

Genealogy.v5

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# Chapter 1

## Hierarchical Index

### 1.1 Class Hierarchy

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

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GColor	5
Genealogy5config	6
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GMpoint	9
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GPeopleAncestors	11
GPeopleFight	12
gPoint	12
GTribe	12
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lineIntersection	16
ofBaseApp	
Genealogy5	6
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ofVec2f	
MaskPoint	17
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# Chapter 2

## Class Index

### 2.1 Class List

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

<b>gc</b> . . . . .	5
<b>GColor</b> . . . . .	5
<b>Genealogy5</b> . . . . .	6
<b>Genealogy5config</b> . . . . .	6
<b>GenealogyApp</b> . . . . .	8
<b>Gmesh</b> . . . . .	8
<b>GMface</b> . . . . .	9
<b>GMpoint</b> . . . . .	9
<b>GPeople</b> . . . . .	10
<b>GPeopleAncestors</b> . . . . .	11
<b>GPeopleFight</b> . . . . .	12
<b>gPoint</b> . . . . .	12
<b>GTribe</b> . . . . .	12
<b>GTribeBoundary</b> . . . . .	13
<b>GTribeRelation</b> . . . . .	13
<b>Gwar</b> . . . . .	14
<b>GWorlConfiguration</b> . . . . .	14
<b>GWorld</b> . . . . .	15
<b>GWorldCell</b> . . . . .	16
<b>lineIntersection</b> . . . . .	16
<b>MaskPoint</b> . . . . .	17
<b>ProjectionMask</b> . . . . .	17
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<b>TribeBoundaryPoint</b> . . . . .	18





## Chapter 3

# Class Documentation

### 3.1 gc Union Reference

#### Public Attributes

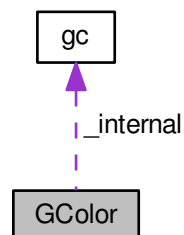
- uint32\_t i
- unsigned char c [4]

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

- /home/frankiezafe/projects/genealogy/work\_cpp/Genealogy.5/src/genealogy/Gcolor.h

### 3.2 GColor Class Reference

Collaboration diagram for GColor:



## Public Member Functions

- void **set** (string rgba\_hexa)
- unsigned char & **operator[]** (unsigned int p)
- string **str** ()
- void **apply** ()
- ofColor **color** ()

## Protected Attributes

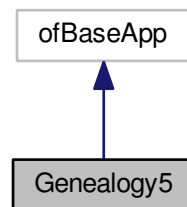
- **gc\_internal**
- ofColor **ocolor**

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

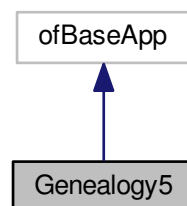
- /home/frankiezafe/projects/genealogy/work\_cpp/Genealogy.5/src/genealogy/Gcolor.h

## 3.3 Genealogy5 Class Reference

Inheritance diagram for Genealogy5:



Collaboration diagram for Genealogy5:



## Public Member Functions

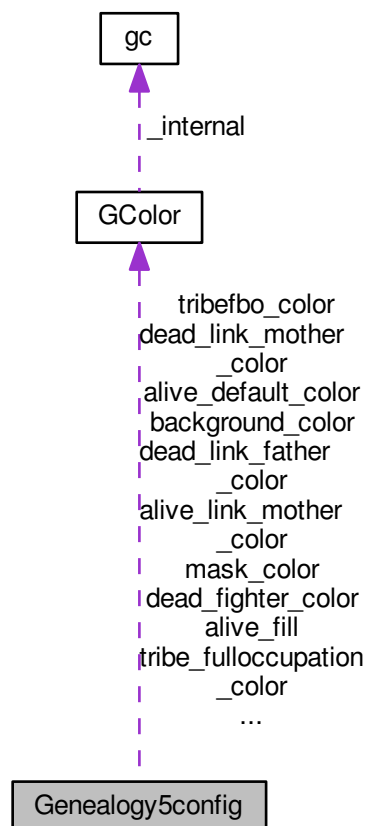
- **Genealogy5** (**Genealogy5config** \*conf)
- void **setup** ()
- void **update** ()
- void **draw** ()
- void **keyReleased** (int key)

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

- /home/frankiezafe/projects/genealogy/work\_cpp/Genealogy.5/src/genealogy/Genealogy5.h
- /home/frankiezafe/projects/genealogy/work\_cpp/Genealogy.5/src/genealogy/Genealogy5.cpp

## 3.4 Genealogy5config Struct Reference

Collaboration diagram for Genealogy5config:



## Public Member Functions

- void **toggleTribe** ()
- void **toggleDead** ()
- void **toggleAlive** ()
- void **loadDefault** ()
- void **print** ()

## Public Attributes

- GMODE **mode**
- bool **controlEnabled**
- int **dayperupdate**
- int **viewportWidth**
- int **viewportHeight**
- int **viewportOffsetx**
- int **viewportOffsety**
- bool **displayTribe**
- bool **displayDead**
- bool **displayAlive**
- bool **displayFps**
- int **maxpeoplecount**
- int **mintribescount**
- int **maxtribescount**
- string **mask**
- string **tribes\_locations**
- int **gridsize**
- string **gridmask**
- int **ancestors**
- int **ancestors\_deviation**
- float **dead\_fighter\_radius**
- float **dead\_adult\_radius\_min**
- float **dead\_adult\_radius\_max**
- float **dead\_adult\_radius\_step**
- float **dead\_child\_radius\_min**
- float **dead\_child\_radius\_max**
- float **dead\_child\_radius\_step**
- bool **info\_age**
- bool **info\_alive**
- int **info\_x**
- int **info\_y**
- float **info\_rotation**
- GColor **info\_color**
- GColor **fadeout\_color**
- GColor **mask\_color**
- GColor **background\_color**
- GColor **tribefbo\_color**
- GColor **alivefbo\_color**
- GColor **deadfbo\_color**
- GColor **tribe\_fulloccupation\_color**
- GColor **tribe\_occupation\_color**
- GColor **alive\_default\_color**
- GColor **alive\_link\_mother\_color**
- GColor **alive\_link\_father\_color**

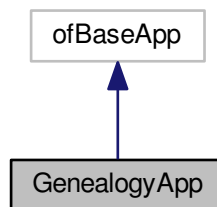
- GColor `alive_fighter_color`
- GColor `alive_returnfromwar_color`
- GColor `alive_male_color`
- GColor `alive_pregnant_color`
- GColor `alive_fill`
- bool `alive_fill_enabled`
- GColor `dead_default_color`
- GColor `dead_fighter_color`
- GColor `dead_link_mother_color`
- GColor `dead_link_father_color`
- GColor `dead_child_color`

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

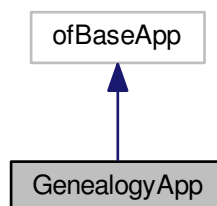
- `/home/frankiezafe/projects/genealogy/work_cpp/Genealogy.5/src/genealogy/GAll.h`

### 3.5 GenealogyApp Class Reference

Inheritance diagram for GenealogyApp:



Collaboration diagram for GenealogyApp:



### Public Member Functions

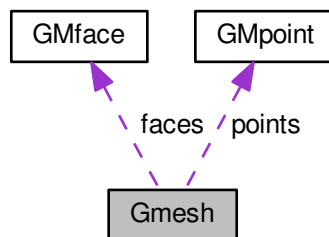
- **GenealogyApp** (const **Genealogy5config** &)
- void **setup** ()
- void **update** ()
- void **draw** ()
- void **keyReleased** (int key)
- void **mousePressed** (int x, int y, int button)

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

- /home/frankiezafe/projects/genealogy/work\_cpp/Genealogy.5/src/genealogy/GenealogyApp.h
- /home/frankiezafe/projects/genealogy/work\_cpp/Genealogy.5/src/genealogy/GenealogyApp.cpp

## 3.6 Gmesh Class Reference

Collaboration diagram for Gmesh:



### Public Member Functions

- void **configure** (float width, float height, float depth)
- void **getDepth** (float x, float y, float dirx, float diry, float \*results)

### Static Public Member Functions

- static **Gmesh** \* **getInstance** ()

### Public Attributes

- ofVec3f **dim**
- int \* **grid**
- **GMpoint** \* **points**
- **GMface** \* **faces**

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

- /home/frankiezafe/projects/genealogy/work\_cpp/Genealogy.5/src/genealogy/Gmesh.h
- /home/frankiezafe/projects/genealogy/work\_cpp/Genealogy.5/src/genealogy/Gmesh.cpp

## 3.7 GMface Struct Reference

### Public Attributes

- float **x**
- float **y**
- float **z**
- ofVec3f **normale**
- int **p1**
- int **p2**
- int **p3**
- float **kc**
- float **ac**
- float **bc**

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

- /home/frankiezafe/projects/genealogy/work\_cpp/Genealogy.5/src/genealogy/Gmesh.h

## 3.8 GMpoint Struct Reference

### Public Attributes

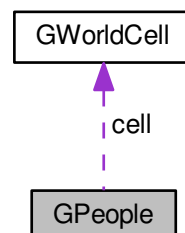
- int **ID**
- int **column**
- int **row**
- float **x**
- float **y**
- float **z**

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

- /home/frankiezafe/projects/genealogy/work\_cpp/Genealogy.5/src/genealogy/Gmesh.h

## 3.9 GPeople Class Reference

Collaboration diagram for GPeople:



## Public Member Functions

- void **reset** ()
- void **init** (long uniqueID, bool ismale)
- void **buildGenealogy** (long fuid, long muid, **GPeopleAncestors** \*fgen, **GPeopleAncestors** \*mgen)
- void **anotherday** ()
- void **kill** ()
- void **gohome** (**GTribeBoundary** \*boundary)
- void **gohome** (ofPoint \*)
- long **getUnique** ()
- bool **isActive** ()
- void **setAncestor** (bool n\_ancestor)
- bool **isAncestor** ()
- void **setFather** (bool n\_knowfather)
- bool **hasFather** ()
- bool **isFoetus** ()
- void **setFoetus** (bool nfoetus)
- bool **isAdult** ()
- void **setAdult** (bool nadult)
- bool **isFertile** ()
- void **setFertile** (bool n\_fertile)
- bool **isMale** ()
- bool **hasMate** ()
- **GPeople** \* **getMate** ()
- void **setMate** (**GPeople** \*p)
- void **unMate** ()
- bool **isPregnant** ()
- bool **setPregnant** (bool n\_pregnant)
- int **getAge** ()
- **GPeopleAncestors** \* **getAncestors** ()
- int **getChildrenNum** ()
- int **getPregnancyTime** ()
- void **setPregnancyTime** (int n\_pregnancytime)
- void **addChildren** (**GPeople** \*c)
- **GPeople** \* **getChildrenAt** (int index)
- void **setFighter** (bool n\_fighter)
- bool **isFighter** ()
- bool **isReturningFromWar** ()
- void **confirmPosition** (int i)
- bool **backToLastPosition** ()
- void **setCell** (bool n\_gotCell)
- bool **hasCell** ()

## Public Attributes

- int **tribePosition**
- int **gpeopleTableIndex**
- ofPoint **position**
- ofPoint **target**
- ofPoint **home**
- ofPoint **direction**
- ofPoint **fatherposition**
- ofPoint **motherposition**
- **GWorldCell** \* **cell**



### 3.9.1 Member Function Documentation

3.9.1.1 void GPeople::buildGenealogy ( long *fuid*, long *muid*, GPeopleAncestors \* *fgen*, GPeopleAncestors \* *mgen* )

level 1

level 2

level 3

then sorting

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

- /home/frankiezafe/projects/genealogy/work\_cpp/Genealogy.5/src/genealogy/GAll.h
- /home/frankiezafe/projects/genealogy/work\_cpp/Genealogy.5/src/genealogy/GPeople.cpp

## 3.10 GPeopleAncestors Class Reference

### Public Attributes

- bool **declared**
- long \* **normal**
- long \* **sorted**
- long \* **sortedlevels**

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

- /home/frankiezafe/projects/genealogy/work\_cpp/Genealogy.5/src/genealogy/GAll.h

## 3.11 GPeopleFight Class Reference

### Public Attributes

- int **fighter01**
- long **fighter01unique**
- int **fighter02**
- long **fighter02unique**
- bool **active**
- int **numOfTestRemaining**

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

- /home/frankiezafe/projects/genealogy/work\_cpp/Genealogy.5/src/genealogy/GAll.h

## 3.12 gPoint Class Reference

### Public Attributes

- float **x**
- float **y**

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

- /home/frankiezafe/projects/genealogy/work\_cpp/Genealogy.5/src/basics/gPoint.h
- /home/frankiezafe/projects/genealogy/work\_cpp/Genealogy.5/src/basics/gPoint.cpp

## 3.13 GTribe Class Reference

### Public Member Functions

- bool **isActive** ()
- long **getUnique** ()
- ofPoint \* **getCenter** ()
- vector< **GTribeRelation** > \* **getRelations** ()
- **GTribe** \* **getNearestTribe** ()
- int **getPossibleMate** (**GPeople** \*male, bool sametribe)
- int **getAvailableWomanAt** (int pos)
- vector< int > \* **getAvailableWomen** ()
- void **setWar** (bool n\_war)
- bool **inWar** ()
- vector< int > \* **getMen** ()
- vector< int > \* **getAllMen** ()
- **GTribeBoundary** \* **getBoundaries** ()
- void **init** (long uniqueID, **GWorld** \*w)
- void **initRelation** (**GTribe** \*othertribe)
- void **generateAncestor** ()
- void **anotherday** ()
- void **setCenter** (float x, float y)
- void **addToCenter** (float x, float y)
- void **adaptBoundary** (float x, float y)
- void **findMate** (**GPeople** \*p)
- void **doMate** (**GPeople** \*p)
- void **doCoit** (**GPeople** \*p)
- void **doBirth** (**GPeople** \*p)
- void **born** (**GPeople** \*p)
- void **dead** (**GPeople** \*p)
- void **adult** (**GPeople** \*p)
- void **checkFertility** (**GPeople** \*p)
- void **killRelation** (int othertribepos)
- void **overlap** (**GTribe** \*othertribe, bool reflect)
- void **mixedcouple** (**GTribe** \*othertribe, bool reflect)
- void **endwar** (**GTribe** \*othertribe)

### Public Attributes

- vector< int > **cells**
- int **tribePosition**
- int **promiscuity**
- float **pacivity**

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

- /home/frankiezafe/projects/genealogy/work\_cpp/Genealogy.5/src/genealogy/GAll.h
- /home/frankiezafe/projects/genealogy/work\_cpp/Genealogy.5/src/genealogy/GTribe.cpp

## 3.14 GTribeBoundary Class Reference

### Public Attributes

- int **num**
- ofPoint \* **bounds**

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

- /home/frankiezafe/projects/genealogy/work\_cpp/Genealogy.5/src/genealogy/GAll.h

## 3.15 GTribeRelation Struct Reference

### Public Attributes

- int **tribePosition**
- float **distance**
- float **wars**
- int **mixedCouples**
- int **overlap**

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

- /home/frankiezafe/projects/genealogy/work\_cpp/Genealogy.5/src/genealogy/GAll.h

## 3.16 Gwar Class Reference

### Public Attributes

- vector< GPeopleFight > **fights**
- int **rounds**
- int **tribe01**
- int **tribe02**
- bool **active**

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

- /home/frankiezafe/projects/genealogy/work\_cpp/Genealogy.5/src/genealogy/GAll.h

## 3.17 GWorldConfiguration Struct Reference

### Public Member Functions

- void **print** ()

### Public Attributes

- int **maxNumOfPeople**
- int **daysInYear**
- int **childrenToAdult**
- int **womenFertilityPeriod**
- int **maxAge**
- float **probabilitytToDie**
- float **maleFemaleRatio**
- float **maleFemaleRatioDeviation**
- float **chanceToFindAMate**
- float **coupleMalePositionRatio**
- float **coupleMalePositionRatioDeviation**
- int **maxChildrenByWoman**
- float **chanceToCoit**
- float **chanceToHaveAChild**
- float **womenPregnancyTime**
- int **gridsize**
- int **promiscuity**
- int **promiscuityDeviation**
- float **pacivity**
- float **pacivityDeviation**
- int **initTribes**
- int **initTribesDeviation**
- int **initAncestors**
- int **initAncestorsDeviation**
- int **minTribes**
- int **maxTribes**

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

- /home/frankiezafe/projects/genealogy/work\_cpp/Genealogy.5/src/genealogy/GAll.h

## 3.18 GWorld Class Reference

### Public Member Functions

- bool **isActive** ()
- bool **isActiveTribes** ()
- long **getUniqueID** ()
- long **getAge** ()
- int **getDaysInYear** ()
- float **getMaleFemaleRatio** ()
- float **getChanceToFindAMate** ()

- float **getCoupleMalePosition** ()
- **GPeople** \* **getPeopleAt** (int pos)
- **GTribe** \* **getTribeAt** (int pos)
- vector< **GTribe** \* > \* **getTribes** ()
- vector< **GPeople** \* > \* **getDead** ()
- vector< **Gwar** > \* **getWars** ()
- int **getAliveCount** ()
- void **loadconfig** (**GWorldConfiguration** \*conf, ofShortPixels &ref)
- void **print** ()
- void **init** (int n\_maxPeople)
- void **finalise** (ofShortPixels &ref)
- bool **isFull** ()
- **GPeople** \* **getNewPeople** ()
- void **launchTribes** (int tnum, int ancestorNum)
- void **addTribe** (float x, float y, int ancestorNum)
- void **anotherday** ()
- vector< **GWorldCell** \* > **getCoupleCells** (float x, float y, int tribePosition)
- void **deadPeople** (int pos)
- void **startWar** (**GTribe** \*offender, **GTribe** \*defender)
- void **stopWar** (int index)
- bool **hasNextPeople** ()
- **GPeople** \* **getNextPeople** ()
- **GWorldCell** \* **getCellAt** (int pos)
- vector< **GWorldCell** \* > \* **getCellsOfTheDay** ()

### Public Attributes

- int **daysInYear**
- int **childrenToAdult**
- int **womenFertilityPeriod**
- int **womenFertilityMaxAge**
- int **womenPregnancyTime**
- int **maxAge**
- float **probabilityToDie**
- float **maleFemaleRatio**
- float **chanceToFindAMate**
- float **coupleMalePositionRatio**
- float **coupleMalePositionRatioDeviation**
- float **chanceToCoit**
- int **maxChildrenByWoman**
- float **chanceToHaveAChild**
- float **pacivity**
- float **pacivityDeviation**
- int **promiscuity**
- int **promiscuityDeviation**
- bool **releaseDeadCells**
- int **gridsize**
- float **cellsize**

### 3.18.1 Member Function Documentation

#### 3.18.1.1 void GWorld::anotherday ( )

both fighters are still alive! let's kill each other!

one of the fighters has died in another attack or something else

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

- /home/frankiezafe/projects/genealogy/work\_cpp/Genealogy.5/src/genealogy/GAll.h
- /home/frankiezafe/projects/genealogy/work\_cpp/Genealogy.5/src/genealogy/GWorld.cpp

### 3.19 GWorldCell Struct Reference

#### Public Attributes

- int **col**
- int **row**
- float **x**
- float **y**
- bool **active**
- bool **conflict**
- int **age**
- float **lastoccupation**
- float **occupation**
- int **tribePosition**
- bool **forbidden**

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

- /home/frankiezafe/projects/genealogy/work\_cpp/Genealogy.5/src/genealogy/GAll.h

### 3.20 lineIntersection Struct Reference

#### Public Attributes

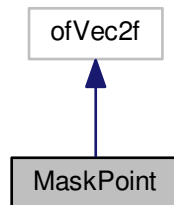
- bool **exist**
- float **x**
- float **y**

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

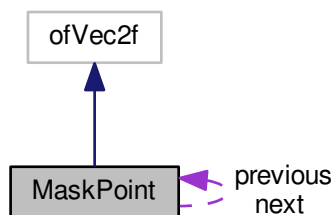
- /home/frankiezafe/projects/genealogy/work\_cpp/Genealogy.5/src/genealogy/GAll.h

## 3.21 MaskPoint Class Reference

Inheritance diagram for MaskPoint:



Collaboration diagram for MaskPoint:



### Public Attributes

- **MaskPoint \* previous**
- **MaskPoint \* next**

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

- `/home/frankiezafe/projects/genealogy/work_cpp/Genealogy.5/src/basics/ProjectionMask.h`

## 3.22 ProjectionMask Class Reference

### Public Member Functions

- void **load** (string path)
- void **resize** (int width, int height)

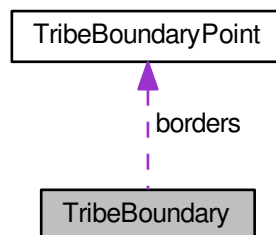
- void **save** ()
- void **draw** (bool disable\_color=false)
- void **refresh** ()
- void **render** (ofFbo \*target)
- void **toggleEdit** ()
- void **toggleFbo** ()
- void **setPrecision** (float p)
- void **add** ()
- void **add** (float norm\_x, float norm\_y)
- void **moveUp** ()
- void **moveRight** ()
- void **moveDown** ()
- void **moveLeft** ()
- void **remove** ()
- void **divide** ()
- void **clear** ()
- **MaskPoint** \* **getClosest** (float norm\_x, float norm\_y)
- bool **isEditing** ()

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

- /home/frankiezafe/projects/genealogy/work\_cpp/Genealogy.5/src/basics/ProjectionMask.h
- /home/frankiezafe/projects/genealogy/work\_cpp/Genealogy.5/src/basics/ProjectionMask.cpp

### 3.23 TribeBoundary Class Reference

Collaboration diagram for TribeBoundary:



#### Public Attributes

- bool **active**
- float **x**
- float **y**
- **TribeBoundaryPoint** \* **borders**
- vector< **TribeBoundaryPoint** \* > **drawables**

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

- /home/frankiezafe/projects/genealogy/work\_cpp/Genealogy.5/src/genealogy/Genealogy5.h



## 3.24 TribeBoundaryPoint Struct Reference

### Public Attributes

- float **x**
- float **y**
- float **displayx**
- float **displayy**
- float **angle**
- float **radius**
- bool **directhit**

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

- `/home/frankiezafe/projects/genealogy/work_cpp/Genealogy.5/src/genealogy/Genealogy5.h`

