Memory Allocators:

```
ptr = alloc(size);
free(ptr);
```

F = 1
ptr = null
```
size = M - h
h = sizeift(hdr)
```

A malloc:

```
free
```

Currently allocated

```
free
```

```
sizes
```

```
sizeswd-h
```

```
Pbr
```

```
ptr
```

```
size
```
free list
first fit
last fit

* indirection allows
heap compaction

Set f-free regions?

→ address, size

Allocated regions?

→ address, size

binary buddy
arbitrary extend-based

consolidate
Slab allocator

kernel memory allocation
→ time critical

→ avoid fragmentation

→ fixed set of objects
→ finite lifetimes

dense packing of objects
pre-initialization.

constructor

use

deconstructor

lifetime
→ initialization

→ per-use initialization

→ ... clean up

→ one-time clean up