

# Exam Logistics

- Exam is *Tuesday, September 29th*
  - In class (75 mins)
  - Open book, open notes
- Extra office hours
  - Monday, September 28th
  - 1:30-3:30

# Exam Topics (I)

- Phases of a compiler (Lecture 1)
  - Difference between front- and back-end
- Scanners (Lecture 3)
  - Regular expressions
  - Finite automata (NFAs and DFAs)
  - Reducing DFAs

# Exam Topics (II)

- Grammars (Lecture 4)
  - Define parts of a grammar
- Parsing (Lecture 4)
  - Left-derivation vs. right-derivation, parse trees
- Recursive descent parsers (Lectures 2 & 4)
- LL(I) Parsers (Lecture 4)
  - First and follow sets
  - Building parse tables
  - Demonstrating how an LL(I) parser works

# Exam Topics (II)

- LR(0) Parsers (Lecture 4)
  - Configurations, closures
  - CFSMs
  - Goto and action tables (using format from the book!)
- LR(1) Parsers (Lecture 4)
  - Shift/reduce conflicts in LR(0) parsers
  - LR(1) machines
  - Demonstrating how an LR(1) parser works
- Semantic routines (Lectures 4 & 5)
  - How to decorate grammars
  - How a semantic stack works
    - Demonstrate with simple semantic routines (e.g., for expressions)