Homework 2

Due date: Monday feb 3, 2003 at class time.

1. Choose a language from the list given below (grad students choose 2), and develop its evolution history starting from the language that provides its original roots to the latest language release version available. Start your historical evolution with a description of the root language to include:
   • Purpose of the root language.
   • Paradigm it supports.
   • Release date.

For each intermediate language between its roots to, and including, language chosen, clearly state

   • release date
   • if the language is an extension, a subset, or just a new design based on the previous language.
   • major feature or features that the new language provides that parent language did not have.
   • Is the original paradigm still supported? any new paradigms supported by it?

Include in your paper a diagram depicting the evolution history of language chosen.

List of languages to choose from: FORTRAN 90, Java 1.4.1, Scheme, Visual Basic, Modula III, Ada ‘95, C++, Common Lisp, Oberon.

2. For many programming languages available you commonly find interpreters for them rather than compilers. Moreover many of these languages are described as being interpreted.
   a. Provide 3 examples of such languages, (different from Java.)
   b. Investigate the reasons why the languages are interpreted over compiled. You should establish if there are any intrinsic reasons in the definition of the language so that they should be interpreted over compiled. Or if there are other reasons outside from the language itself that interpreters are best with them.

Finish your paper with a bibliography of sources used to answer both questions.

Sources to use

There are several programming language books in the library that include historical developments of some programming languages; among these books there are two books which go deeper into the evolution of some languages:

   Programming languages: history and fundamentals
   Sammet, Jean E.

   History of programming languages II
   edited by Thomas J. Bergin, Jr. and Richard G. Gibson, Jr.

Warning:For the benefit of all, use the books while in the library; do not check these books out, just photo copy what you need. Also, you will not get all answers from these two books. You will need to search several sources.