Placement Algorithms

- **First-fit**
  choose first block that is large enough; search can start at beginning, or where previous search ended (a.k.a next-fit)
- **Best-fit**
  choose the block that is closest in size to the request
- Worst-fit
  choose the largest block
- Quick-fit
  keep multiple free lists for common block sizes
- **Buddy systems**
  round up allocations to power of 2 to make management faster

Best Fit

➡ Minimize fragmentation by allocating space from block that leaves smallest fragment

Data structure

heap is a list of free blocks, each has a header holding block size and a pointer to the next block

Code

search freelist for block closest in size to the request