Comparing First Fit and Best Fit

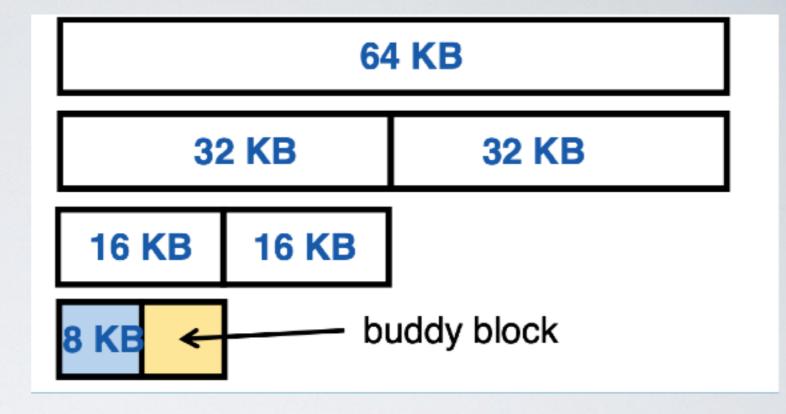
First Fit

- ✓ Simplest, and often fastest and most efficient
- May leave many small fragments near start of memory that must be searched repeatedly

Best Fit

- ✓ In practice, similar storage utilization to first-fit
- Left-over fragments tend to be small (unusable)

Buddy Allocation



→ Allocate blocks in 2^k

Data structure

Maintain n free lists of blocks of size $2^0, 2^1, ..., 2^n$

Code

- recursively divide larger blocks until reach suitable block
- insert buddy blocks into free lists
- · upon free, recursively coalesce block with buddy if buddy free
- → the addresses of the buddy pair only differ by one bit