Heap Memory Allocator

What the memory allocator must do?

➡ Track which parts of memory in use, which parts are free
ideally no wasted space, no time overhead

What the memory allocator cannot do?

- Control order of the number and size of requested blocks
- Know the number, size, & lifetime of future allocations

What makes a good memory allocator?

➡ The one that avoid compaction (time consuming)

➡ The one that minimize fragmentation

Tracking memory allocation with **bitmaps**

Bitmap : 1 bit per allocation unit

- 0 means free
- 1 means allocated

➡ Allocating a N-unit chunk requires scanning bitmap for sequence of N zero's

◉ Slow