

CISC 471/672

Final Exam Study Guide

Spring 2018

Forming study groups is highly recommended. Read the book and study the lecture slides.

Important things to study:

- Lexing: regular expressions, DFAs
Can you build a DFA from regular expressions?
- Parsing: grammars, acceptance, parse trees, ambiguity, left-most/right-most derivations, problems with grammars
Can you determine if a grammar is ambiguous?
- Procedure Abstraction: Activation records, lexically-scoped symbol tables, nested procedures, call-by-reference, call-by-value, location of variables (heap vs stack)
Draw activation records for executing functions.
Draw lexically-scoped symbol tables for functions?
- Code generation for Boolean and Relational expressions and control flow (loops)
- Dependence DAGs, Instruction Scheduling, and Register Allocation
Can you construct a DAG and schedule instructions?
Register allocation using graph coloring
- All phases, but focus on Phases 4 and 5