



23 Feb 1999; Session 10

CS655

## **Tues, 23 Feb: Assignment for Next Week**

- Read Unit 5 papers (in file drawer) by Tues 2 Mar:
  - Goldberg, McCarthy, Hudak
    - Functional, Recursive functions, Haskell
- Write (due 4 Mar):
  - Haskell and ML handle type inferencing and polymorphism differently. Haskell maps to abstract types while ML maps to concrete types. Explain what this means and address which method, if either (feel free to suggest alternatives), is better.

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## Today's Topics

- Aspect-oriented programming: Kiczales talk
- $\lambda$  calculus
- Denotational semantics
- *Next time*: Library lady

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## Project

- **Objective:** to learn one or more new languages through analysis and use, in order to broaden your view and understanding of programming languages concepts and issues.
- **Assignment:**
  - Identify and receive approval for a project in which you learn one or more new programming languages or make a significant contribution to an existing (or evolving) language.
  - You may work on a default project (see next slide)
    - You may work in groups of up to three people. OK to work alone.
    - Final project proposal must be to me by Tuesday, 9 March, 5PM.
    - No member of a group may have previously known any of the languages analyzed.

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## *Preferred Project*

- Influence the design of an evolving language.
  - You suggest the way you'll influence it.
  - You accomplish the task of convincing the language designer(s) to at least consider your idea(s) and respond to it (them).

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## *Default Project*

- Languages: CLU, Icon, APL, Cecil, Sather, Eiffel, Self, OCAML
  - choose one
- Sample questions to answer:
  - What are the most notable features of your language? Show us they work.
  - What are the influences on your language?
    - What is its history in general?
    - How were the features from (1) influenced?
  - What problem domains is your language good for? Bad for? Why?
    - Support arguments with code.
  - What were the language designer's goals?
  - How well does your language meet the language designer's goals?
  - What would you do to improve the language?
    - support with examples.

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