CS 5470: Compilers

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Why take compilers?
It’s meta.
It’s ubiquitous.
It’s theoretical.
It’s practical.
It’s hard.
It’s rewarding.
Menu

- Lexical analysis
- Syntactic analysis
- Semantic analysis
- Transformation++
- Static analysis
- Optimization
- Code generation
- Register allocation
- Garbage collection
- Virtual machines
No textbook
Grades

WIN  meh.  FAIL
Grading

- About six projects
- Optional final exam
- Lots of extra credit
max(ProjectAverage, Final)
WARNING
The final exam is evil.
Six projects
Python compiler!
Lexical analyzer
Parser
High-level translator
Normalizer/transformer
Low-level translator
Code emitter
What language?
Not recommended

• Java, C#
• C, C++
Recommended

• Racket
• OCaml / SML
• Scala
• Haskell*
First assignment?
Learn Python 3.1