



Organization of Programming Languages (CSE452)

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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)