## Reading Exercise 0 Discussion

### Imperative vs Declarative

- A. Prolog, SQL, Perl
- B. ML, Lisp, SQL
- C. C, Java, Smalltalk
- D. C#, Haskell, Spreadsheets
- E. C++, Eiffel, Small talk

- 1. Which set(s) above are considered functional
- 2. Which set(s) above are considered OO
- 3. Which set(s) above are considered imperative

#### List reasons to study Programming Languages

# Bootstrapping

#### Phases

- Place these in the order they are usually performed
- Code inprovement
- Parsing
- Typing
- Lexical Analysis
- Semantic analysis
- Target code generation

## Regular expressions

- Which phase of compiling makes use of regular expressions
- Code inprovement
- Parsing
- Typing
- Lexical Analysis
- Semantic analysis
- Target code generation

#### True or false

 There are infinitely many grammars for every context free grammar

Ambiguity is a property of a language

### Language implementations

Interpreted, compiled, byte-coded

- Order these by the amount of time they take
  - When processing the program
  - When executing the program