Objectives:

1. understand class prerequisites, goals, and expectations
2. be able to list four major programming languages created around 1950–1960 (Algol, Cobol, Fortran, and Lisp) and for each one be able to describe the problem domain that language was trying to support and at least one language feature that was influenced by that domain
3. be able to explain what it means for a problem to computable
4. be able to explain what the difference between compile-time and run-time is
5. be able to explain why, in language design, one often has to make tradeoffs between expressiveness and efficiency

Vocabulary

computability, static analysis, compile-time, runtime, expressiveness, efficiency

Outline

1. What is the study of programming languages?
2. syllabus, course expectations
3. History: Algol, Cobol, Fortran, and Lisp
4. preview of recurring themes:
   (a) computability,
   (b) compile-time vs. runtime
   (c) expressiveness vs. efficiency