

Block Allocator

→ Constructor

chunk space = 128

chunk count = 0

Create memory to store 128 chunks.

chunk* chunks
chunk count
chunk space
Block* free list [16]
Block allocator

Block Size
Block* block

Chunk

Block* next

Block

| | | | | | |
|--------|--------|--------|--------|-----|--------|
| Size | Size | Size | Size | ... | Size |
| Block* | Block* | Block* | Block* | ... | Block* |

0

127

128 Chunks

| | | | | | | | | |
|---|--------|---|---|---|---|---|---|----|
| 0 | Block* | . | . | . | . | . | . | 7 |
| 8 | . | . | . | . | . | . | . | 15 |

16 Block*

→ Allocate (Size)

If size > 640 → Do malloc on heap section

else

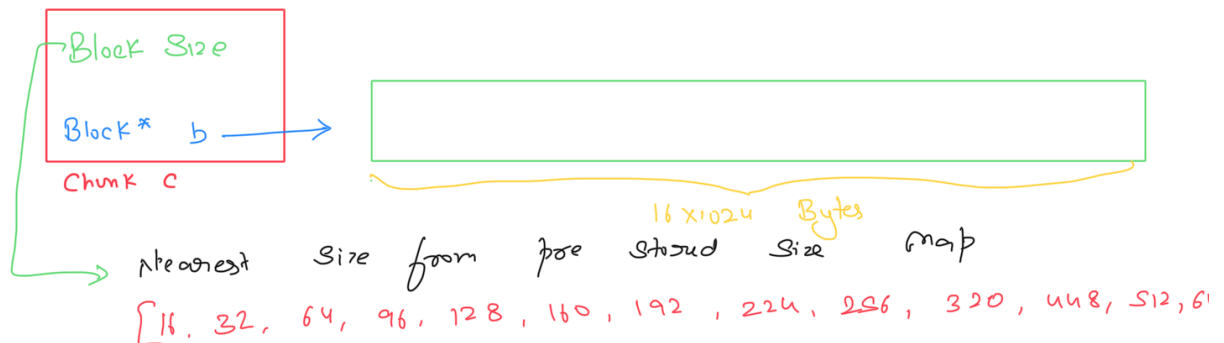
→ If chunk count exceed chunk space (128) # Start with 0

- Resize chunk space = *2 = 256
- Create New Memory to store 256 chunks
- Copy old chunks into new memory (first 128)
- free old memory

→ take pointer of next free chunk $chunk* c = chunks + chunk c$

→ allocate memory of Block inside chunk

$c \rightarrow Block = . Alloc (Chunk Size)$ 16×1024



Block count = $16 \times 1024 / Block Size$

→ Store the Next Block address in each Block

