

3.1.3.1 void LGCell::setIsAlive (bool *IsAlive*)

Modify cell's status.

Parameters

<i>IsAlive</i>	: if true, the cell is setted as alive
----------------	--

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

- D:/MyDocuments/Visual Studio 2015/Projects/LifeGame/LifeGame/sources/header/LGCell.h
- D:/MyDocuments/Visual Studio 2015/Projects/LifeGame/LifeGame/sources/cpp/LGCell.cpp

3.2 LGGrid Class Reference

Public Member Functions

- [LGGrid](#) ()
Default constructor.
- [LGGrid](#) (int XSize, int YSize)
Constructor to build a specific sized grid.
- [LGGrid](#) (const [LGGrid](#) &Grid)
Copy constructor.
- [~LGGrid](#) ()
Destructor.
- int [getXSize](#) () const
Return number of line.
- int [getYSize](#) () const
Return number of column.
- bool [isCellAlive](#) (int X, int Y) const
Is a cell alive?
- int [getTotalAliveCells](#) () const
How many cells are alive?
- void [setCellAlive](#) (int X, int Y, bool IsAlive)
Change cell's status.
- void [execute](#) ()
Execute on turn of the game.
- void [display](#) () const
Displays on stdout all cells.
- void [displayTech](#) () const
display on stdout all cells including empty edges
- void [displayStats](#) () const
display current grid's stats
- void [updateStats](#) ()
update statistics.

3.2.1 Constructor & Destructor Documentation

3.2.1.1 LGrid::LGrid ()

Default constructor.

Default size is 5 by 5 grid is all cells dead

3.2.1.2 LGrid::LGrid (int *XSize*, int *YSize*)

Constructor to build a specific sized grid.

All cells are dead

Parameters

<i>XSize</i>	: number of line without empty ones
<i>YSize</i>	: number of column without empty ones

3.2.1.3 LGrid::LGrid (const LGrid & *Grid*)

Copy constructor.

Parameters

<i>Grid</i>	: creates a new grid based on the parameter
-------------	---

3.2.1.4 LGrid::~~LGrid ()

Destructor.

Desallocates grid and cells.

3.2.2 Member Function Documentation

3.2.2.1 void LGrid::displayStats () const

display current grid's stats

Current stats are :

- Grid size
- Total cells
- Total alive cells
- Number of execution
- Number of death
- Number of birth

3.2.2.2 int LGrid::getTotalAliveCells () const

How many cells are alive?

Returns

: total number of alive cells on the current grid

3.2.2.3 int LGrid::getXSize () const

Return number of line.

Returns

number of line without empty ones

3.2.2.4 int LGrid::getYSize () const

Return number of column.

Returns

number of column without empty ones

3.2.2.5 bool LGrid::isCellAlive (int X, int Y) const

Is a cell alive?

Check if a cell is alive or not. Manage empty cells therefore parameters should be as for the real grid only

Parameters

X	: line position
Y	: column position

Returns

true if the cell is alive

3.2.2.6 void LGrid::setCellAlive (int X, int Y, bool *IsAlive*)

Change cell's status.

Parameters

<i>X</i>	: line position
<i>Y</i>	: column position

3.2.2.7 void LGrid::updateStats ()

update statistics.

Current stats are :

- Grid size
- Total cells
- Total alive cells
- Number of execution
- Number of death
- Number of birth

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

- D:/MyDocuments/Visual Studio 2015/Projects/LifeGame/LifeGame/sources/header/LGrid.h
- D:/MyDocuments/Visual Studio 2015/Projects/LifeGame/LifeGame/sources/cpp/LGrid.cpp

Chapter 4

File Documentation

4.1 D:/MyDocuments/Visual Studio 2015/Projects/LifeGame/LifeGame/sources/cpp/LG↵ Cell.cpp File Reference

Cell implementation.

```
#include "..\..\header\LGCell.h"
```

4.1.1 Detailed Description

Cell implementation.

Author

Alexis Koutero

Version

0.1

4.2 D:/MyDocuments/Visual Studio 2015/Projects/LifeGame/LifeGame/sources/cpp/LG↵ Grid.cpp File Reference

Grid implementation.

```
#include "..\..\header\LGGrid.h"
```

4.2.1 Detailed Description

Grid implementation.

Author

Alexis Koutero

Version

0.1

4.3 D:/MyDocuments/Visual Studio 2015/Projects/LifeGame/LifeGame/sources/cpp/Life↵ Game.cpp File Reference

Main for test.

```
#include <iostream>
#include <cstdlib>
#include <ctime>
#include "..\..\header\LGCell.h"
#include "..\..\header\LGGrid.h"
```

Functions

- int **main** ()

4.3.1 Detailed Description

Main for test.

Author

Alexis Koutero

Version

0.1

4.4 D:/MyDocuments/Visual Studio 2015/Projects/LifeGame/LifeGame/sources/header/↵ LGCell.h File Reference

Cell definition.

```
#include <iostream>
```


Classes

- class [LGCell](#)

Class representing a cell.

4.4.1 Detailed Description

Cell definition.

Author

Alexis Koutero

Version

0.1

4.5 D:/MyDocuments/Visual Studio 2015/Projects/LifeGame/LifeGame/sources/header/LGGrid.h File Reference

Grid definition.

```
#include "LGCell.h"
```

Classes

- class [LGGrid](#)

4.5.1 Detailed Description

Grid definition.

Author

Alexis Koutero

Version

0.1

Index

~LGGrid

LGGrid, [7](#)

D:/MyDocuments/Visual Studio 2015/Projects/Life↔
Game/LifeGame/sources/cpp/LGCell.cpp, [11](#)

D:/MyDocuments/Visual Studio 2015/Projects/Life↔
Game/LifeGame/sources/cpp/LGGrid.cpp, [11](#)

D:/MyDocuments/Visual Studio 2015/Projects/Life↔
Game/LifeGame/sources/cpp/LifeGame.cpp,
[12](#)

D:/MyDocuments/Visual Studio 2015/Projects/Life↔
Game/LifeGame/sources/header/LGCell.h,
[12](#)

D:/MyDocuments/Visual Studio 2015/Projects/Life↔
Game/LifeGame/sources/header/LGGrid.h,
[13](#)

displayStats

LGGrid, [7](#)

getTotalAliveCells

LGGrid, [7](#)

getXSize

LGGrid, [8](#)

getYSize

LGGrid, [8](#)

isCellAlive

LGGrid, [8](#)

LGCell, [5](#)

LGCell, [5](#)

setIsAlive, [6](#)

LGGrid, [6](#)

~LGGrid, [7](#)

displayStats, [7](#)

getTotalAliveCells, [7](#)

getXSize, [8](#)

getYSize, [8](#)

isCellAlive, [8](#)

LGGrid, [7](#)

setCellAlive, [8](#)

updateStats, [9](#)

setCellAlive

LGGrid, [8](#)

setIsAlive

LGCell, [6](#)

updateStats

LGGrid, [9](#)