DGL**

0.1

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Namespace Documentation

5.1 DECS Namespace Reference

Namespace of Descrete Elements Calculation Suites(DECS)

Namespaces

- namespace GL

  Namespace of GL section of Descrete Elements Calculation Suites(DECS)

5.1.1 Detailed Description

Namespace of Descrete Elements Calculation Suites(DECS)

5.2 DECS::GL Namespace Reference

Namespace of GL section of Descrete Elements Calculation Suites(DECS)

Classes

- class DGLLine
- class DGLTriangle
- class DGLSquare
- class DGLCircle
- class DGLObject
- class DGLColor
- class DGLPosition
- struct DGLWindowProperty

Window property structure for DECS::GL::DGLWindow class.

- class DGLWindow

  Window class.

Typedefs

- typedef void(∗ RESIZE_FUNC)(int, int)

  Type definition for the resize function.

Functions

- RESIZE_FUNC getResizeFunc (GLdouble canvasWidth, GLdouble canvasHeight)

  Helper function to generate resize function.

Variables

- static const DGLColor DGL_WHITE (1.0, 1.0, 1.0, 1.0)
- static const DGLColor DGL_BLACK (0.0, 0.0, 0.0, 1.0)
- static const DGLColor DGL_RED (1.0, 0.0, 0.0, 1.0)
- static const DGLColor DGL_GREEN (0.0, 1.0, 0.0, 1.0)
- static const DGLColor DGL_BLUE (0.0, 0.0, 1.0, 1.0)
- static const DGLPosition DGL_ORIGIN (0.0, 0.0, 0.0)
- static const int X = 0
- static const int Y = 1
- static const int Z = 2
- static const int R = 0
- static const int G = 1
- static const int B = 2
- static const int A = 3
- static DGLWindowProperty DGL_DEFAULT_WPROP

  Default window property.

5.2.1 Detailed Description

Namespace of GL section of Descrete Elements Calculation Suites(DECS)

5.2.2 Typedef Documentation

5.2.2.1 typedef void(* DECS::GL::RESIZE_FUNC)(int, int)

Type definition for the resize function.

5.2.3 Function Documentation

5.2.3.1 RESIZE_FUNC DECS::GL::getResizeFunc (GLdouble *canvasWidth,* GLdouble *canvasHeight*)

Helper function to generate resize function.

This function returns the function pointer of resize function. That resize function provide a fix size draw (canvasWidth X canvas Height) after the window resized.

Parameters

canvasWidth	Width of display area
canvasHeight	Height of display area

Returns

Pointer to resize function

5.2.4 Variable Documentation

5.2.4.1 const int DECS::GL::A = 3 [static]

5.2.4.2 const int DECS::GL::B = 2 [static]

5.2.4.3 const DGLColor DECS::GL::DGL_BLACK(0.0, 0.0, 0.0, 1.0) [static]

5.2.4.4 const DGLColor DECS::GL::DGL_BLUE(0.0, 0.0, 1.0, 1.0) [static]

5.2.4.5 DGLWindowProperty DECS::GL::DGL_DEFAULT_WPROP [static]

Initial value:

```
{
     "DGL** Window",
     GL_RGBA,
     DGL_WHITE,
     300,
     300,
     100,
     100}
```

Default window property.

Following is the default values.

Parameters

*title_*	"DGL∗∗ Window"
*mode_*	GL_RGBA
*bgColor_*	DGL_WHITE
*wWidth_*	300px
*wHeight_*	300px
wPositionX_-	100px
wPositionY_-	100px

5.2.4.6 const DGLColor DECS::GL::DGL_GREEN(0.0, 1.0, 0.0, 1.0) [static]

5.2.4.7 const DGLPosition DECS::GL::DGL_ORIGIN(0.0, 0.0, 0.0) [static]

5.2.4.8 const DGLColor DECS::GL::DGL_RED(1.0, 0.0, 0.0, 1.0) [static]

5.2.4.9 const DGLColor DECS::GL::DGL_WHITE(1.0, 1.0, 1.0, 1.0) [static]

5.2.4.10 const int DECS::GL::G = 1 [static]

5.2.4.11 const int DECS::GL::R = 0 [static]

5.2.4.12 const int DECS::GL::X = 0 [static]

5.2.4.13 const int DECS::GL::Y = 1 [static]

5.2.4.14 const int DECS::GL::Z = 2 [static]

Chapter 6

Class Documentation

6.1 DECS::GL::DGLCircle Class Reference

`#include <dglbasicshape.hpp>`

Inheritance diagram for DECS::GL::DGLCircle:

Public Member Functions

- DGLCircle (GLdouble radius)
- DGLCircle (DGLPosition center, GLdouble radius)
- DGLCircle (int mode, DGLPosition center, GLdouble radius)
- DGLCircle (DGLPosition center, GLdouble radius, DGLColor color)
- DGLCircle (int mode, DGLPosition center, GLdouble radius, DGLColor color)
- DGLCircle (int mode, DGLPosition center, GLdouble radius, int nPoint, DGL-Color color)
- ~DGLCircle ()
- void setCenter (DGLPosition center)
- void setRadius (GLdouble radius)
- void setNumberOfPoints (int nPoint)
- virtual void setColor (DGLColor color)
- virtual void draw ()

Private Member Functions

- DGLCircle ()

Private Attributes

- DGLPosition center_
- GLdouble radius_
- int nPoint_

6.1.1 Constructor & Destructor Documentation

6.1.1.1 DECS::GL::DGLCircle::DGLCircle ( ) [inline, private]

6.1.1.2 DECS::GL::DGLCircle::DGLCircle (GLdouble *radius*) [inline]

6.1.1.3 DECS::GL::DGLCircle::DGLCircle (DGLPosition *center*, GLdouble *radius*) [inline]

6.1.1.4 DECS::GL::DGLCircle::DGLCircle (int *mode*, DGLPosition *center*, GLdouble *radius*) [inline]

6.1.1.5 DECS::GL::DGLCircle::DGLCircle (DGLPosition *center*, GLdouble *radius*, DGLColor *color*) [inline]

6.1.1.6 DECS::GL::DGLCircle::DGLCircle (int *mode*, DGLPosition *center*, GLdouble *radius*, DGLColor *color*) [inline]

6.1.1.7 DECS::GL::DGLCircle::DGLCircle (int *mode*, DGLPosition *center*, GLdouble *radius*, int *nPoint*, DGLColor *color*) [inline]

6.1.1.8 DECS::GL::DGLCircle::~DGLCircle ( ) [inline]

6.1.2 Member Function Documentation

6.1.2.1 virtual void DECS::GL::DGLCircle::draw ( ) [virtual]

Implements DECS::GL::DGLObject.

6.1.2.2 void DECS::GL::DGLCircle::setCenter (DGLPosition *center*)

6.1.2.3 virtual void DECS::GL::DGLCircle::setColor (DGLColor *color*) [virtual]

Implements DECS::GL::DGLObject.

6.1.2.4 void DECS::GL::DGLCircle::setNumberOfPoints (int *nPoint*)

6.1.2.5 void DECS::GL::DGLCircle::setRadius (GLdouble *radius*)

6.1.3 Member Data Documentation

6.1.3.1 DGLPosition DECS::GL::DGLCircle::center_ [private]

6.1.3.2 int DECS::GL::DGLCircle::nPoint_ [private]

6.1.3.3 GLdouble DECS::GL::DGLCircle::radius_ [private]

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

- include/GL/dglbasicshape.hpp

6.2 DECS::GL::DGLColor Class Reference

```
#include <dglutil.hpp>
```

Public Member Functions

- DGLColor ()
- DGLColor (GLdouble r, GLdouble g, GLdouble b)
- DGLColor (GLdouble r, GLdouble g, GLdouble b, GLdouble a)
- ~DGLColor ()
- GLdouble r ()
- GLdouble g ()
- GLdouble b ()
- GLdouble a ()

Private Attributes

- GLdouble color_ [4]

6.2.1 Constructor & Destructor Documentation

6.2.1.1 DECS::GL::DGLColor::DGLColor ( )

6.2.1.2 DECS::GL::DGLColor::DGLColor (GLdouble *r*, GLdouble *g*, GLdouble *b*)

6.2.1.3 DECS::GL::DGLColor::DGLColor (GLdouble *r*, GLdouble *g*, GLdouble *b*, GLdouble *a*)

6.2.1.4 DECS::GL::DGLColor::∼DGLColor ( )

6.2.2 Member Function Documentation

6.2.2.1 GLdouble DECS::GL::DGLColor::a ( )

6.2.2.2 GLdouble DECS::GL::DGLColor::b ( )

6.2.2.3 GLdouble DECS::GL::DGLColor::g ( )

6.2.2.4 GLdouble DECS::GL::DGLColor::r ( )

6.2.3 Member Data Documentation

6.2.3.1 GLdouble DECS::GL::DGLColor::color_[4] [private]

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

- include/GL/dglutil.hpp

6.3 DECS::GL::DGLLine Class Reference

`#include <dglbasicshape.hpp>`

Inheritance diagram for DECS::GL::DGLLine:

Public Member Functions

- DGLLine (DGLPosition beginPoint, DGLPosition endPoint)
- DGLLine (DGLPosition beginPoint, DGLPosition endPoint, DGLColor color)
- DGLLine (int mode, DGLPosition beginPoint, DGLPosition endPoint, DGLColor color)

- ~DGLLine ()
- void setPoint (DGLPosition beginPoint, DGLPosition endPosition)
- virtual void setColor (DGLColor color)
- virtual void draw ()

Private Member Functions

- DGLLine ()

Private Attributes

- DGLPosition beginPoint_
- DGLPosition endPoint_

6.3.1 Constructor & Destructor Documentation

6.3.1.1 DECS::GL::DGLLine::DGLLine ( ) [inline, private]

6.3.1.2 DECS::GL::DGLLine::DGLLine (DGLPosition *beginPoint*, DGLPosition *endPoint*) [inline]

6.3.1.3 DECS::GL::DGLLine::DGLLine (DGLPosition *beginPoint*, DGLPosition *endPoint*, DGLColor *color*) [inline]

6.3.1.4 DECS::GL::DGLLine::DGLLine (int *mode*, DGLPosition *beginPoint*, DGLPosition *endPoint*, DGLColor *color*) [inline]

6.3.1.5 DECS::GL::DGLLine::~DGLLine ( ) [inline]

6.3.2 Member Function Documentation

6.3.2.1 virtual void DECS::GL::DGLLine::draw ( ) [virtual]

Implements DECS::GL::DGLObject.

6.3.2.2 virtual void DECS::GL::DGLLine::setColor (DGLColor *color*) [virtual]

Implements DECS::GL::DGLObject.

6.3.2.3 void DECS::GL::DGLLine::setPoint (DGLPosition *beginPoint*, DGLPosition *endPosition*)

6.3.3 Member Data Documentation

6.3.3.1 DGLPosition DECS::GL::DGLLine::beginPoint_ [private]

6.3.3.2 DGLPosition DECS::GL::DGLLine::endPoint_ [private]

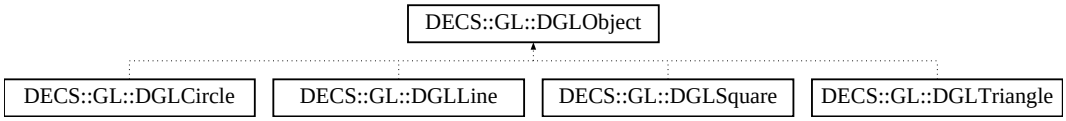
The documentation for this class was generated from the following file:

- include/GL/dglbasicshape.hpp

6.4 DECS::GL::DGLObject Class Reference

`#include <dglcommon.hpp>`

Inheritance diagram for DECS::GL::DGLObject:



Public Member Functions

- DGLObject ()
- DGLObject (int mode)
- DGLObject (int mode, DGLColor color)
- virtual void setColor (DGLColor color)=0
- virtual void draw ()=0

Protected Attributes

- int mode_
- DGLColor color_

6.4.1 Constructor & Destructor Documentation

6.4.1.1 DECS::GL::DGLObject::DGLObject ( ) [inline]

6.4.1.2 DECS::GL::DGLObject::DGLObject (int *mode*) [inline]

6.4.1.3 DECS::GL::DGLObject::DGLObject (int *mode*, DGLColor *color*) [inline]

6.4.2 Member Function Documentation

6.4.2.1 virtual void DECS::GL::DGLObject::draw ( ) [pure virtual]

Implemented in DECS::GL::DGLLine, DECS::GL::DGLTriangle, DECS::GL::DGLSquare, and DECS::GL::DGLCircle.

6.4.2.2 virtual void DECS::GL::DGLObject::setColor (DGLColor *color*) [pure virtual]

Implemented in DECS::GL::DGLLine, DECS::GL::DGLTriangle, DECS::GL::DGLSquare, and DECS::GL::DGLCircle.

6.4.3 Member Data Documentation

6.4.3.1 DGLColor DECS::GL::DGLObject::color_ [protected]

6.4.3.2 int DECS::GL::DGLObject::mode_ [protected]

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

- include/GL/dglcommon.hpp

6.5 DECS::GL::DGLPosition Class Reference

```
#include <dglutil.hpp>
```

Public Member Functions

- DGLPosition ()
- DGLPosition (GLdouble x, GLdouble y, GLdouble z)
- ~DGLPosition ()
- GLdouble & x ()
- GLdouble & y ()
- GLdouble & z ()

Private Attributes

- GLdouble position_ [3]

6.5.1 Constructor & Destructor Documentation

6.5.1.1 DECS::GL::DGLPosition::DGLPosition ( )

6.5.1.2 DECS::GL::DGLPosition::DGLPosition (GLdouble *x*, GLdouble *y*, GLdouble *z*)

6.5.1.3 DECS::GL::DGLPosition::~DGLPosition ( )

6.5.2 Member Function Documentation

6.5.2.1 GLdouble& DECS::GL::DGLPosition::x ( )

6.5.2.2 GLdouble& DECS::GL::DGLPosition::y ( )

6.5.2.3 GLdouble& DECS::GL::DGLPosition::z ( )

6.5.3 Member Data Documentation

6.5.3.1 GLdouble DECS::GL::DGLPosition::position_[3] [private]

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

- include/GL/dglutil.hpp

6.6 DECS::GL::DGLSquare Class Reference

`#include <dglbasicshape.hpp>`

Inheritance diagram for DECS::GL::DGLSquare:

Public Member Functions

- DGLSquare (DGLPosition point1, DGLPosition point2, DGLPosition point3, DGLPosition point4)
- DGLSquare (DGLPosition point1, DGLPosition point2, DGLPosition point3, DGLPosition point4, DGLColor color)

- DGLSquare (int mode, DGLPosition point1, DGLPosition point2, DGLPosition point3, DGLPosition point4)
- DGLSquare (int mode, DGLPosition point1, DGLPosition point2, DGLPosition point3, DGLPosition point4, DGLColor color)
- ~DGLSquare ()
- void setPoint (DGLPosition point1, DGLPosition point2, DGLPosition point3, DGLPosition point4)
- virtual void setColor (DGLColor color)
- virtual void draw ()

Private Member Functions

- DGLSquare ()

Private Attributes

- DGLPosition point1_
- DGLPosition point2_
- DGLPosition point3_
- DGLPosition point4_

6.6.1 Constructor & Destructor Documentation

6.6.1.1 DECS::GL::DGLSquare::DGLSquare ( ) [inline, private]

6.6.1.2 DECS::GL::DGLSquare::DGLSquare (DGLPosition *point1*, DGLPosition *point2*, DGLPosition *point3*, DGLPosition *point4*) [inline]

6.6.1.3 DECS::GL::DGLSquare::DGLSquare (DGLPosition *point1*, DGLPosition *point2*, DGLPosition *point3*, DGLPosition *point4*, DGLColor *color*) [inline]

6.6.1.4 DECS::GL::DGLSquare::DGLSquare (int *mode*, DGLPosition *point1*, DGLPosition *point2*, DGLPosition *point3*, DGLPosition *point4*) [inline]

6.6.1.5 DECS::GL::DGLSquare::DGLSquare (int *mode*, DGLPosition *point1*, DGLPosition *point2*, DGLPosition *point3*, DGLPosition *point4*, DGLColor *color*) [inline]

6.6.1.6 DECS::GL::DGLSquare::~DGLSquare ( ) [inline]

6.6.2 Member Function Documentation

6.6.2.1 virtual void DECS::GL::DGLSquare::draw ( ) [virtual]

Implements DECS::GL::DGLObject.

6.6.2.2 virtual void DECS::GL::DGLSquare::setColor (DGLColor *color*) [virtual]

Implements DECS::GL::DGLObject.

6.6.2.3 void DECS::GL::DGLSquare::setPoint (DGLPosition *point1*, DGLPosition *point2*, DGLPosition *point3*, DGLPosition *point4*)

6.6.3 Member Data Documentation

6.6.3.1 DGLPosition DECS::GL::DGLSquare::point1_ [private]

6.6.3.2 DGLPosition DECS::GL::DGLSquare::point2_ [private]

6.6.3.3 DGLPosition DECS::GL::DGLSquare::point3_ [private]

6.6.3.4 DGLPosition DECS::GL::DGLSquare::point4_ [private]

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

- include/GL/dglbasicshape.hpp

6.7 DECS::GL::DGLTriangle Class Reference

`#include <dglbasicshape.hpp>`

Inheritance diagram for DECS::GL::DGLTriangle:

Public Member Functions

- DGLTriangle (DGLPosition point1, DGLPosition point2, DGLPosition point3)
- DGLTriangle (DGLPosition point1, DGLPosition point2, DGLPosition point3, DGLColor color)
- DGLTriangle (int mode, DGLPosition point1, DGLPosition point2, DGLPosition point3)
- DGLTriangle (int mode, DGLPosition point1, DGLPosition point2, DGLPosition point3, DGLColor color)
- ~DGLTriangle ()
- void setPoint (DGLPosition point1, DGLPosition point2, DGLPosition point3)
- virtual void setColor (DGLColor color)
- virtual void draw ()

Private Member Functions

- DGLTriangle ()

Private Attributes

- DGLPosition point1_
- DGLPosition point2_
- DGLPosition point3_

6.7.1 Constructor & Destructor Documentation

6.7.1.1 DECS::GL::DGLTriangle::DGLTriangle ( ) [inline, private]

6.7.1.2 DECS::GL::DGLTriangle::DGLTriangle (DGLPosition *point1*, DGLPosition *point2*, DGLPosition *point3*) [inline]

6.7.1.3 DECS::GL::DGLTriangle::DGLTriangle (DGLPosition *point1*, DGLPosition *point2*, DGLPosition *point3*, DGLColor *color*) [inline]

6.7.1.4 DECS::GL::DGLTriangle::DGLTriangle (int *mode*, DGLPosition *point1*, DGLPosition *point2*, DGLPosition *point3*) [inline]

6.7.1.5 DECS::GL::DGLTriangle::DGLTriangle (int *mode*, DGLPosition *point1*, DGLPosition *point2*, DGLPosition *point3*, DGLColor *color*) [inline]

6.7.1.6 DECS::GL::DGLTriangle::~DGLTriangle ( ) [inline]

6.7.2 Member Function Documentation

6.7.2.1 virtual void DECS::GL::DGLTriangle::draw ( ) [virtual]

Implements DECS::GL::DGLObject.

6.7.2.2 virtual void DECS::GL::DGLTriangle::setColor (DGLColor *color*) [virtual]

Implements DECS::GL::DGLObject.

6.7.2.3 void DECS::GL::DGLTriangle::setPoint (DGLPosition *point1*, DGLPosition *point2*, DGLPosition *point3*)

6.7.3 Member Data Documentation

6.7.3.1 DGLPosition DECS::GL::DGLTriangle::point1_ [private]

6.7.3.2 DGLPosition DECS::GL::DGLTriangle::point2_ [private]

6.7.3.3 DGLPosition DECS::GL::DGLTriangle::point3_ [private]

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

- include/GL/dglbasicshape.hpp

6.8 DECS::GL::DGLWindow Class Reference

Window class.

`#include <dglwindow.hpp>`

Public Member Functions

- DGLWindow (int argc, char ∗argv[ ])

  Constructor for the default window.

- DGLWindow (int argc, char ∗argv[ ], void(∗displayFunc)(), void(∗resizeFunc)(int width, int height))

  Constructor for the default window with display and resize function.

- DGLWindow (int argc, char ∗argv[ ], DGLWindowProperty ∗wProp)

  Constructor for the window with user-defined properties.

- DGLWindow (int argc, char ∗argv[ ], DGLWindowProperty ∗wProp, void(∗displayFunc)(), void(∗resizeFunc)(int width, int height))

  Constructor for the window with user-defined properties with display and resize functions.

- ∼DGLWindow ()

  Default destructor.

- void setBGColor (DGLColor bgColor)

  Function for setting background color.

- void setDisplayFunc (void(∗displayFunc)())

  Function for seting a display function.

- void setResizeFunc (void(∗resizeFunc)(int width, int height))

  Function for seting a resize function.

- void setMouseFunc (void(∗mouseFunc)(int button, int state, int x, int y))

  Function for seting a mouse event handler.

- void create ()

  Function for window creation.

Private Member Functions

- void init ()

  Initialize function for internal use.

Private Attributes

- DGLWindowProperty ∗ wProp_

  Pointer to window property.

- void(∗ displayFunc_)()

  Function pointer of a display function.

- void(∗ resizeFunc_)(int width, int height)

  Function pointer of a resize function.

- void(∗ mouseFunc_)(int button, int state, int x, int y)

  Function pointer of the mouse event handler.

6.8.1 Detailed Description

Window class. This class provide window with a draw area. This window is created through GLUT. In short, this class wrap the systme which GLUT deal with a window and provide this as C++ class.

6.8.2 Constructor & Destructor Documentation

6.8.2.1 DECS::GL::DGLWindow::DGLWindow (int *argc*, char ∗ *argv[]*) [inline]

Constructor for the default window.

This constructor create the instance using the default window property (DECS::GL::DGL_-DEFAULT_WPROP).

Warning

This constructor is **NOT** setting display and resize functions. So that functions have to be set using DGLWindow::setDisplayFunc() and DGLWindow::setResizeFunc() before using DGLWindow::create() .

Parameters

argc	Same as command line argument "argc"
argv	Same as command line argument "argv"

6.8.2.2 DECS::GL::DGLWindow::DGLWindow (int *argc*, char * *argv[]*, void(*)() *displayFunc*, void(*)(int width, int height) *resizeFunc*) [inline]

Constructor for the default window with display and resize function.

This constructor create the instance using the default window property (DECS::GL::DGL_-DEFAULT_WPROP) with display and resize functions.

Parameters

argc	Same as command line argument "argc"
argv	Same as command line argument "argv"
displayFunc	Pointer to Display function
resizeFunc	Pointer to resize function

6.8.2.3 DECS::GL::DGLWindow::DGLWindow (int *argc*, char * *argv[]*, DGLWindowProperty * *wProp*) [inline]

Constructor for the window with user-defined properties.

This constructor create the instance using the user-defined window properties.

Warning

This constructor is **NOT** setting display and resize functions. So that functions have to be set using DGLWindow::setDisplayFunc() and DGLWindow::setResizeFunc() before using DGLWindow::create() .

Parameters

argc	Same as command line argument "argc"
argv	Same as command line argument "argv"
wProp	A pointer to the user-defined window properties

6.8.2.4 DECS::GL::DGLWindow::DGLWindow (int *argc*, char * *argv[]*, DGLWindowProperty * *wProp*, void(*)() *displayFunc*, void(*)(int width, int height) *resizeFunc*) [inline]

Constructor for the window with user-defined properties with display and resize functions.

This constructor create the instance using the user-defined window properties with display and resize functions.

Parameters

argc	Same as command line argument "argc"
argv	Same as command line argument "argv"
wProp	A pointer to the user-defined window properties
A	displayFunc Pointer to Display function
A	resizeFunc Pointer to resize function

6.8.2.5 DECS::GL::DGLWindow::~DGLWindow ( ) [inline]

Default destructor.

6.8.3 Member Function Documentation

6.8.3.1 void DECS::GL::DGLWindow::create ( )

Function for window creation.

This function create the window using setting of its instance.

6.8.3.2 void DECS::GL::DGLWindow::init ( ) [private]

Initialize function for internal use.

6.8.3.3 void DECS::GL::DGLWindow::setBGColor (DGLColor *bgColor*)

Function for setting background color.

This Function set the argument "bgColor" in the member variable "bgColor_". This setting is not a call by refference but by value.

Parameters

bgColor	Background color for draw area

6.8.3.4 void DECS::GL::DGLWindow::setDisplayFunc (void(∗)() *displayFunc*)

Function for seting a display function.

This Function set the argument "displayFunc" in the member variable "displayFunc_".

Warning

1. The Default display function is **NOT** existance. So a display function have to be defined by yourself.
2. If the instance of this class createe by the constructor without the display and resize functions, the display function have to be set by this function.

Parameters

displayFunc	Pointer to the display function

6.8.3.5 void DECS::GL::DGLWindow::setMouseFunc (void(∗)(int button, int state, int x, int y) *mouseFunc*)

Function for seting a mouse event handler.

This Function set the argument "mouseFunc" in the member variable "mouseFunc_".

Parameters

mouseFunc	Pointer to the mouse event handler function

6.8.3.6 void DECS::GL::DGLWindow::setResizeFunc (void(∗)(int width, int height) *resizeFunc*)

Function for seting a resize function.

This Function set the argument "resizeFunc" in the member variable "resizeFunc_".

Warning

1. The Default resize function is **NOT** existance. So a resize function have to be defined by yourself.
2. If the instance of this class createe by the constructor without the display and resize functions, the resize function have to be set by this function.

Parameters

resizeFunc	Pointer to the resize function

6.8.4 Member Data Documentation

6.8.4.1 void(* DECS::GL::DGLWindow::displayFunc_)() [private]

Function pointer of a display function.

6.8.4.2 void(* DECS::GL::DGLWindow::mouseFunc_)(int button, int state, int x, int y) [private]

Function pointer of the mouse event handler.

6.8.4.3 void(* DECS::GL::DGLWindow::resizeFunc_)(int width, int height) [private]

Function pointer of a resize function.

6.8.4.4 DGLWindowProperty* DECS::GL::DGLWindow::wProp_ [private]

Pointer to window property.

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

- include/GL/dglwindow.hpp

6.9 DECS::GL::DGLWindowProperty Struct Reference

Window property structure for DECS::GL::DGLWindow class.

`#include <dglwindow.hpp>`

Public Attributes

- string title_

  Window title.

- unsigned int mode_
- DGLColor bgColor_

  Background color of the window.

- int wWidth_

  Window width.

- int wHeight_

  Window height.

- int wPositionX_

  X-coordinate of window position.

- int wPositionY_

  Y-coordinate of window position.

6.9.1 Detailed Description

Window property structure for DECS::GL::DGLWindow class. This structure is a set of window property, for example window title, background color, window size and etc.

6.9.2 Member Data Documentation

6.9.2.1 DGLColor DECS::GL::DGLWindowProperty::bgColor_

Background color of the window.

6.9.2.2 unsigned int DECS::GL::DGLWindowProperty::mode_

OpenGL color mode

6.9.2.3 string DECS::GL::DGLWindowProperty::title_

Window title.

6.9.2.4 int DECS::GL::DGLWindowProperty::wHeight_

Window height.

6.9.2.5 int DECS::GL::DGLWindowProperty::wPositionX_

X-coordinate of window position.

6.9.2.6 int DECS::GL::DGLWindowProperty::wPositionY_

Y-coordinate of window position.

6.9.2.7 int DECS::GL::DGLWindowProperty::wWidth_

Window width.

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

- include/GL/dglwindow.hpp

Chapter 7

File Documentation

7.1 include/GL/dgl.hpp File Reference

```
#include <GL/dglcommon.hpp>
#include <GL/dglutil.hpp>
#include <GL/dglbasicshape.hpp>
#include <GL/dglwindow.hpp>
```

7.2 include/GL/dglbasicshape.hpp File Reference

```
#include <GL/dglcommon.hpp>
```

Classes

- class DECS::GL::DGLLine
- class DECS::GL::DGLTriangle
- class DECS::GL::DGLSquare
- class DECS::GL::DGLCircle

Namespaces

- namespace DECS

  Namespace of Descrete Elements Calculation Suites(DECS)

- namespace DECS::GL

  Namespace of GL section of Descrete Elements Calculation Suites(DECS)

7.3 include/GL/dglcommon.hpp File Reference

```
#include <GL/dglutil.hpp>
```

Classes

- class DECS::GL::DGLObject

Namespaces

- namespace DECS

  Namespace of Descrete Elements Calculation Suites(DECS)

- namespace DECS::GL

  Namespace of GL section of Descrete Elements Calculation Suites(DECS)

Variables

- static const DGLColor DECS::GL::DGL_WHITE (1.0, 1.0, 1.0, 1.0)
- static const DGLColor DECS::GL::DGL_BLACK (0.0, 0.0, 0.0, 1.0)
- static const DGLColor DECS::GL::DGL_RED (1.0, 0.0, 0.0, 1.0)
- static const DGLColor DECS::GL::DGL_GREEN (0.0, 1.0, 0.0, 1.0)
- static const DGLColor DECS::GL::DGL_BLUE (0.0, 0.0, 1.0, 1.0)
- static const DGLPosition DECS::GL::DGL_ORIGIN (0.0, 0.0, 0.0)

7.4 include/GL/dglutil.hpp File Reference

```
#include <GLUT/glut.h>
```

Classes

- class DECS::GL::DGLColor
- class DECS::GL::DGLPosition

Namespaces

- namespace DECS

  Namespace of Descrete Elements Calculation Suites(DECS)

- namespace DECS::GL

  Namespace of GL section of Descrete Elements Calculation Suites(DECS)

Variables

- static const int DECS::GL::X = 0
- static const int DECS::GL::Y = 1
- static const int DECS::GL::Z = 2
- static const int DECS::GL::R = 0
- static const int DECS::GL::G = 1
- static const int DECS::GL::B = 2
- static const int DECS::GL::A = 3

7.5 include/GL/dglwindow.hpp File Reference

```
#include <string>
#include <GL/dgl.hpp>
```

Classes

- struct DECS::GL::DGLWindowProperty

  Window property structure for DECS::GL::DGLWindow class.

- class DECS::GL::DGLWindow

  Window class.

Namespaces

- namespace DECS

  Namespace of Descrete Elements Calculation Suites(DECS)

- namespace DECS::GL

  Namespace of GL section of Descrete Elements Calculation Suites(DECS)

Typedefs

- typedef void(∗ DECS::GL::RESIZE_FUNC)(int, int)

  Type definition for the resize function.

Functions

- RESIZE_FUNC DECS::GL::getResizeFunc (GLdouble canvasWidth, GLdouble canvasHeight)

  Helper function to generate resize function.

Variables

- static DGLWindowProperty DECS::GL::DGL_DEFAULT_WPROP

  Default window property.

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