

Material for the final exam

- Everything from the homeworks.
- Everything from the midterm.
  - Sorting and searching (counting comparisons, swaps)
  - Control flow (loops, conditions)
  - Pass by reference, pass by value
  - Primitive data types
  - Binary (converting between bases)
- Objects
  - public vs private
  - constructors
  - static and final keywords
  - attributes, methods
  - get and set methods (what are they, why use them)
  - creating class files and using objects
  - overloading methods and constructors
- Data Structures
  - Hash tables (and hash functions)
  - Linked Lists (singly and doubly)
  - Array Lists
  - Arrays
- Reading from and Writing to a file
- Exceptions

Not on the final (unless stated otherwise above)

- Recursion
- Complexity (big O, big  $\Omega$ )
- Special topics (machine learning, bio-informatics, html, tree search, Processing, Robotics, *etc.*)