labo_10_comte_emmanuelle_gallay_david

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Chapter 1

File Index

1.1 File List

Here is a list of all files with brief descriptions:

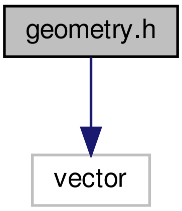
Chapter 2

File Documentation

2.1 geometry.h File Reference

```
#include <vector>
```

Include dependency graph for geometry.h:



Typedefs

- typedef std::size_t Coordonate
- typedef std::vector< Coordonate > Point
- typedef std::vector< Point > PointList
- typedef std::vector< PointState > Line
- typedef std::vector< Line > Map
- typedef std::vector< Map > Space

Enumerations

- enum PointState { EMPTY, EXIST }
- enum MapCode { MAPCODE_XY, MAPCODE_XZ, MAPCODE_YZ }

Functions

- PointList getPointList ()

  Get a point list from the user.
- void displayLine (const Line &line, char exist='O', char empty='.')

  Display a line.
- void displayMap (const Map &map, MapCode code, char exist='O', char empty='.')

  Display a map.
- Space getSpace (const PointList &list)

  Create a space conatin the three projections.
- void project (const PointList &list, Map &map, MapCode code)

  Project a point in a map (XY, XZ or YZ)
- void addPoint (Space &space, Point point)

  Add a point to all of projections in space.
- Map getProjection (const Space &space, MapCode code)
- Coordonate getX (const Point &point)

  Get the Coordonate X from a point.
- Coordonate getY (const Point &point)

  Get the Coordonate Y from a point.
- Coordonate getZ (const Point &point)

  Get the Coordonate Z from a point.
- void setX (Point &point, Coordonate value)

  Set the Coordonate X from a point.
- void setY (Point &point, Coordonate value)

  Get the Coordonate Y from a point.
- void setZ (Point &point, Coordonate value)

  Get the Coordonate Z from a point.

2.1.1 Typedef Documentation

2.1.1.1 Coordonate

```
typedef std::size_t Coordonate
```

2.1.1.2 Line

```
typedef std::vector<PointState> Line
```

2.1.1.3 Map

```
typedef std::vector<Line> Map
```

2.1.1.4 Point

```
typedef std::vector<Coordonate> Point
```

2.1.1.5 PointList

```
typedef std::vector<Point> PointList
```

2.1.1.6 Space

```
typedef std::vector<Map> Space
```

2.1.2 Enumeration Type Documentation

2.1.2.1 MapCode

```
enum MapCode
```

Enumerator

MAPCODE_XY	
MAPCODE_XZ	
MAPCODE_YZ	

2.1.2.2 PointState

```
enum PointState
```

Enumerator

EMPTY	
EXIST	

2.1.3 Function Documentation

2.1.3.1 addPoint()

```
void addPoint (
            Space & space,
            Point point )
```

Add a point to all of projections in space.

Parameters

in	*PointList*	list
in		

2.1.3.2 displayLine()

```
void displayLine (
            const Line & line,
            char exist = 'O',
            char empty = '.'  )
```

Display a line.

Parameters

in	*const*	Line& line
in	*char*	exist Display for a point Default value 'O'
in	*char*	empty Display for a place empty Default value '.'

2.1.3.3 displayMap()

```
void displayMap (
            const Map & map,
            MapCode code,
            char exist = 'O',
            char empty = '.'  )
```

Display a map.

Parameters

in	*const*	Map& map
in	*char*	exist Display for a point Default value 'O'
in	*char*	empty Display for a place empty Default value '.'

2.1.3.4 getPointList()

```
PointList getPointList ( )
```

Get a point list from the user.

Returns

PointList The point list the user enter

2.1.3.5 getProjection()

```
Map getProjection (
            const Space & space,
            MapCode code )
```

Parameters

in	*const*	Space& space
in	*MapCode*	code The code for the direction of the projection

Returns

Map The map of the projection asked

2.1.3.6 getSpace()

```
Space getSpace (
            const PointList & list )
```

Create a space conatin the three projections.

Parameters

in	*PointList*	list The list of the points in the space

Returns

Space Contain the three projections

2.1.3.7 getX()

```
Coordonate getX (
             const Point & point )
```

Get the Coordonate X from a point.

Parameters

in	*Point*	point

Returns

Coordonate The Coordonate X of the point

2.1.3.8 getY()

```
Coordonate getY (
             const Point & point )
```

Get the Coordonate Y from a point.

Parameters

in	*Point*	point

Returns

Coordonate The Coordonate Y of the point

2.1.3.9 getZ()

```
Coordonate getZ (
             const Point & point )
```

Get the Coordonate Z from a point.

Parameters

in	*Point*	point

Returns

Coordonate The Coordonate Z of the point

2.1.3.10 project()

```
void project (
             const PointList & list,
             Map & map,
             MapCode code )
```

Project a point in a map (XY, XZ or YZ)

Parameters

in	*PointList*	list
in		

2.1.3.11 setX()

```
void setX (
             Point & point,
             Coordonate value )
```

Set the Coordonate X from a point.

Parameters

in	*Point*	point

2.1.3.12 setY()

```
void setY (
             Point & point,
             Coordonate value )
```

Get the Coordonate Y from a point.

Parameters

in	*Point*	point

2.1.3.13 setZ()

```
void setZ (
            Point & point,
            Coordonate value )
```

Get the Coordonate Z from a point.

Parameters

in	*Point*	point

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