

vengine

0.1.0

Generated by Doxygen 1.9.1

1 Hierarchical Index	1
1.1 Class Hierarchy	1
2 Class Index	3
2.1 Class List	3
3 Class Documentation	5
3.1 myLib::Clock Class Reference	5
3.2 ven::Device Class Reference	5
3.3 ven::Engine Class Reference	6
3.4 ven::PipelineConfigInfo Struct Reference	6
3.5 gui::PluginLoader Class Reference	7
3.6 gui::PluginLoader::PluginLoaderException Class Reference	7
3.7 ven::QueueFamilyIndices Struct Reference	8
3.8 myLib::Random Class Reference	8
3.9 ven::Shaders Class Reference	8
3.10 ven::SwapChain Class Reference	9
3.11 ven::SwapChainSupportDetails Struct Reference	9
3.12 myLib::Time Class Reference	9
3.13 ven::Window Class Reference	10
Index	11

Chapter 1

Hierarchical Index

1.1 Class Hierarchy

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

myLib::Clock	5
ven::Device	5
ven::Engine	6
std::exception	
gui::PluginLoader::PluginLoaderException	7
ven::PipelineConfigInfo	6
gui::PluginLoader	7
ven::QueueFamilyIndices	8
myLib::Random	8
ven::Shaders	8
ven::SwapChain	9
ven::SwapChainSupportDetails	9
myLib::Time	9
ven::Window	10

Chapter 2

Class Index

2.1 Class List

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

myLib::Clock	5
ven::Device	5
ven::Engine	6
ven::PipelineConfigInfo	6
gui::PluginLoader	7
gui::PluginLoader::PluginLoaderException	7
ven::QueueFamilyIndices	8
myLib::Random	8
ven::Shaders	8
ven::SwapChain	9
ven::SwapChainSupportDetails	9
myLib::Time	9
ven::Window	10

Chapter 3

Class Documentation

3.1 myLib::Clock Class Reference

Public Member Functions

- void **restart** ()
- void **pause** ()
- void **resume** ()
- [Time](#) **getElapsedTime** () const

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

- lib/static/myLib/include/myLib/Clock/Clock.hpp

3.2 ven::Device Class Reference

Public Member Functions

- **Device** ([ven::Window](#) &window)
- **Device** (const [Device](#) &)=delete
- void **operator=** (const [Device](#) &)=delete
- **Device** ([Device](#) &&)=delete
- [Device](#) & **operator=** ([Device](#) &&)=delete
- VkCommandPool **getCommandPool** ()
- VkDevice **device** ()
- VkSurfaceKHR **surface** ()
- VkQueue **graphicsQueue** ()
- VkQueue **presentQueue** ()
- [SwapChainSupportDetails](#) **getSwapChainSupport** ()
- uint32_t **findMemoryType** (uint32_t typeFilter, VkMemoryPropertyFlags properties)
- [QueueFamilyIndices](#) **findPhysicalQueueFamilies** ()
- VkFormat **findSupportedFormat** (const std::vector< VkFormat > &candidates, VkImageTiling tiling, VkFormatFeatureFlags features)
- void **createBuffer** (VkDeviceSize size, VkBufferUsageFlags usage, VkMemoryPropertyFlags properties, VkBuffer &buffer, VkDeviceMemory &bufferMemory)
- VkCommandBuffer **beginSingleTimeCommands** ()
- void **endSingleTimeCommands** (VkCommandBuffer commandBuffer)
- void **copyBuffer** (VkBuffer srcBuffer, VkBuffer dstBuffer, VkDeviceSize size)
- void **copyBufferToImage** (VkBuffer buffer, VkImage image, uint32_t width, uint32_t height, uint32_t layerCount)
- void **createImageWithInfo** (const VkImageCreateInfo &imageInfo, VkMemoryPropertyFlags properties, VkImage &image, VkDeviceMemory &imageMemory)

Public Attributes

- const bool **enableValidationLayers** = true
- VkPhysicalDeviceProperties **properties**

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

- include/VEngine/Device.hpp

3.3 ven::Engine Class Reference

Public Member Functions

- **Engine** (int width=DEFAULT_WIDTH, int height=DEFAULT_HEIGHT, const std::string &title="VEngine")
- **Engine** (const [Engine](#) &)=delete
- **Engine operator=** (const [Engine](#) &)=delete
- [Window](#) & **getWindow** ()
- void **initVulkan** ()
- void **mainLoop** ()
- void **deleteResources** ()

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

- include/VEngine/Engine.hpp

3.4 ven::PipelineConfigInfo Struct Reference

Public Attributes

- VkViewport **viewport** {}
- VkRect2D **scissor** {}
- VkPipelineInputAssemblyStateCreateInfo **inputAssemblyInfo** {}
- VkPipelineRasterizationStateCreateInfo **rasterizationInfo** {}
- VkPipelineMultisampleStateCreateInfo **multisampleInfo** {}
- VkPipelineColorBlendAttachmentState **colorBlendAttachment** {}
- VkPipelineColorBlendStateCreateInfo **colorBlendInfo** {}
- VkPipelineDepthStencilStateCreateInfo **depthStencilInfo** {}
- VkPipelineLayout **pipelineLayout** = nullptr
- VkRenderPass **renderPass** = nullptr
- uint32_t **subpass** = 0

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

- include/VEngine/Shaders.hpp

3.5 gui::PluginLoader Class Reference

Classes

- class [PluginLoaderException](#)

Public Types

- using **PluginCreator** = std::unique_ptr< IPlugin >(*)()

Public Member Functions

- template<typename T >
std::unique_ptr< T > **getPlugin** (const std::string &pluginName)
- void **closePlugins** ()

Static Public Member Functions

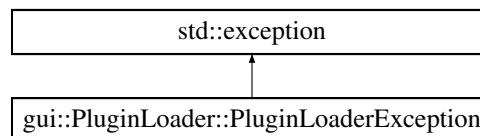
- static [PluginLoader](#) & **getInstance** ()

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

- include/VEngine/PluginLoader.hpp

3.6 gui::PluginLoader::PluginLoaderException Class Reference

Inheritance diagram for gui::PluginLoader::PluginLoaderException:



Public Member Functions

- **PluginLoaderException** (std::string msg)
- const char * **what** () const noexcept override

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

- include/VEngine/PluginLoader.hpp

3.7 ven::QueueFamilyIndices Struct Reference

Public Member Functions

- bool **isComplete** () const

Public Attributes

- uint32_t **graphicsFamily** {}
- uint32_t **presentFamily** {}
- bool **graphicsFamilyHasValue** = false
- bool **presentFamilyHasValue** = false

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

- include/VEngine/Device.hpp

3.8 myLib::Random Class Reference

Static Public Member Functions

- static int **randomInt** (int min, int max)
- static int **randomInt** ()
- static float **randomFloat** (float min, float max)
- static float **randomFloat** ()

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

- lib/static/myLib/include/myLib/Random.hpp

3.9 ven::Shaders Class Reference

Public Member Functions

- **Shaders** ([Device](#) &device, const std::string &vertFilepath, const std::string &fragFilepath, const [PipelineConfigInfo](#) &configInfo)
- **Shaders** (const [Shaders](#) &)=delete
- void **operator=** (const [Shaders](#) &)=delete
- void **bind** (VkCommandBuffer commandBuffer)

Static Public Member Functions

- static [PipelineConfigInfo](#) **defaultPipelineConfigInfo** (uint32_t width, uint32_t height)

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

- include/VEngine/Shaders.hpp

3.10 ven::SwapChain Class Reference

Public Member Functions

- **SwapChain** ([Device](#) &deviceRef, VkExtent2D windowExtent)
- **SwapChain** (const [SwapChain](#) &)=delete
- void **operator=** (const [SwapChain](#) &)=delete
- VkFramebuffer **getFrameBuffer** (int index)
- VkRenderPass **getRenderPass** ()
- VkImageView **getImageView** (int index)
- size_t **imageCount** ()
- VkFormat **getSwapChainImageFormat** ()
- VkExtent2D **getSwapChainExtent** ()
- uint32_t **width** () const
- uint32_t **height** () const
- float **extentAspectRatio** () const
- VkFormat **findDepthFormat** ()
- VkResult **acquireNextImage** (uint32_t *imageIndex)
- VkResult **submitCommandBuffers** (const VkCommandBuffer *buffers, const uint32_t *imageIndex)

Static Public Attributes

- static constexpr int **MAX_FRAMES_IN_FLIGHT** = 2

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

- include/VEngine/SwapChain.hpp

3.11 ven::SwapChainSupportDetails Struct Reference

Public Attributes

- VkSurfaceCapabilitiesKHR **capabilities**
- std::vector< VkSurfaceFormatKHR > **formats**
- std::vector< VkPresentModeKHR > **presentModes**

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

- include/VEngine/Device.hpp

3.12 myLib::Time Class Reference

Public Member Functions

- **Time** (const double seconds)
- int **asSeconds** () const
- int **asMilliseconds** () const
- int **asMicroseconds** () const

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

- lib/static/myLib/include/myLib/Clock/Time.hpp

3.13 ven::Window Class Reference

Public Member Functions

- **Window** (int width, int height, const std::string &title)
- void **createWindowSurface** (VkInstance instance, VkSurfaceKHR *surface)
- GLFWwindow * **getGLFWWindow** () const
- VkExtent2D **getExtent** () const

Static Public Member Functions

- static GLFWwindow * **createWindow** (int width, int height, const std::string &title)

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

- include/VEngine/Window.hpp

Index

gui::PluginLoader, [7](#)
gui::PluginLoader::PluginLoaderException, [7](#)

myLib::Clock, [5](#)
myLib::Random, [8](#)
myLib::Time, [9](#)

ven::Device, [5](#)
ven::Engine, [6](#)
ven::PipelineConfigInfo, [6](#)
ven::QueueFamilyIndices, [8](#)
ven::Shaders, [8](#)
ven::SwapChain, [9](#)
ven::SwapChainSupportDetails, [9](#)
ven::Window, [10](#)