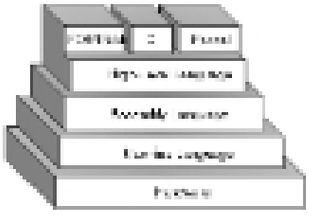
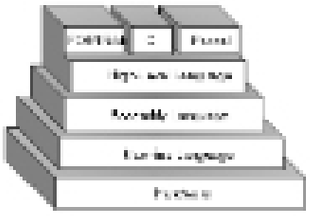


Organization of Programming Languages (CSE452)

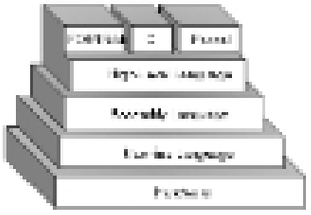
Instructor: Dr. B. Cheng

Fall 2005



Why are there so many programming languages?

- Evolution -- we've learned better ways of doing things over time
- Socio-economic factors:
- Proprietary interests,
- Commercial advantage orientation toward special purposes
- Orientation toward special hardware
- Diverse ideas about what is pleasant to use



What makes a language successful?

- **Ease of use:**
  - Easy to learn (BASIC, Pascal, LOGO, Scheme)
  - Easy to express things
  - Easy to use once fluent -- "powerful" (C++, Common Lisp, APL, Algol-68, perl)
  - Easy to implement (BASIC, Forth) possible to compile to very good (fast/small) code (ForTran)

- **Cost factors:**
  - Backing of a powerful sponsor (COBOL, PL/1, Ada, Visual Basic)
  - Wide dissemination at minimal cost (Pascal, Turing, Java)