

Final Exam CS 23001 Study Guide

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The exam is closed book and closed notes. It is comprehensive and includes all materials covered during the term, in lecture, lab, and on the projects.

Topics include:

- ADTs: string, set, stacks, queues, lists, container/iterator, binary search trees, n-ary trees and any ADTs used in projects
- All algorithms used in ADTs, projects, or talked about in class
- Software testing and constructing test cases
- Documentation – pre and post conditions, class invariants
- Classes, operator overloading, constructors, destructors, assignment, constant time swap, copy, `this`, copy semantics
- Templates
- Dynamic memory allocation (`new`, `delete`), dynamic arrays, linked lists, double linked lists, trees, pointer arithmetic
- Tree traversal algorithms – inorder, preorder, postorder
- Pre/Post/In fix notations, conversion algorithms
- Simple inheritance and virtual methods

Topics NOT covered on the exam:

- `make`
- `svn`
- Unix commands