

GLFW General

GLFWwindow* window;

glfwInit();

glfwWindowHint(GLFW_CLIENT_API, GLFW_NO_API);

window = **glfwCreateWindow**(<WIDTH>, <HEIGHT>, <WINDOW_NAME>, nullptr, nullptr);

glfwSetWindowUserPointer(window, <USER_DATA>);

glfwSetFramebufferSizeCallback(window, <USER_CALLBACK>);

static (void USER_CALLBACK*)(GLFWwindow* window, int width, int height);
// In this callback, just set an atomic flag to recreate the swap chain
// and the other resources.

bool **glfwWindowShouldClose**(window)

glfwGetFramebufferSize(window, &width, &height);

glfwWaitEventsTimeout(<SECONDS>);

glfwDestroyWindow(window);

glfwTerminate();

GLFW Vulkan Specific

int **glfwVulkanSupported**(); // GLFW_TRUE or GLFW_FALSE

int **glfwGetPhysicalDevicePresentationSupport** (instance, VkPhysicalDevice device, uint32_t queuefamily)
// queueFamily : index within the range returned by vkGetPhysicalDeviceQueueFamilyProperties().
// GLFW_TRUE / GLFW_FALSE

const char ** **glfwGetRequiredInstanceExtensions**(uint32_t* count)

// Ex.
// [0] "VK_KHR_surface"
// [1] "VK_KHR_xcb_surface"

VkResult **glfwCreateWindowSurface**(VkInstance instance, window, nullptr, **VkSurfaceKHR * surface**)

GLFWVkproc **glfwGetInstanceProcAddress** (instance, const char * procname)

// typedef void(GLFWVkproc) (void)
// instance can be nullptr
// procname is something like "vkDestroyImageView"

VkSwapchainCreateInfoKHR createInfo{}

createInfo.surface = surface;

vkCreateSwapchainKHR(..., &createInfo, ...);

vkGetPhysicalDeviceSurfaceSupportKHR(..., VkBool32* pSupported)

vkGetPhysicalDeviceSurfaceCapabilitiesKHR()

typedef struct VkSurfaceCapabilitiesKHR {

uint32_t minImageCount; // 2

uint32_t maxImageCount; // 8

VkExtent2D currentExtent; // (800, 600)

VkExtent2D minImageExtent; // (800, 600)

VkExtent2D maxImageExtent; // (800, 600)

uint32_t maxImageArrayLayers; // 1

VkSurfaceTransformFlagsKHR supportedTransforms; // VK_SURFACE_TRANSFORM_IDENTITY_BIT_KHR

VkSurfaceTransformFlagBitsKHR currentTransform; // VK_SURFACE_TRANSFORM_IDENTITY_BIT_KHR

VkCompositeAlphaFlagsKHR supportedCompositeAlpha; // VK_COMPOSITE_ALPHA_OPAQUE_BIT_KHR

VkImageUsageFlags supportedUsageFlags; // VK_IMAGE_USAGE_TRANSFER_SRC_BIT

} VkSurfaceCapabilitiesKHR; // VK_IMAGE_USAGE_TRANSFER_DST_BIT

// VK_IMAGE_USAGE_SAMPLED_BIT

// VK_IMAGE_USAGE_STORAGE_BIT

// VK_IMAGE_USAGE_COLOR_ATTACHMENT_BIT

// VK_IMAGE_USAGE_INPUT_ATTACHMENT_BIT

vkGetPhysicalDeviceSurfacePresentModesKHR()

// VK_PRESENT_MODE_IMMEDIATE_KHR = 0,

// VK_PRESENT_MODE_FIFO_KHR = 2,

// VK_PRESENT_MODE_FIFO_RELAXED_KHR = 3,

vkGetPhysicalDeviceSurfaceFormatsKHR()

typedef struct VkSurfaceFormatKHR {

VkFormat format; // VK_FORMAT_B8G8R8A8_UNORM

// VK_FORMAT_B8G8R8A8_SRGB

VkColorSpaceKHR colorSpace; // VK_COLOR_SPACE_SRGB_NONLINEAR_KHR

} VkSurfaceFormatKHR;