

15-213

“The course that gives CMU its Zip!”

Dynamic Memory Allocation II

Apr 3, 2002

Topics

- Explicit doubly-linked free lists
- Segregated free lists
- Garbage collection
- Memory-related perils and pitfalls

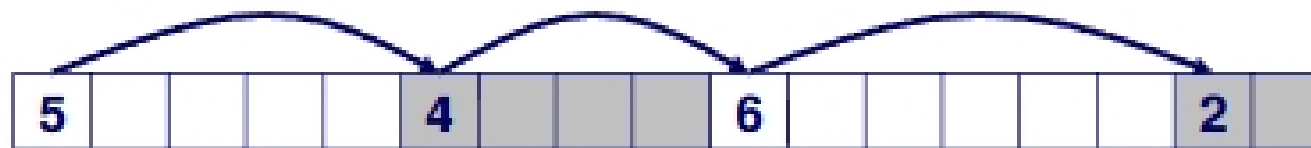
Admin

Conflicts for final.

Please email before 4/8 so we can setup an alternative date.

Keeping Track of Free Blocks

- **Method 1**: Implicit list using lengths -- links all blocks



- **Method 2**: Explicit list among the free blocks using pointers within the free blocks



- **Method 3**: Segregated free lists
 - Different free lists for different size classes
- **Method 4**: Blocks sorted by size (not discussed)
 - Can use a balanced tree (e.g. Red-Black tree) with pointers within each free block, and the length used as a key