

list of built-in objects in ofelia.

`declare -lib ofelia`

WINDOW

| | |
|---|--|
| <code>ofelia</code> | - initialize the ofelia external library |
| <code>glfwindow</code> | - handle the output window |
| <code>glfwgetwidth</code> | - get the width of the current window |
| <code>glfwgetheight</code> | - get the height of the current window |
| <code>glfwgetdimen</code> | - get the dimensions of the current window |
| <code>glfwgetwindowScale</code> | - get the scale of the current window |
| <code>glfwgetFrameNum</code> | - get the number of frames rendered |
| <code>glfwgetFrameRate</code> | - get the actual frame rate of the current window |
| <code>glfwgetTargetFrameRate</code> | - get the target frame rate of the current window |
| <code>glfwgetElapsedTime</code> | - get the elapsed time in seconds |
| <code>glfwgetElapsedTimeMillis</code> | - get the elapsed time in milliseconds |
| <code>glfwgetLastFrameTime</code> | - get the last frame time in seconds |
| <code>glfwgetLastFrameTimeMillis</code> | - get the last frame time in milliseconds |
| <code>glfwgetOrientationLock</code> | - get the orientation lock state of the current window |
| <code>glfwgetOrien</code> | - get the orientation of the current window |
| <code>glfwgetFullscreen</code> | - get the fullscreen state of the current window |
| <code>glfwgetFocus</code> | - get the focus state of the current window |
| <code>glfwgetWindowPosX</code> | - get the x position of the current window |
| <code>glfwgetWindowPosY</code> | - get the y position of the current window |
| <code>glfwgetWindowPos</code> | - get the position of the current window |
| <code>glfwgetScreenWidth</code> | - get the width of the current device's screen |
| <code>glfwgetScreenHeight</code> | - get the height of the current device's screen |
| <code>glfwgetScreenDimen</code> | - get the dimensions of the current device's screen |
| <code>glfwgetRetina</code> | - get the retina scale of the current device's screen |
| <code>glfwgetBgColorR</code> | - get the r value of the background color |
| <code>glfwgetBgColorG</code> | - get the g value of the background color |
| <code>glfwgetBgColorB</code> | - get the b value of the background color |
| <code>glfwgetBgColor</code> | - get the background color of the current window |
| <code>glfwgetWindow</code> | - check if a window exists |
| <code>glfwgetFirstRenderOrder</code> | - get the first rendering order |
| <code>glfwgetLastRenderOrder</code> | - get the last rendering order |
| <code>glfwTouchEventListener</code> | - listen to the touch events |
| <code>glfwMouseListener</code> | - listen to the mouse events |
| <code>glfwScrollListener</code> | - listen to the mouse scroll events |
| <code>glfwKeyListener</code> | - listen to the key events |
| <code>glfwAccelerometerListener</code> | - listen to the accelerometer events |
| <code>glfwWindowScaleListener</code> | - listen to the updated scale of the current window |
| <code>glfwOrientationListener</code> | - listen to the updated orientation of the current window |
| <code>glfwFullscreenListener</code> | - listen to the fullscreen mode of the current window |
| <code>glfwFocusListener</code> | - listen to the focus state of the current window |
| <code>glfwWindowPosListener</code> | - listen to the updated position of the current window |
| <code>glfwWindowListener</code> | - listen to the creation/destruction of the current window |
| <code>glfwWindowLoadBang</code> | - listen to the creation of the current window |
| <code>glfwWindowLoadBang</code> | - listen to the destruction of the current window |
| <code>glfwBackListener</code> | - listen to the back button press on android devices |

GRAPHICS

| | |
|--|---|
| <code>glfthead</code> | - the start of a rendering chain |
| <code>glftranslate</code> | - move along the coordinate system |
| <code>glfrotateX</code> | - rotate around the x-axis of the coordinate system |
| <code>glfrotateY</code> | - rotate around the y-axis of the coordinate system |
| <code>glfrotateZ</code> | - rotate around the z-axis of the coordinate system |
| <code>glfrotateXYZ</code> | - rotate around the xyz-axis of the coordinate system |
| <code>glfrotate</code> | - produce a rotation of angle around the vector |
| <code>glfScale</code> | - scale along the coordinate system |
| <code>glfPushMatrix</code> | - push the current matrix |
| <code>glfPopMatrix</code> | - pop the current matrix |
| <code>glfwTranslate</code> | - get the current translate information |
| <code>glfwRotate</code> | - get the current rotate information |
| <code>glfwScale</code> | - get the current scale information |
| <code>glfwSetColor</code> | - set the draw color |
| <code>glfwSetBgColor</code> | - set the background color |
| <code>glfwSetRectMode</code> | - set the align mode for drawing rectangular objects |
| <code>glfwSetLineMode</code> | - set the line mode for drawing rectangular objects |
| <code>glfwSetFillMode</code> | - set the fill mode for drawing shaped objects |
| <code>glfwSetPolyMode</code> | - set the poly winding mode for drawing |
| <code>glfwSetBlendMode</code> | - set the blend mode for drawing |
| <code>glfwSetLineWidth</code> | - set the width of the lined objects |
| <code>glfwSetLineSmoothing</code> | - enable/disable the smoothing for lines |
| <code>glfwSetCircleRes</code> | - set the resolution for circular objects |
| <code>glfwSetCurveRes</code> | - set the resolution for curved objects |
| <code>glfwPushStyle</code> | - push the current style |
| <code>glfwPopStyle</code> | - pop the current style |
| <code>glfwSepMatrix</code> | - separate render chains in matrix |
| <code>glfwSepStyle</code> | - separate render chains in style |
| <code>glfwSeparator</code> | - separate render chains in matrix and style |
| <code>glfwViewport</code> | - setup the drawing viewport |
| <code>glfwDepthTest</code> | - enable/disable the depth test |
| <code>glfwSetArbTex</code> | - enable/disable the use of ARB textures |
| <code>glfwSetAntiAliasing</code> | - enable/disable the anti-aliasing for lines |
| <code>glfwSetBgAuto</code> | - enable/disable the auto background clearing function |
| <code>glfclear</code> | - clear the color and depth bits of current renderer |
| <code>glfclearColor</code> | - clear the color bits of current renderer |
| <code>glfclearDepth</code> | - clear the depth bits of current renderer |
| <code>glfclearAlpha</code> | - clear the alpha channel of current renderer |
| <code>glfBeginShape</code> | - start drawing a new shape |
| <code>glfEndShape</code> | - finish drawing the shape and draw it to the screen |
| <code>glfwNextContour</code> | - draw multiple contours within one shape |
| <code>glfwVertex2d</code> | - specify a single 2d point of a shape |
| <code>glfwVertex3d</code> | - specify a single 3d point of a shape |
| <code>glfwCurveVertex2d</code> | - specify a single 2d point of a shape |
| <code>glfwCurveVertex3d</code> | - specify a single 3d point of a shape |
| <code>glfwBezierVertex2d</code> | - describe a bezier curve through three points of a shape |
| <code>glfwBezierVertex3d</code> | - describe a bezier curve through three points of a shape |
| <code>glfCircle</code> | - draw a circle |
| <code>glfEllipse</code> | - draw an ellipse |
| <code>glfArc</code> | - draw an arc |
| <code>glfSector</code> | - draw a sector |
| <code>glfLine2d</code> | - draw a 2d line |
| <code>glfLine3d</code> | - draw a 3d line |
| <code>glfCurve2d</code> | - draw a 2d curve |
| <code>glfCurve3d</code> | - draw a 3d curve |
| <code>glfwBezier2d</code> | - draw a 2d bezier curve |
| <code>glfwBezier3d</code> | - draw a 3d bezier curve |
| <code>glfQuadBezier2d</code> | - draw a 2d quadratic bezier curve |
| <code>glfQuadBezier3d</code> | - draw a 3d quadratic bezier curve |
| <code>glfTriangle2d</code> | - draw a 2d triangle |
| <code>glfTriangle3d</code> | - draw a 3d triangle |
| <code>glfTriangle</code> | - draw an equilateral triangle |
| <code>glfIsoTriangle</code> | - draw an isosceles triangle |
| <code>glfLoad2d</code> | - draw a 2d quadrilateral |
| <code>glfLoad3d</code> | - draw a 3d quadrilateral |
| <code>glfsquare</code> | - draw a square |
| <code>glfRectangle</code> | - draw a rectangle |
| <code>glfRectRounded</code> | - draw a rounded rectangle with a given corner radius |
| <code>glfRectRounded4</code> | - draw a rounded rectangle with a given 4 corner radiuses |
| <code>glfCross</code> | - draw a cross |
| <code>glfHeart</code> | - draw a heart |
| <code>glfMoon</code> | - draw a moon |
| <code>glfRegPolygon</code> | - draw a regular polygon |
| <code>glfStar</code> | - draw a star |
| <code>glfAxis</code> | - draw axes |
| <code>glfBox</code> | - draw a box |
| <code>glfCone</code> | - draw a cone |
| <code>glfCylinder</code> | - draw a cylinder |
| <code>glfIcosphere</code> | - draw an icosphere |
| <code>glfPlane</code> | - draw a plane |
| <code>glfSphere</code> | - draw a sphere |
| <code>glfArrow</code> | - draw an arrow |
| <code>glfGrid</code> | - draw grid planes |
| <code>glfGridPlane</code> | - draw a yz grid plane |
| <code>glfRotationAxes</code> | - draw a set of 3-axis aligned circular bands |
| <code>glfLoadPolyline2d</code> | - store an array of polyline2d commands |
| <code>glfLoadPolyline3d</code> | - store an array of polyline3d commands |
| <code>glfDrawPolyline2d</code> | - draw the stored polyline2d |
| <code>glfDrawPolyline3d</code> | - draw the stored polyline3d |
| <code>glfDoesPolyline2dNameExist</code> | - check the existence of a polyline2d variable name |
| <code>glfDoesPolyline3dNameExist</code> | - check the existence of a polyline3d variable name |
| <code>glfEditPolyline2dPoint</code> | - edit the stored polyline2d point |
| <code>glfEditPolyline3dPoint</code> | - edit the stored polyline3d point |
| <code>glfGetPolyline2dPoint</code> | - get a polyline2d point at the given index |
| <code>glfGetPolyline3dPoint</code> | - get a polyline3d point at the given index |
| <code>glfGetPolyline2dPoints</code> | - get all polyline2d points as a list |
| <code>glfGetPolyline3dPoints</code> | - get all polyline3d points as a list |
| <code>glfIsPointInsidePolyline2d</code> | - check if a 2d point is within a closed polyline2d |
| <code>glfIsPointInsidePolyline3d</code> | - check if a 2d point is within a closed polyline3d |
| <code>glfGetPolyline2dCommand</code> | - get a polyline2d command at the given index |
| <code>glfGetPolyline3dCommand</code> | - get a polyline3d command at the given index |
| <code>glfGetPolyline2dCommands</code> | - get all polyline2d commands as a list |
| <code>glfGetPolyline3dCommands</code> | - get all polyline3d commands as a list |
| <code>glfGetPolyline2dBoundingBox</code> | - get the dimensions of the polyline2d bounding box |
| <code>glfGetPolyline3dBoundingBox</code> | - get the dimensions of the polyline3d bounding box |
| <code>glfGetPolyline2dCentroid</code> | - get the center position of the polyline2d area |
| <code>glfGetPolyline3dCentroid</code> | - get the center position of the polyline3d area |
| <code>glfGetPolyline2dArea</code> | - get the precise area of the polyline2d |
| <code>glfGetPolyline3dArea</code> | - get the precise area of the polyline3d |
| <code>glfGetPolyline2dPerimeter</code> | - get the size of the perimeter of the polyline2d |
| <code>glfGetPolyline3dPerimeter</code> | - get the size of the perimeter of the polyline3d |
| <code>glfLoadPath2d</code> | - store an array of path2d commands |
| <code>glfLoadPath3d</code> | - store an array of path3d commands |
| <code>glfDrawPath2d</code> | - draw the stored path2d |
| <code>glfDrawPath3d</code> | - draw the stored path3d |
| <code>glfDoesPath2dNameExist</code> | - check the existence of a path2d variable name |
| <code>glfDoesPath3dNameExist</code> | - check the existence of a path3d variable name |
| <code>glfGetPath2dPoint</code> | - get a path2d point at the given index |
| <code>glfGetPath3dPoint</code> | - get a path3d point at the given index |
| <code>glfGetPath2dPoints</code> | - get all path2d points as a list |
| <code>glfGetPath3dPoints</code> | - get all path3d points as a list |
| <code>glfIsPointInsidePath2d</code> | - check if a 2d point is within a closed path2d |
| <code>glfIsPointInsidePath3d</code> | - check if a 2d point is within a closed path3d |
| <code>glfGetPath2dCommand</code> | - get a path2d command at the given index |
| <code>glfGetPath3dCommand</code> | - get a path3d command at the given index |
| <code>glfGetPath2dCommands</code> | - get all path2d commands as a list |
| <code>glfGetPath3dCommands</code> | - get all path3d commands as a list |
| <code>glfGetPath2dTessellation</code> | - get the tessellation data to convert path2d to mesh2d |
| <code>glfGetPath3dTessellation</code> | - get the tessellation data to convert path3d to mesh3d |
| <code>glfGetPath2dBoundingBox</code> | - get the dimensions of the path2d bounding box |
| <code>glfGetPath3dBoundingBox</code> | - get the dimensions of the path3d bounding box |
| <code>glfGetPath2dCentroid</code> | - get the center position of the path2d area |
| <code>glfGetPath3dCentroid</code> | - get the center position of the path3d area |
| <code>glfGetPath2dArea</code> | - get the precise area of the path2d |
| <code>glfGetPath3dArea</code> | - get the precise area of the path3d |
| <code>glfGetPath2dPerimeter</code> | - get the size of the perimeter of the path2d |
| <code>glfGetPath3dPerimeter</code> | - get the size of the perimeter of the path3d |
| <code>glfCreateFbo</code> | - create framebuffer object |
| <code>glfBindFboTex</code> | - bind the stored fbo's texture |
| <code>glfDrawFbo</code> | - draw the stored fbo |
| <code>glfDoesFboNameExist</code> | - check the existence of a fbo variable name |
| <code>glfIsFboAllocated</code> | - check if the fbo is allocated or not |
| <code>glfGetFboDimen</code> | - get the dimensions of the fbo |
| <code>glfGetFboType</code> | - get the type of the fbo |
| <code>glfGetFboMaxSamples</code> | - get the maximum number of MSAA samples |
| <code>glfCreateImage</code> | - create an image |
| <code>glfLoadImage</code> | - store an array of images |
| <code>glfEditImage</code> | - edit the stored image |
| <code>glfSaveImage</code> | - save image to disk |
| <code>glfBindImageTex</code> | - bind the stored image's texture |
| <code>glfDrawImage</code> | - draw the stored image |
| <code>glfDrawSubImage</code> | - draw a subsection of the image |
| <code>glfDoesImageNameExist</code> | - check the existence of an image variable name |
| <code>glfGetImagePath</code> | - get the absolute path of the image |
| <code>glfIsImageAllocated</code> | - check if the image is allocated or not |
| <code>glfGetImageDimen</code> | - get the dimensions of the image |
| <code>glfGetImageType</code> | - get the type of the image |
| <code>glfGetImageColorAt</code> | - get the color of a pixel at the specified x, y index |
| <code>glfGetImageTexCoord</code> | - get the texture coordinate of the image from 2d vertex |
| <code>glfGetImageTexCoords</code> | - get the texture coordinates of the image from 2d vertices |
| <code>glfLoadShader</code> | - store an array of shaders |
| <code>glfApplyShader</code> | - apply the shader |
| <code>glfDoesShaderNameExist</code> | - check the existence of a shader variable name |
| <code>glfGetShaderPath</code> | - get the absolute path of the shader |
| <code>glfIsShaderLoaded</code> | - check if the shader is loaded or not |
| <code>glfSetShaderUniform1i</code> | - set a int uniform on the shader |
| <code>glfSetShaderUniform2i</code> | - set a ivec2 uniform on the shader |
| <code>glfSetShaderUniform3i</code> | - set a ivec3 uniform on the shader |
| <code>glfSetShaderUniform4i</code> | - set a ivec4 uniform on the shader |
| <code>glfSetShaderUniform1f</code> | - set a float uniform on the shader |
| <code>glfSetShaderUniform2f</code> | - set a vec2 uniform on the shader |
| <code>glfSetShaderUniform3f</code> | - set a vec3 uniform on the shader |
| <code>glfSetShaderUniform4f</code> | - set a vec4 uniform on the shader |
| <code>glfSetShaderUniform1iv</code> | - set an array of int uniform on the shader |
| <code>glfSetShaderUniform2iv</code> | - set an array of ivec2 uniform on the shader |
| <code>glfSetShaderUniform3iv</code> | - set an array of ivec3 uniform on the shader |
| <code>glfSetShaderUniform4iv</code> | - set an array of ivec4 uniform on the shader |
| <code>glfSetShaderUniform1fv</code> | - set an array of float uniform on the shader |
| <code>glfSetShaderUniform2fv</code> | - set an array of vec2 uniform on the shader |
| <code>glfSetShaderUniform3fv</code> | - set an array of vec3 uniform on the shader |
| <code>glfSetShaderUniform4fv</code> | - set an array of vec4 uniform on the shader |
| <code>glfSetShaderAttribute1f</code> | - set 1 float attribute on the shader |
| <code>glfSetShaderAttribute2f</code> | - set 2 float attributes on the shader |
| <code>glfSetShaderAttribute3f</code> | - set 3 float attributes on the shader |
| <code>glfSetShaderAttribute4f</code> | - set 4 float attributes on the shader |
| <code>glfSetShaderAttribute1fv</code> | - set an array of 1 float attributes on the shader |
| <code>glfSetShaderAttribute3fv</code> | - set an array of 3 float attributes on the shader |
| <code>glfSetShaderAttribute4fv</code> | - set an array of 4 float attributes on the shader |
| <code>glfLoadFont</code> | - store an array of fonts |
| <code>glfEditFont</code> | - edit the stored font |
| <code>glfBindFontTex</code> | - bind the stored font's texture |
| <code>glfDrawText</code> | - draw a text using the stored font |
| <code>glfDrawTextAsShapes</code> | - draw a text as shapes using the stored font |
| <code>glfDoesFontNameExist</code> | - check the existence of a font variable name |
| <code>glfGetFontPath</code> | - get the absolute path of the font |
| <code>glfGetFontSize</code> | - get the size of the font |
| <code>glfIsFontLoaded</code> | - check if the font is loaded or not |
| <code>glfGetTextBoundingBox</code> | - get the dimensions of the text bounding box |
| <code>glfGetFontLetterSpacing</code> | - get the letter spacing of the font |
| <code>glfGetFontLineHeight</code> | - get the line height of the font |
| <code>glfGetFontSpaceSize</code> | - get the space size of the font |
| <code>glfGetTextMesh2dCommands</code> | - get the mesh2d data based on the font and text |
| <code>glfGetTextMesh3dCommands</code> | - get the mesh3d data based on the font and text |
| <code>glfLoadMesh2d</code> | - store a set of arrays for a 2d mesh |
| <code>glfLoadMesh3d</code> | - store a set of arrays for a 3d mesh |
| <code>glfDrawMesh2d</code> | - draw the stored mesh2d |
| <code>glfDrawMesh3d</code> | - draw the stored mesh3d |
| <code>glfDoesMesh2dNameExist</code> | - check the existence of a mesh2d variable name |
| <code>glfDoesMesh3dNameExist</code> | - check the existence of a mesh3d variable name |
| <code>glfEditMesh2dVertex</code> | - edit the stored mesh2d vertex |
| <code>glfEditMesh3dVertex</code> | - edit the stored mesh3d vertex |
| <code>glfEditMesh2dIndex</code> | - edit the stored mesh2d index |
| <code>glfEditMesh3dIndex</code> | - edit the stored mesh3d index |
| <code>glfEditMesh2dNormal</code> | - edit the stored mesh2d normal |
| <code>glfEditMesh3dNormal</code> | - edit the stored mesh3d normal |
| <code>glfEditMesh2dTexCoord</code> | - edit the stored mesh2d texture coordinate |
| <code>glfEditMesh3dTexCoord</code> | - edit the stored mesh3d texture coordinate |
| <code>glfEditMesh2dColor</code> | - edit the stored mesh2d color |
| <code>glfEditMesh3dColor</code> | - edit the stored mesh3d color |
| <code>glfGetMesh2dVertex</code> | - get the mesh2d vertex at the given index |
| <code>glfGetMesh3dVertex</code> | - get the mesh3d vertex at the given index |
| <code>glfGetMesh2dIndex</code> | - get the mesh2d index at the given index |
| <code>glfGetMesh3dIndex</code> | - get the mesh3d index at the given index |
| <code>glfGetMesh2dNormal</code> | - get the mesh2d normal at the given index |
| <code>glfGetMesh3dNormal</code> | - get the mesh3d normal at the given index |
| <code>glfGetMesh2dTexCoord</code> | - get the mesh2d texture coordinate at the given index |
| <code>glfGetMesh3dTexCoord</code> | - get the mesh3d texture coordinate at the given index |
| <code>glfGetMesh2dColor</code> | - get the mesh2d color at the given index |
| <code>glfGetMesh3dColor</code> | - get the mesh3d color at the given index |
| <code>glfGetMesh2dVertices</code> | - get all mesh2d vertices as a list |
| <code>glfGetMesh3dVertices</code> | - get all mesh3d vertices as a list |
| <code>glfGetMesh2dIndices</code> | - get all mesh2d indices as a list |
| <code>glfGetMesh3dIndices</code> | - get all mesh3d indices as a list |
| <code>glfGetMesh2dNormals</code> | - get all mesh2d normals as a list |
| <code>glfGetMesh3dNormals</code> | - get all mesh3d normals as a list |
| <code>glfGetMesh2dTexCoords</code> | - get all mesh2d texture coordinates as a list |
| <code>glfGetMesh3dTexCoords</code> | - get all mesh3d texture coordinates as a list |
| <code>glfGetMesh2dColors</code> | - get all mesh2d colors as a list |
| <code>glfGetMesh3dColors</code> | - get all mesh3d colors as a list |
| <code>glfGetMesh2dCommands</code> | - get all mesh2d commands as a list |
| <code>glfGetMesh3dCommands</code> | - get all mesh3d commands as a list |
| <code>glfGetMesh2dBoundingBox</code> | - get the dimensions of the mesh2d bounding box |
| <code>glfGetMesh3dBoundingBox</code> | - get the dimensions of the mesh3d bounding box |
| <code>glfGetMesh2dCentroid</code> | - get the centroid of all the vertices in the mesh2d |
| <code>glfGetMesh3dCentroid</code> | - get the centroid of all the vertices in the mesh3d |
| <code>glfEasyCam</code> | - a simple camera for interacting with objects in 3d space |
| <code>glfCamera</code> | - a basic camera for interacting with objects in 3d space |
| <code>glfPointLight</code> | - a light that spreads outward evenly in all directions |
| <code>glfSpotLight</code> | - a light that spreads outward in a cone |
| <code>glfDirectionalLight</code> | - a light that comes evenly from a given direction |
| <code>glfMaterial</code> | - set the material of the object |

TYPES

| | |
|---------------------------------------|---|
| <code>glfLoadFloat</code> | - store an array of floats |
| <code>glfEditFloat</code> | - edit the stored float |
| <code>glfDoesFloatNameExist</code> | - check the existence of a float variable name |
| <code>glfGetFloat</code> | - get a float element at the given index |
| <code>glfGetFloats</code> | - get all float elements as a list |
| <code>glfGetFloatAverage</code> | - get the average value of float elements |
| <code>glfLoadVec2f</code> | - store an array of two dimensional vectors |
| <code>glfEditVec2f</code> | - edit the stored vec2f |
| <code>glfDoesVec2fNameExist</code> | - check the existence of a vec2f variable name |
| <code>glfGetVec2f</code> | - get a vec2f element at the given index |
| <code>glfGetVec2fs</code> | - get all vec2f elements as a list |
| <code>glfGetVec2fAverage</code> | - get the average value of vec2f elements |
| <code>glfGetVec2fAngle</code> | - get the angle in degrees between two vec2fs |
| <code>glfGetVec2fAngleRad</code> | - get the angle in radians between two vec2fs |
| <code>glfGetVec2fDist</code> | - get the distance between two vec2fs |
| <code>glfGetVec2fDistSquared</code> | - get the squared distance between two vec2fs |
| <code>glfGetVec2fDot</code> | - get the dot product of two vec2fs |
| <code>glfGetVec2fLength</code> | - get the length of the vec2f element |
| <code>glfGetVec2fLengthSquared</code> | - get the squared length of the vec2f element |
| <code>glfLoadVec3f</code> | - store an array of three dimensional vectors |
| <code>glfEditVec3f</code> | - edit the stored vec3f |
| <code>glfDoesVec3fNameExist</code> | - check the existence of a vec3f variable name |
| <code>glfGetVec3f</code> | - get a vec3f element at the given index |
| <code>glfGetVec3fs</code> | - get all vec3f elements as a list |
| <code>glfGetVec3fAverage</code> | - get the average value of vec3f elements |
| <code>glfGetVec3fAngle</code> | - get the angle in degrees between two vec3fs |
| <code>glfGetVec3fAngleRad</code> | - get the angle in radians between two vec3fs |
| <code>glfGetVec3fDist</code> | - get the distance between two vec3fs |
| <code>glfGetVec3fDistSquared</code> | - get the squared distance between two vec3fs |
| <code>glfGetVec3fDot</code> | - get the dot product of two vec3fs |
| <code>glfGetVec3fLength</code> | - get the length of the vec3f element |
| <code>glfGetVec3fLengthSquared</code> | - get the squared length of the vec3f element |
| <code>glfLoadVec4f</code> | - store an array of four dimensional vectors |
| <code>glfEditVec4f</code> | - edit the stored vec4f |
| <code>glfDoesVec4fNameExist</code> | - check the existence of a vec4f variable name |
| <code>glfGetVec4f</code> | - get a vec4f element at the given index |
| <code>glfGetVec4fs</code> | - get all vec4f elements as a list |
| <code>glfGetVec4fAverage</code> | - get the average value of vec4f elements |
| <code>glfGetVec4fDist</code> | - get the distance between two vec4fs |
| <code>glfGetVec4fDistSquared</code> | - get the squared distance between two vec4fs |
| <code>glfGetVec4fDot</code> | - get the dot product of two vec4fs |
| <code>glfGetVec4fLength</code> | - get the length of the vec4f element |
| <code>glfGetVec4fLengthSquared</code> | - get the squared length of the vec4f element |
| <code>glfLoadColor</code> | - store an array of colors |
| <code>glfEditColor</code> | - edit the stored color |
| <code>glfDoesColorNameExist</code> | - check the existence of a color variable name |
| <code>glfGetColor</code> | - get a color element at the given index |
| <code>glfGetColors</code> | - get all color elements as a list |
| <code>glfLoadSymbol</code> | - store an array of symbols |
| <code>glfEditSymbol</code> | - edit the stored symbol |
| <code>glfDoesSymbolNameExist</code> | - check the existence of a symbol variable name |
| <code>glfGetSymbol</code> | - get a symbol element at the given index |
| <code>glfGetSymbols</code> | - get all symbol elements as a list |

MATH

| | |
|--|--|
| <code>glfAngleDifferenceDegrees</code> | - calculate the difference between two angles in degrees |
| <code>glfAngleDifferenceRadians</code> | - calculate the difference between two angles in radians |
| <code>glfDegToRad</code> | - convert degrees to radians |
| <code>glfRadToDeg</code> | - convert radians to degrees |
| <code>glfDist2d</code> | - calculate the 2d distance between two points |
| <code>glfDist3d</code> | - calculate the 3d distance between two points |
| <code>glfDistSquared2d</code> | - calculate the squared 2d distance between two points |
| <code>glfDistSquared3d</code> | - calculate the squared 3d distance between two points |
| <code>glfInRange</code> | - determine if a number is inside of a given range |
| <code>glfClamp</code> | - clamp a value between min and max |
| <code>glfNormalize</code> | - map the input value to be within 0 and 1 |
| <code>glfLerp</code> | - linearly interpolate a value within a range |
| <code>glfLerpDegrees</code> | - linearly interpolate a value between two angles in degrees |
| <code>glfLerpRadians</code> | - linearly interpolate a value between two angles in radians |
| <code>glfRandomf</code> | - get a random number within a given range |
| <code>glfRandomui</code> | - get a random floating point number between -1 and 1 |
| <code>glfSeedRandom</code> | - seed the random number generator with a unique value |
| <code>glfWrap</code> | - wrap a value if it overflows a given range |
| <code>glfWrapDegrees</code> | - wrap a value within the angle in degrees |
| <code>glfWrapRadians</code> | - wrap a value within the angle in radians |
| <code>glfMap</code> | - map the value to a new value |
| <code>glfNextPow2</code> | - calculate the next larger power of 2 |
| <code>glfSignedNoise</code> | - calculate a simplex noise value between 0 and 1 |
| <code>glfSign</code> | - get the sign of a value |

UTILS

| | |
|----------------------------|---|
| <code>ofSquare~</code> | - square wave oscillator |
| <code>ofPulse~</code> | - pulse wave oscillator |
| <code>ofB1Triangle~</code> | - bandlimited triangle wave oscillator |
| <code>ofB1Saw~</code> | - bandlimited sawtooth wave oscillator |
| <code>ofB1Square~</code> | - bandlimited square wave oscillator |
| <code>ofB1Pulse~</code> | - bandlimited pulse wave oscillator |
| <code>ofLowPass~</code> | - low-pass filter with resonance control |
| <code>ofHighPass~</code> | - high-pass filter with resonance control |
| <code>ofBandPass~</code> | - band-pass filter with Q control |
| <code>ofNotch~</code> | - notch filter with bandwidth control |
| <code>ofPeaking~</code> | - peaking filter with Q and gain control |
| <code>ofLowShelf~</code> | - low shelf filter with shelf slope and gain control |
| <code>ofHighShelf~</code> | - high shelf filter with shelf slope and gain control |
| <code>ofAllPass~</code> | - all-pass filter with bandwidth control |