LeapPaint

Generated by Doxygen 1.8.3.1

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Contents

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`Project Home & Wiki`

#Requirements Specification

Interface

- HUD Requirement to render a cursor where the pointable is intersecting with the screen. The cursor should show the color that will be painting on the screen

- Ring and round cursor to indicate drawing or not drawing.

Features

- Change Colors
- Change Brushes
- Eraser
- Change size of brush
- Reset drawing
- Change Opacity of brushes

#Unit Tests

#Libraries & Sub Modules

- Cocos2d 2.0
- CCControlExtension
- #Build Settings
- Valid Architecture i386 x86_64
- Other Linker Flags -lz -ObjC
- C Language Dialect GNU99 -std=gnu99
- C ++ Language Dialect GNU++11 -std=gnu++11
- C ++ Standard Library libc++ (LLVM C++ standard lib)
- run script after build:

  echo TARGET_BUILD_DIR=${TARGET_BUILD_DIR} echo TARGET_NAME=${TARGET_NAME} cd ${TARGET_BUILD_DIR}/${TARGET_NAME}.app/Contents/MacOS ls -la install_name_tool -change /libLeap.dylib /../Resources/libLeap.dylib ${TARGET_NAME}

#Documentation

Documentation is done using Doxygen

2 Hierarchical Index

2.1 Class Hierarchy

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

CCLayer

3 Class Index

3.1 Class List

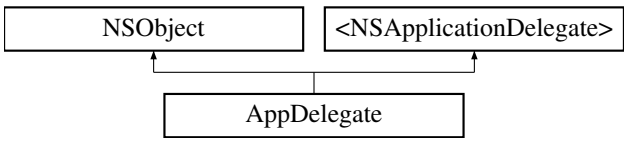
Here are the classes, structs, unions and interfaces with brief descriptions:

4 Class Documentation

4.1 AppDelegate Class Reference

`#import <AppDelegate.h>`

Inheritance diagram for AppDelegate:



Instance Methods

- (void) - runGameScene
- (IBAction) - toggleFullScreen:

Protected Attributes

- NSWindow * window_
- CCGLView * glView_

Properties

- IBOutlet NSWindow * window
- IBOutlet CCGLView * glView

4.1.1 Detailed Description

Application Delegate Creates app instance and binds libraries to interface builder xibs Serves as an application wide callback object for events that affects the whole application, such as low-memory, etc.

4.1.2 Method Documentation

4.1.2.1 - (void) runGameScene

RunGameSceen sets up the Cocos2d environment and runs it in the application.

4.1.2.2 - (IBAction) toggleFullScreen: (id) *sender*

Toggles from a window to full screen view point

Parameters

sender	is the action sending the command

Returns

IBAction binding to interface builder

4.1.3 Member Data Documentation

4.1.3.1 - (CCGLView∗) glView_ [protected]

glView is the embedded view in which cocos2d will run inside the window

Referenced by runGameScene.

4.1.3.2 - (NSWindow∗) window_ [protected]

window is the main window to be displayed

Referenced by runGameScene.

4.1.4 Property Documentation

4.1.4.1 - (IBOutlet CCGLView∗) glView [read], [write], [atomic], [strong]

glView is the embedded view in which cocos2d will run inside the window

4.1.4.2 - (IBOutlet NSWindow∗) window [read], [write], [atomic], [strong]

window is the main window to be displayed

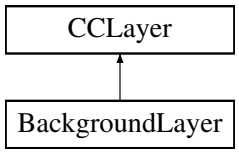
The documentation for this class was generated from the following files:

- LeapPaint/AppDelegate.h
- LeapPaint/AppDelegate.m

4.2 BackgroundLayer Class Reference

```
#import <BackgroundLayer.h>
```

Inheritance diagram for BackgroundLayer:



4.2.1 Detailed Description

Background Layer Displays a background image for the scene

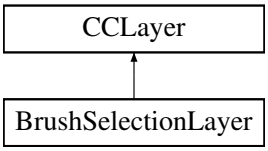
The documentation for this class was generated from the following file:

- LeapPaint/BackgroundLayer.h

4.3 BrushSelectionLayer Class Reference

`#import <BrushSelectionLayer.h>`

Inheritance diagram for BrushSelectionLayer:



Protected Attributes

- NSMutableDictionary ∗ imageNamesDictionary

Properties

- id< BrushSelectionLayerDelegate > delegate
- bool layerHidden

4.3.1 Detailed Description

BrushSelectionLayer This user interface layer provides a collection view of all the available brushes that can be selected.

4.3.2 Member Data Documentation

4.3.2.1 - (NSMutableDictionary∗) imageNamesDictionary [protected]

imageNamesDictionary is the list of brush names available for selection

4.3.3 Property Documentation

4.3.3.1 - (id<BrushSelectionLayerDelegate>) delegate [read],[write],[nonatomic],[weak]

delegate is the instance reference for triggering delegate call back functions

4.3.3.2 - (bool) layerHidden [read],[write],[nonatomic],[assign]

layerHidded tracks the visibility state of the layer

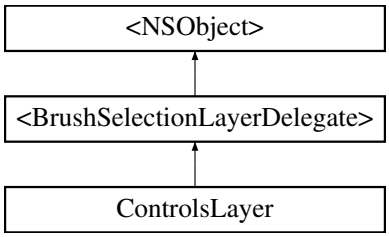
The documentation for this class was generated from the following file:

- LeapPaint/BrushSelectionLayer.h

4.4 <BrushSelectionLayerDelegate> Protocol Reference

`#import <BrushSelectionLayer.h>`

Inheritance diagram for <BrushSelectionLayerDelegate>:



Instance Methods

- (void) - hidePanel
- (void) - brushSelected:

4.4.1 Detailed Description

BrushSelectionLayer Delegate Provides a delegate interface for the layer to notify of actions

4.4.2 Method Documentation

4.4.2.1 - (void) brushSelected: (NSString *) *brushname*

Calls back to notify a new brushname has been selected

Parameters

brushname	is the name of the brush that has been selected.

4.4.2.2 - (void) hidePanel

Calls back to notify that the layer can be hidden

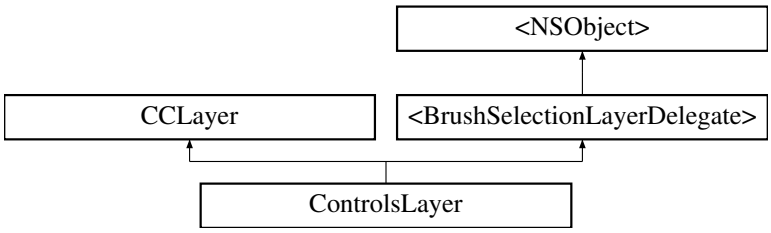
The documentation for this protocol was generated from the following file:

- LeapPaint/BrushSelectionLayer.h

4.5 ControlsLayer Class Reference

`#import <ControlsLayer.h>`

Inheritance diagram for ControlsLayer:



Instance Methods

- (void) - valueChanged:
- (void) - opacitySliderChanged:
- (void) - expandPanel
- (void) - collapsePanel
- (CCControlSwitch *) - makeControlSwitch
- (void) - switchValueChanged:
- (void) - updateOpacitySlider:

Protected Attributes

- CCLabelTTF * colorLabel
- GameSettings * gameSettings

Properties

- CCControlSlider * slider
- CCControlSlider * opacitySlider
- CCControlSwitch * opacitySwitchControl
- CCLabelTTF * opacitydisplayValueLabel
- id< ControlsLayerDelegate > delegate
- BrushSelectionLayer * brushSelection
- CCLabelTTF * displayValueLabel
- CCControlSwitch * switchControl

4.5.1 Detailed Description

Controls Layer User inferface controls for operating buttons, switches, sliders

4.5.2 Method Documentation

4.5.2.1 - (void) collapsePanel

Collapses Brushes Panel

4.5.2.2 - (void) expandPanel

Expands brushes panel

4.5.2.3 - (CCControlSwitch ∗) makeControlSwitch

Creates and returns a new CCControlSwitch.

Returns

a generate ControlSwitch

4.5.2.4 - (void) opacitySliderChanged: (CCControlSlider ∗) *sender*

Recieves opacitySliderControl delegate callbacks and updates values in the interface

Parameters

sender	is the object performing the callback

4.5.2.5 - (void) switchValueChanged: (CCControlSwitch ∗) *sender*

Callback for the change value.

Parameters

sender	is the object performing the callback

4.5.2.6 - (void) updateOpacitySlider: (float) *value*

Callback for opacity changing with the slider

Parameters

sender	is the object performing the callback

4.5.2.7 - (void) valueChanged: (CCControlSlider ∗) *sender*

Recieves brushSizeControl delegate callbacks and updates values in the interface

Parameters

sender	is the object performing the callback

4.5.3 Member Data Documentation

4.5.3.1 - (CCLabelTTF*) colorLabel [protected]

colorLabel displays name of color in hash value

4.5.3.2 - (GameSettings*) gameSettings [protected]

gameSettings global reference to shared settings instance

4.5.4 Property Documentation

4.5.4.1 - (BrushSelectionLayer*) brushSelection [read], [write], [nonatomic], [strong]

brushSelection layer expands as a drawer to allow for brush selection

4.5.4.2 - (id<ControlsLayerDelegate>) delegate [read], [write], [nonatomic], [weak]

delegate is the instance reference for triggering delegate call back functions

Referenced by GameScene::scene.

4.5.4.3 - (CCLabelTTF *) displayValueLabel [read], [write], [nonatomic], [strong]

displayValueLabel displays coordinate

displayValueLabel displays eraser toggle state

Referenced by switchValueChanged:.

4.5.4.4 - (CCLabelTTF*) opacitydisplayValueLabel [read], [write], [nonatomic], [strong]

opacitydisplayValueLabel shows the state of the opacitySwitchControl

4.5.4.5 - (CCControlSlider*) opacitySlider [read], [write], [nonatomic], [strong]

opacitySlider is the opacity contro of the brush

Referenced by updateOpacitySlider:.

4.5.4.6 - (CCControlSwitch*) opacitySwitchControl [read], [write], [nonatomic], [strong]

opacitySwitchControl is the control for setting automatic or manual opacity control

4.5.4.7 - (CCControlSlider*) slider [read], [write], [nonatomic], [strong]

slider is the thickness control of the brush

4.5.4.8 - (CCControlSwitch*) switchControl [read], [write], [nonatomic], [strong]

switchControl is the eraser toggle

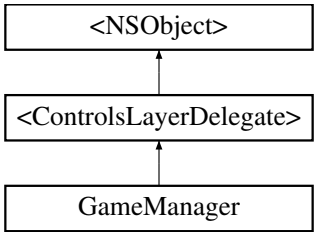
The documentation for this class was generated from the following files:

- LeapPaint/ControlsLayer.h
- LeapPaint/ControlsLayer.mm

4.6 <ControlsLayerDelegate> Protocol Reference

`#import <ControlsLayer.h>`

Inheritance diagram for <ControlsLayerDelegate>:



Instance Methods

- (void) - changeColorControl:
- (void) - changeThicknessControl:
- (void) - changeBrushControl:
- (void) - changeOpacityControl:
- (void) - clearDrawing
- (void) - eraserMode:

4.6.1 Detailed Description

Controls Layer Delegate Provides a delegate interface for the layer to notify of actions

4.6.2 Method Documentation

4.6.2.1 - (void) changeBrushControl: (NSString *) *brushname*

Callback with a change in brush texture

Parameters

brushname	is the new selected brush value

4.6.2.2 - (void) changeColorControl: (ccColor3B) *color*

Callback with a change in color of the brush

Parameters

color	is the new selected color value

4.6.2.3 - (void) changeOpacityControl: (float) *value*

Callback with a change in opacity

Parameters

value	is the new selected opacity value

4.6.2.4 - (void) changeThicknessControl: (float) *value*

Callback with a change in thickness of the brush

Parameters

value	is the new selected color value

4.6.2.5 - (void) clearDrawing

Callback to notify to clear the drawing

4.6.2.6 - (void) eraserMode: (bool) *mode*

Callback with a change in color

Parameters

mode	is the toggled eraser mode TODO: Turn off eraser mode when new color is selected

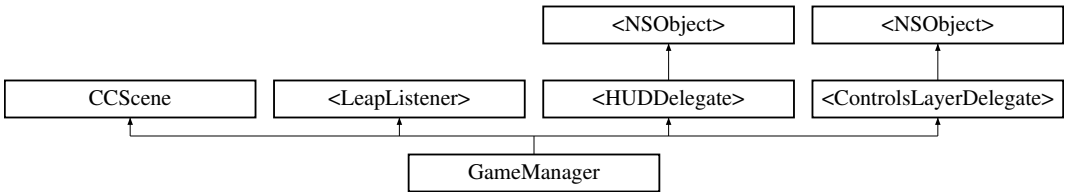
The documentation for this protocol was generated from the following file:

- LeapPaint/ControlsLayer.h

4.7 GameManager Class Reference

`#import <GameManager.h>`

Inheritance diagram for GameManager:



Instance Methods

- (float) - findPecentageDifference:withMin:withValue:
- (float) - opacityPercentage:

Protected Attributes

- InputMode inputMode
- LeapPointable * currentPointable
- CGPoint currentPoint
- BOOL painting
- GameSettings * gameSettings
- int lastTag
- SimplePoint * lastPoint
- int framesSinceLastFound

Properties

- HUDLayer * hudLayer
- SketchRenderTextureScene * textureScene
- BackgroundLayer * backgroundLayer
- ControlsLayer * controlsLayer
- LeapController * controller
- LeapScreen * leapScreen

4.7.1 Detailed Description

Core Application Management Provides interfaces and controls the various inputs, controls and outputs

4.7.2 Method Documentation

4.7.2.1 - (float) findPecentageDifference: (float) *max* withMin:(float) *min* withValue:(float) *value*

Finds the percentage of a number between two values If the number is greater or less than the range, that boundry of the range will be returned.

Parameters

max	is the top range value
min	is the bottom range value
value	is the number we are seeking the percentage from

Returns

the a percentage between 0 and 100%

Find the percentage between two numbers

Referenced by opacityPercentage:.

4.7.2.2 - (float) opacityPercentage: (float) *value*

Determines the opacity based upon the Z axis coordinate

Parameters

value	is the Z axis coordinate

Returns

the opacity value to set the brush at.

Return the Opacity value based on Z position

4.7.3 Member Data Documentation

4.7.3.1 - (CGPoint) currentPoint [protected]

colorLabel displays name of color in hash value

4.7.3.2 - (LeapPointable*) currentPointable [protected]

colorLabel displays name of color in hash value

4.7.3.3 - (int) framesSinceLastFound [protected]

framesSinceLastFound number of frames since last finding a LeapPointable

4.7.3.4 - (GameSettings*) gameSettings [protected]

gameSettings singleton to global seetings

4.7.3.5 - (InputMode) inputMode [protected]

colorLabel displays name of color in hash value

4.7.3.6 - (SimplePoint*) lastPoint [protected]

lastPoint is the last known point on the screen of the LeapPointable

4.7.3.7 - (int) lastTag [protected]

lastTag is the last tag value tracked of a LeapPointable

4.7.3.8 - (BOOL) painting [protected]

painting indicates wether or not the application is painting at that moment

4.7.4 Property Documentation

4.7.4.1 - (BackgroundLayer*) backgroundLayer [read], [write], [nonatomic], [strong]

backgroundLayer is the layer for setting up the background

Referenced by GameScene::scene.

4.7.4.2 - (LeapController*) controller [read], [write], [nonatomic], [strong]

controller is the leapController

4.7.4.3 - (ControlsLayer*) controlsLayer [read], [write], [nonatomic], [strong]

controlsLayer is the layer for managing interface controls

Referenced by GameScene::scene.

4.7.4.4 - (HUDLayer*) hudLayer [read], [write], [nonatomic], [strong]

hudLayer displays the icons for tracking where a leapPointable is pointing

Referenced by GameScene::scene.

4.7.4.5 - (LeapScreen*) leapScreen [read], [write], [nonatomic], [strong]

leapScreen references the screen being used on the system

4.7.4.6 - (SketchRenderTextureScene*) textureScene [read], [write], [nonatomic], [strong]

textureScene is the drawing layer

Referenced by GameScene::scene.

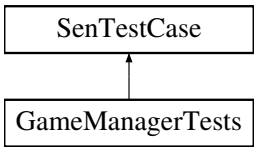
The documentation for this class was generated from the following files:

- LeapPaint/GameManager.h
- LeapPaint/GameManager.mm

4.8 GameManagerTests Class Reference

`#import <GameManagerTests.h>`

Inheritance diagram for GameManagerTests:



Protected Attributes

- NSString * testName
- GameManager * node

4.8.1 Detailed Description

Tests the GameManager object

4.8.2 Member Data Documentation

4.8.2.1 - (GameManager*) node [protected]

gameManager instance

4.8.2.2 - (NSString*) testName [protected]

testName is the name of the test

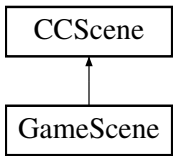
The documentation for this class was generated from the following file:

- LeapPaintTests/GameManagerTests.h

4.9 GameScene Class Reference

`#import <GameScene.h>`

Inheritance diagram for GameScene:



Class Methods

- (CCScene ∗) + scene

4.9.1 Detailed Description

GameScene Initializes and assembles all of the layers and gameobjects into the GameManager

4.9.2 Method Documentation

4.9.2.1 + (CCScene ∗) scene

Scene initializes each object and assigns interlinking pointers and delegates to each class

Returns

scene for CCDirector to begin running

Referenced by AppDelegate::runGameScene.

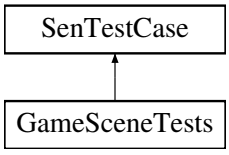
The documentation for this class was generated from the following files:

- LeapPaint/GameScene.h
- LeapPaint/GameScene.mm

4.10 GameSceneTests Class Reference

`#import <GameSceneTests.h>`

Inheritance diagram for GameSceneTests:



Protected Attributes

- NSString ∗ testName

4.10.1 Detailed Description

Tests the GameScene object

4.10.2 Member Data Documentation

4.10.2.1 - (NSString*) testName [protected]

testName is the name of the test

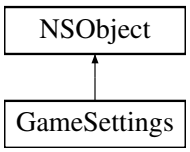
The documentation for this class was generated from the following file:

- LeapPaintTests/GameSceneTests.h

4.11 GameSettings Class Reference

`#import <GameSettings.h>`

Inheritance diagram for GameSettings:



Class Methods

- (GameSettings *) + sharedInstance

Properties

- BOOL depthOpacityMode
- BOOL painting
- BOOL eraserMode
- InputMode inputMode

4.11.1 Detailed Description

GameSettings is a globally shared class instance which tracks all the game settings. This class can be accessed by any object in the game.

4.11.2 Method Documentation

4.11.2.1 + (GameSettings *) sharedInstance

Singleton Intiailizes and Returns a shared instance of the class

Returns

sharedInstance of the class.

Singleton SharedInstance Intiailizes and Returns a shared instance of the class

4.11.3 Property Documentation

4.11.3.1 - (BOOL) depthOpacityMode [read], [write], [nonatomic], [assign]

depthOpacityMode controls use of z axis control of opacity

4.11.3.2 - (BOOL) eraserMode [read], [write], [nonatomic], [assign]

eraserMode controls erasing on drawing canvas

4.11.3.3 - (InputMode) inputMode [read], [write], [nonatomic], [assign]

inputMode controller input mode for leapmotion

4.11.3.4 - (BOOL) painting [read], [write], [nonatomic], [assign]

painting indicates wether or not the application is painting at that moment

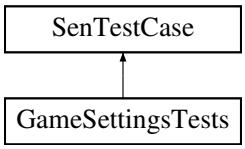
The documentation for this class was generated from the following files:

- LeapPaint/GameSettings.h
- LeapPaint/GameSettings.mm

4.12 GameSettingsTests Class Reference

`#import <GameSettingsTests.h>`

Inheritance diagram for GameSettingsTests:



Protected Attributes

- GameSettings * gameSettings

4.12.1 Detailed Description

Tests the GameSettings object

4.12.2 Member Data Documentation

4.12.2.1 - (GameSettings*) gameSettings [protected]

gameSettings singleton instance

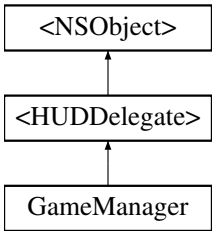
The documentation for this class was generated from the following file:

- LeapPaintTests/GameSettingsTests.h

4.13 <HUDDelegate> Protocol Reference

`#import <HUDLayer.h>`

Inheritance diagram for <HUDDelegate>:



Instance Methods

- (void) - changeMode:
- (void) - painting:

4.13.1 Detailed Description

HUD Delegate Protocol User inferface controls for operating buttons, switches, sliders

4.13.2 Method Documentation

4.13.2.1 - (void) changeMode: (InputMode) *mode*

Calls back to notify a new input mode has been selected by the keyboard interface

Parameters

mode	is the state of the input mode

4.13.2.2 - (void) painting: (BOOL) *paintingState*

Calls back to notify a new change in painting state

Parameters

paintingState	

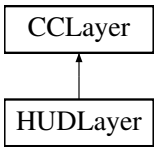
The documentation for this protocol was generated from the following file:

- LeapPaint/HUDLayer.h

4.14 HUDLayer Class Reference

`#import <HUDLayer.h>`

Inheritance diagram for HUDLayer:



Instance Methods

- (void) - toolMoved:toolID:
- (void) - startTrackingTool:toolID:
- (void) - moveTrackingTool:toolID:
- (void) - endTrackingTool
- (void) - **changeColor:**
- (void) - **changeBrush:**
- (void) - **changeScale:**
- (void) - **erasingMode:**

Protected Attributes

- NSString * primaryToolID
- LPTool * primaryTool
- InputMode inputMode
- ccColor3B lastColor
- ccColor3B previousColor
- NSString * lastBrush
- float lastScale
- CCSprite * paintingIndicator
- BOOL eraseMode
- GameSettings * gameSettings

Properties

- id< HUDDelegate > delegate
- CCLabelTTF * xyzcoords

4.14.1 Detailed Description

HUD Layer Tracks the position of the LeapCursor on the screen

4.14.2 Method Documentation

4.14.2.1 - (void) endTrackingTool

EndTracking tool singles the end of the tool being tracked. The tool may be lost or no longer drawing

4.14.2.2 - (void) moveTrackingTool: (CGPoint) *point* toolID:(NSString∗) *toolid*

MoveTrackingTool updates the position and path of a tool.

Parameters

point	is the coordinate location on the screen in which pointable interesects
toolid	is LeapSDK provided tool id of the tool moving

Referenced by toolMoved:toolID:.

4.14.2.3 - (void) startTrackingTool: (CGPoint) *point* toolID:(NSString∗) *toolid*

StartTrackingTool begins the process of tracking a tool starting with a new path

Parameters

point	is the coordinate location on the screen in which pointable interesects
toolid	is LeapSDK provided tool id of the tool moving

Referenced by toolMoved:toolID:.

4.14.2.4 - (void) toolMoved: (CGPoint) *point* toolID:(NSString∗) *toolid*

ToolMoved updates the last known tracked position of the tool.

Parameters

point	is the coordinate location on the screen in which pointable interesects
toolid	is LeapSDK provided tool id of the tool moving

4.14.3 Member Data Documentation

4.14.3.1 - (BOOL) eraseMode [protected]

eraseMode determines weather the pointable is painting or erasing

4.14.3.2 - (GameSettings∗) gameSettings [protected]

gameSettings singleton to global seetings

4.14.3.3 - (InputMode) inputMode [protected]

inputMode is the current mode of input

4.14.3.4 - (NSString∗) lastBrush [protected]

lastBrush is last brush to be selected

4.14.3.5 - (ccColor3B) lastColor [protected]

lastColor is the lastColor to be selected

4.14.3.6 - (float) lastScale [protected]

lastScale is last scale to be selected

4.14.3.7 - (CCSprite*) paintingIndicator [protected]

paintingIndicator shows the state at which the object is currently paintg

4.14.3.8 - (ccColor3B) previousColor [protected]

previousColor is the color before the lastcolor to be selected

4.14.3.9 - (LPTool*) primaryTool [protected]

primaryTool points to the current pointable object

Referenced by endTrackingTool, moveTrackingTool:toolID:, startTrackingTool:toolID:, and toolMoved:toolID:.

4.14.3.10 - (NSString*) primaryToolID [protected]

primaryToolID stores the id tag to the pointable in reference

4.14.4 Property Documentation

4.14.4.1 - (id<HUDDelegate>) delegate [read], [write], [nonatomic], [weak]

colorLabel displays name of color in hash value

Referenced by GameScene::scene.

4.14.4.2 - (CCLabelTTF*) xyzcoords [read], [write], [nonatomic], [strong]

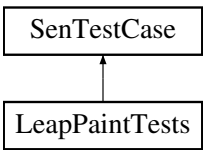
xyzcoords is the X,Y,Z coordinates in string form for displaying on the HUD in real-time for debugging

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

- LeapPaint/HUDLayer.h
- LeapPaint/HUDLayer.mm

4.15 LeapPaintTests Class Reference

Inheritance diagram for LeapPaintTests:



Protected Attributes

- NSString * testName

4.15.1 Member Data Documentation

4.15.1.1 - (NSString*) testName [protected]

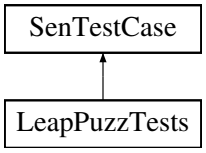
testName is the name of the test

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

- LeapPaintTests/LeapPaintTests.h

4.16 LeapPuzzTests Class Reference

Inheritance diagram for LeapPuzzTests:



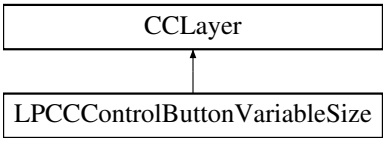
The documentation for this class was generated from the following file:

- LeapPaintTests/LeapPuzzTests.h

4.17 LPCCControlButtonVariableSize Class Reference

`#import <LPCCControlButtonVariableSize.h>`

Inheritance diagram for LPCCControlButtonVariableSize:



Instance Methods

- (CCControlButton ∗) - standardButtonWithTitle:

4.17.1 Detailed Description

LPCCControlButtonVariableSize Extends CCLayer to have a customizable control button interface

4.17.2 Method Documentation

4.17.2.1 - (CCControlButton ∗) standardButtonWithTitle: (NSString ∗) *title*

Creates and return a button with a default background and title color. Creates and return a button with a default background and title color.

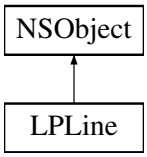
The documentation for this class was generated from the following files:

- LeapPaint/LPCCControlButtonVariableSize.h
- LeapPaint/LPCCControlButtonVariableSize.m

4.18 LPLine Class Reference

`#import <LPLine.h>`

Inheritance diagram for LPLine:



Properties

- NSMutableArray * points
- float width

4.18.1 Detailed Description

LPLine is tracks the points in one line from beginning to end

4.18.2 Property Documentation

4.18.2.1 - (NSMutableArray*) points `[read], [write], [nonatomic], [strong]`

points is a an array of points for the line

4.18.2.2 - (float) width `[read], [write], [nonatomic], [assign]`

width is a constant width for the line

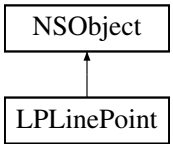
The documentation for this class was generated from the following file:

- LeapPaint/LPLine.h

4.19 LPLinePoint Class Reference

`#import <LPLinePoint.h>`

Inheritance diagram for LPLinePoint:



Instance Methods

- (id) - initWithPosition:

- (id) - initWithX:withY:
- (id) - initWithPosition:withWidth:
- (id) - initWithX:withY:withWidth:
- (CGPoint) - point

Properties

- float x
- float y
- float width

4.19.1 Detailed Description

LPLinePoint is a plotted point for drawing onto the canvas

4.19.2 Method Documentation

4.19.2.1 - (id) initWithPosition: (CGPoint) *p*

Init constructor with existing point to create with no width

Parameters

p	an point (x,y)

Returns

object instance

init 2d point with CGPoint

4.19.2.2 - (id) initWithPosition: (CGPoint) *p* withWidth:(float) *wVal*

Init constructor with existing point with width

Parameters

p	a point (x,y)
wVal	width of the point

Returns

object instance

Init point with CGPoint and width Value

4.19.2.3 - (id) initWithX: (float) *xVal* withY:(float) *yVal*

Init constructor with x and y values with no width

Parameters

xVal	coordinate value
yVal	coordinate value

Returns

object instance

Init Point with 2 separate values

4.19.2.4 - (id) initWithX: (float) *xVal* withY:(float) *yVal* withWidth:(float) *wVal*

Init constructor with x and y values with width

Parameters

xVal	coordinate value
yVal	coordinate value
wVal	width of the point

Returns

object instance

Init Point with x and y values with width

4.19.2.5 - (CGPoint) point

Returns point based on x and y

Returns

CGPoint

Return the CGPoint type from the object

4.19.3 Property Documentation

4.19.3.1 - (float) width [read], [write], [nonatomic], [assign]

width of the point

4.19.3.2 - (float) x [read], [write], [nonatomic], [assign]

x coordinate

Referenced by point.

4.19.3.3 - (float) y [read], [write], [nonatomic], [assign]

y coordinate

Referenced by point.

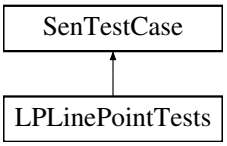
The documentation for this class was generated from the following files:

- LeapPaint/LPLinePoint.h
- LeapPaint/LPLinePoint.m

4.20 LPLinePointTests Class Reference

`#import <LPLinePointTests.h>`

Inheritance diagram for LPLinePointTests:



Protected Attributes

- NSString * testName
- LPLinePoint * pointNoWidth
- LPLinePoint * pointWithWidth

4.20.1 Detailed Description

Tests the LPLinePointTests object

4.20.2 Member Data Documentation

4.20.2.1 - (LPLinePoint*) pointNoWidth [protected]

pointNoWidth is a test point without width variable at init

4.20.2.2 - (LPLinePoint*) pointWithWidth [protected]

pointNoWidth is a test point width variable at init

4.20.2.3 - (NSString*) testName [protected]

testName is the name of the test

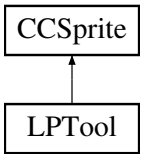
The documentation for this class was generated from the following file:

- LeapPaintTests/LPLinePointTests.h

4.21 LPTool Class Reference

`#import <LPTool.h>`

Inheritance diagram for LPTool:



Properties

- NSString * toolID
- BOOL updated

4.21.1 Detailed Description

Extends CCSprite object with two properties for tracking sprites with pointable objects

4.21.2 Property Documentation

4.21.2.1 - (NSString*) toolID [read], [write], [nonatomic], [strong]

toolID is the ID number assigned by the LeapMotion SDK

Referenced by HUDLayer::moveTrackingTool:toolID:.

4.21.2.2 - (BOOL) updated [read], [write], [nonatomic], [assign]

updated is if the sprite has been updated in that frame.

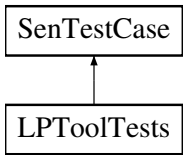
The documentation for this class was generated from the following file:

- LeapPaint/LPTool.h

4.22 LPToolTests Class Reference

`#import <LPToolTests.h>`

Inheritance diagram for LPToolTests:



Protected Attributes

- NSString * testName

4.22.1 Detailed Description

Tests the GameSettings object

4.22.2 Member Data Documentation

4.22.2.1 - (NSString*) testName [protected]

name of the test

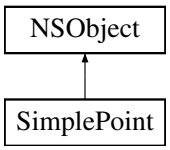
The documentation for this class was generated from the following file:

- LeapPaintTests/LPToolTests.h

4.23 SimplePoint Class Reference

`#import <SimplePoint.h>`

Inheritance diagram for SimplePoint:



Instance Methods

- (id) - initWithPosition:
- (id) - initWithX:withY:
- (id) - initWithPosition:withZ:
- (id) - initWithX:withY:withZ:
- (CGPoint) - point

Properties

- float x
- float y
- float z
- BOOL is3d

4.23.1 Detailed Description

2D or 3D space coordinate for temporarily maniulapting points

4.23.2 Method Documentation

4.23.2.1 - (id) initWithPosition: (CGPoint) *p*

Init constructor with existing point to create a 2d Point

Parameters

p	an point (x,y)

Returns

object instance

init 2d point with CGPoint

4.23.2.2 - (id) initWithPosition: (CGPoint) *p* withZ:(float) *zVal*

Init constructor with existing point to create a 3d Point

Parameters

p	a point (x,y)
zVal	coordinateValue

Returns

object instance

Init 3d point with CGPoint and z Value

4.23.2.3 - (id) initWithX: (float) *xVal* withY:(float) *yVal*

Init constructor with x and y values to create a 2d point

Parameters

xVal	coordinate value
yVal	coordinate value

Returns

object instance

Init 2d Point with 2 separate values

4.23.2.4 - (id) initWithX: (float) *xVal* withY:(float) *yVal* withZ:(float) *zVal*

Init constructor with x, y and z values to create 3D point

Parameters

xVal	coordinate value
yVal	coordinate value
zval	coordinate value

Returns

object instance

Init 3d Point with 3 separate values

4.23.2.5 - (CGPoint) point

Returns point based on x and y

Returns

CGPoint

Return the CGPoint type from the object

4.23.3 Property Documentation

4.23.3.1 - (BOOL) is3d [read], [write], [nonatomic], [assign]

is3d is 2d or 3d point type

4.23.3.2 - (float) x [read], [write], [nonatomic], [assign]

x coordinate

Referenced by point.

4.23.3.3 - (float) y [read], [write], [nonatomic], [assign]

y coordinate

Referenced by point.

4.23.3.4 - (float) z [read], [write], [nonatomic], [assign]

z coordinate

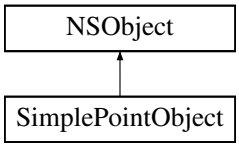
The documentation for this class was generated from the following files:

- LeapPaint/SimplePoint.h
- LeapPaint/SimplePoint.mm

4.24 SimplePointObject Class Reference

`#import <SimplePointObject.h>`

Inheritance diagram for SimplePointObject:



Instance Methods

- (id) - initWithPosition:
- (id) - initWithX:withY:

Properties

- CGPoint point

4.24.1 Detailed Description

2D space coordinate for temporarily maniulapting points

4.24.2 Method Documentation

4.24.2.1 - (id) initWithPosition: (CGPoint) *p*

Init constructor with existing point to create a 2d Point

Parameters

p	an point consisting of (x,y)

Returns

object instance

4.24.2.2 - (id) initWithX: (float) *x* withY:(float) *y*

Init constructor with existing point to create a 2d Point

Parameters

x	is x axis coordinate
y	is y axis coordinate

Returns

object instance

4.24.3 Property Documentation

4.24.3.1 - (CGPoint) point `[read],[write],[nonatomic],[assign]`

point is the X and Y coordinates

Referenced by initWithPosition:.

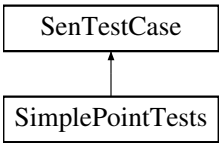
The documentation for this class was generated from the following files:

- LeapPaint/SimplePointObject.h
- LeapPaint/SimplePointObject.m

4.25 SimplePointTests Class Reference

`#import <SimplePointTests.h>`

Inheritance diagram for SimplePointTests:



Protected Attributes

- NSString * testName
- SimplePoint * twoValuePoint
- SimplePoint * threeValuePoint

4.25.1 Detailed Description

Tests the SimplePoint object

4.25.2 Member Data Documentation

4.25.2.1 - (NSString*) testName [protected]

name of the test

4.25.2.2 - (SimplePoint*) threeValuePoint [protected]

three coordinate point (x,y,z)

4.25.2.3 - (SimplePoint*) twoValuePoint [protected]

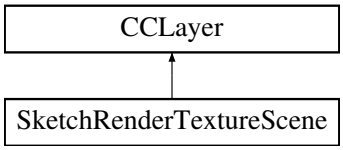
two coordinate point (x,y)

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

- LeapPaintTests/SimplePointTests.h

4.26 SketchRenderTextureScene Class Reference

Inheritance diagram for SketchRenderTextureScene:



Instance Methods

- (void) - **beginDraw:withZ:**
- (void) - **updateDraw:withZ:**
- (void) - **endDraw:**
- (void) - **changeColor:**

- (void) - **changeBrush:**
- (void) - **changeScale:**
- (void) - **changeOpacity:**
- (void) - **erasingMode:**
- (void) - **clearDrawing**

Protected Attributes

- CCSprite * **brush**
- NSMutableArray * **touches**
- ccColor3B **lastColor**
- ccColor3B **previousColor**
- NSString * **lastBrush**
- float **lastScale**
- bool **eraseMode**

Properties

- float **opacity**

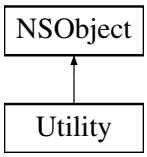
The documentation for this class was generated from the following files:

- LeapPaint/SketchRenderTextureScene.h
- LeapPaint/SketchRenderTextureScene.mm

4.27 Utility Class Reference

```
#import <Utility.h>
```

Inheritance diagram for Utility:



Class Methods

- (int) + getRandomNumberBetween:to:
- (int) + getRandomUniformNumberUnder:
- (int) + getRandomNumberUnder:

4.27.1 Detailed Description

Utility class provides common usage function throughout the application.

4.27.2 Method Documentation

4.27.2.1 + (int) getRandomNumberBetween: (int) *from* to:(int) *to*

Generates a random number between two designated integers

Parameters

from	is the bottom of the range
to	is the top of the range

Returns

a random number between the from and to parameters

returns random number within a range with defined upper and lower bounds

4.27.2.2 + (int) getRandomNumberUnder: (int) *to*

Generates a random number between 0 designated integer

Parameters

to	is the top of the range

Returns

a random number between 0 and to parameters

Returns a random number from 0 to an upper bound

4.27.2.3 + (int) getRandomUniformNumberUnder: (int) *to*

Generates a random number between 0 designated integer

Parameters

to	is the top of the range

Returns

a random number between 0 and to parameters

Returns a Uniform Random Number from 0 to an upper bound

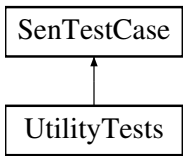
The documentation for this class was generated from the following files:

- LeapPaint/Utility.h
- LeapPaint/Utility.m

4.28 UtilityTests Class Reference

`#import <UtilityTests.h>`

Inheritance diagram for UtilityTests:



Protected Attributes

- NSString * testName

4.28.1 Detailed Description

Tests the GameSettings object

4.28.2 Member Data Documentation

4.28.2.1 - (NSString*) testName [protected]

testName is the name of the test

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

- LeapPaintTests/UtilityTests.h

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