



Chapter 3: Common Patterns: *if someone missed to catch it yet* 😊

```
Object   Vk      VkInstance
Types    Vk      VkInstanceCreateInfo
Funcs    vk      vkCreateInstance()
Enums    VK_     VK_STRUCTURE_TYPE_INSTANCE_CREATE_INFO
```

Extensions

```
KHR:- Khronos authored,
EXT:- multi-company authored
```

Creating "VkZZZ" object

1. take `VkZZZCreateInfo` --> fill it up
2. call `vkCreateZZZ()`
3. also `vkDestroyZZZ()` before closing your app
4. Some objects get "allocated" rather than "created"
`VkZZZAllocateInfo` --> `vkAllocateZZZ` --> `vkFreeZZZ`
5. Sometimes there will be `.zzzCreateInfoCount` & `.pZZZCreateInfos`
e.g. `.queueCreateInfoCount` & `.pQueueCreateInfos`
-> So you could like pass `in` an array/vector
-> You will see this `in` lots of other places

Getting List/Properties

1. `vkEnumerateZZZ()` --> \see `[Chapter2.1.] vkEnumeratePhysicalDevices()` example

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7. `sType` & `pNext`

- Many Vulkan structures include these two common fields

8. `sType` :-

- It may seem somewhat redundant, but this information can be useful for the `vulkan-loader` and actual `gpu-driver-implementations` to know what type of structure was passed in through `pNext`.

9. `pNext` :-

- allows to create a linked list between structures.
- It is mostly used when dealing with extensions that expose new structures to provide additional information to the `vulkan-loader`, `debugging-validation-layers`, and `gpu-driver-implementations`.
 - i.e. they can use the `pNext->sType` field to know what's ahead in the linked list

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10. Do remember to check the `'Valid Usage'` section within `each` manual-page

Two Questions I keep on pondering 🤔

- a) Would this make sense to someone else?
- b) Would this make sense to a 5 year old?

Keywords in this file

```
ChapterZZZ => **"ChapterZZZ"** Unknown WIP/TBD Chapter  
REY_DOCs =>  
ChapterZ.Z => **_Chapter1.Z_**
```