## VRE::VRE\_Window

- int mWidth
- int mHeight
- bool mFrameBufferResized
- const std::string mWindowName
- GLFWwindow \* mWindow + VRE\_Window(int width,
- int height, std::string name)
  - + ~VRE\_Window() + VRE\_Window(const VRE
- \_Window &)=delete
- + VRE\_Window & operator =(const VRE\_Window &)
- =delete
- + bool ShouldClose()
- + void CreateWindowSurface
- (VkInstance instance, VkSurface KHR \*surface)
- + VkExtent2D GetExtent()

+ bool HasWindowResized()

- + void ResetWindowResizedFlag()
- + GLFWwindow \* GetGLFWwindow
- () const
- void Init()
- static void FrameBufferResized
- Callback(GLFWwindow \*window, int width, int height)
- - -mWindow

VRE::VRE Device

## + const bool mEnableValidation

- Layers + VkPhysicalDeviceProperties
- VkInstance mInstance

**mProperties** 

- VkDebugUtilsMessengerEXT mDebugMessenger
- VkPhysicalDevice mPhysical Device
- VkCommandPool mCommandPool VkDevice mVkDevice
- VkSurfaceKHR mVkSurface
  - VkQueue mGraphicsQueue
  - VkQueue mPresentQueue
  - const std::vector<
  - const char \* > mValidation Layers
    - const std::vector< const char \* > mDeviceExtensions
- + VRE\_Device(VRE\_Window
  - &window)
- + ~VRE\_Device()
- + VRE Device(const VRE
  - Device &)=delete
    - VRE\_Device & operator =(const VRE\_Device &) =delete
- + VRE Device(VRE Device
  - &&)=delete
- + VRE Device & operator =(VRE\_Device &&)=delete
- VkCommandPool GetCommand
- Pool()
- + VkDevice GetVkDevice() + VkPhysicalDevice GetPhysical
- Device()
- + VkSurfaceKHR Surface() and 12 more...
- void CreateInstance()
- void SetupDebugMessenger() void CreateSurface()
- void PickPhysicalDevice()
- void CreateLogicalDevice()
- void CreateCommandPool() bool IsDeviceSuitable
- (VkPhysicalDevice device)
- std::vector< const char \* > GetRequiredExtensions()
- bool CheckValidationLayer Support()
- QueueFamilyIndices FindQueueFamilies(VkPhysical Device device)
- void PopulateDebugMessenger CreateInfo(VkDebugUtilsMessenger
- void HasGflwRequiredInstance Extensions()

CreateInfoEXT &createInfo)

- bool CheckDeviceExtension Support(VkPhysicalDevice device)
- SwapChainSupportDetails QuerySwapChainSupport (VkPhysicalDevice device)