**PieChart3DView**

**Component Description:**

**GLSurfaceVie**

**└ PieChart3DView**

PieChart3DView is a custom 3D PiechartView , made to be independent of parent application. To add this custom component in your design you just need to drag and drop it in your layout.

**Public methods :**

1. public void register()

Registers compass to sense the sensors data. It's needed to be called in activity's onResume() method.

2. public void unregister()

Unregisters compass and frees sensors to make them available to other applications. It's needed to be called in activity's onPause () method.

3. public void initializePieChart(ArrayList<Sector> listSector)

Initializes PieChart with List of Sectors

**Nasted Static Class**

1 Sector: Represents a Sector from a pie chart.

public Sector(String name, int degree, float r, float g, float b)

@param name - name of the sector.

@param degree - angle occupied by sector in pie chart.

@param r,g,b - color of the sector (RGB) normalized in (0-1) code

**File List with description for the file**

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| --- | --- | --- |
| No. | File Name | Description |
| 1 | com.example.piechart3d. PieChart3DView | PieChart3DView is a custom 3D PiechartView , made to be independent of parent application. To add this custom component in your design you just need to drag and drop it in your layout. |
| 2 | com.example.piechart3d. PieChart3DView. Sector | Represents a Sector from a pie chart. |

**About OpenGL ES:**

Android supports the OpenGL ES API. OpenGL is an API for writing 2D and 3D graphics that is rendered on the GPU(Graphic Processing Unit). This will free up precious computing resources on the CPU to be used for more complex physics or more entities or anything not related to graphics.

<http://www.javacodegeeks.com/2011/09/android-game-development-switching-from.html>

<http://www.javacodegeeks.com/2011/10/android-game-development-opengl-texture.html>

**About GLSurfaceView**

An implementation of SurfaceView that uses the dedicated surface for displaying OpenGL rendering. A GLSurfaceView provides the following features:

* Manages a surface, which is a special piece of memory that can be composited into the Android view system.
* Manages an EGL display, which enables OpenGL to render into a surface.
* Accepts a user-provided Renderer object that does the actual rendering.
* Renders on a dedicated thread to decouple rendering performance from the UI thread.
* Supports both on-demand and continuous rendering.
* Optionally wraps, traces, and/or error-checks the renderer's OpenGL calls.

# About GLSurfaceView.Renderer

A generic renderer interface. The renderer is responsible for making OpenGL calls to render a frame. GLSurfaceView clients typically create their own classes that implement this interface, and then call [setRenderer(GLSurfaceView.Renderer)](http://developer.android.com/reference/android/opengl/GLSurfaceView.html#setRenderer(android.opengl.GLSurfaceView.Renderer)) to register the renderer with the GLSurfaceView.

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| --- | --- |
| Public Methods | |
| abstract void | [onDrawFrame](http://developer.android.com/reference/android/opengl/GLSurfaceView.Renderer.html#onDrawFrame(javax.microedition.khronos.opengles.GL10))([GL10](http://developer.android.com/reference/javax/microedition/khronos/opengles/GL10.html) gl)  Called to draw the current frame. |  |  |  |  |  |  |  |  |  |  |
| abstract void | [onSurfaceChanged](http://developer.android.com/reference/android/opengl/GLSurfaceView.Renderer.html#onSurfaceChanged(javax.microedition.khronos.opengles.GL10, int, int))([GL10](http://developer.android.com/reference/javax/microedition/khronos/opengles/GL10.html) gl, int width, int height)  Called when the surface changed size. |  |  |  |  |  |  |  |  |  |  |
| abstract void | [onSurfaceCreated](http://developer.android.com/reference/android/opengl/GLSurfaceView.Renderer.html#onSurfaceCreated(javax.microedition.khronos.opengles.GL10, javax.microedition.khronos.egl.EGLConfig))([GL10](http://developer.android.com/reference/javax/microedition/khronos/opengles/GL10.html) gl, [EGLConfig](http://developer.android.com/reference/javax/microedition/khronos/egl/EGLConfig.html) config)  Called when the surface is created or recreated. |  |  |  |  |  |  |  |  |  |  |

**Contact information for the programmer:**

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**Known Bugs:**