SWIG Master Class

Advanced Python Training
In Chicago with David Beazley

- Practical Python Programming
- Advanced Python Mastery
- Concurrency and Distributed Systems

Click here for more details!

Copyright (C) 2008
David M. Beazley
http://www.dabeaz.com

Presented at PyCon'08, March 13, 2008, Chicago, Illinois.

Introduction

This tutorial is an advanced in-depth look at SWIG, a tool for building C/C++ extensions to Python. Rather than simply repeating the user-manual, the main focus of this course is on the internals of what makes Swig tick and how it is put together.

- Presentation Slides (PDF)

Software

This tutorial assumes the use of SWIG-1.3.33. Various versions are available for download at

- http://www.swig.org

You will need to have Swig installed in a standard location on your machine to proceed with the demonstrations. Note: Swig is often preinstalled on many Linux distributions. It is also pre-installed on OS-X Leopard. Be aware that these installations often use older versions of Swig that may be out of date with certain details of the presentation slides.

Samples

The following download includes a number of samples we will be using to illustrate concepts.

- swigmaster.zip

The samples include both some simple C code, simple C++ code, along with distutils setup.py files needed to get the samples to compile. The samples should work on all Unix-based systems (Linux, BSD, OS-X). The samples may work on Windows provided that you have configured your machine to properly build extension modules (which is nontrivial).

The following code samples are provided:

- `SwigMaster/csample`. A C extension module.
- `SwigMaster/cppsample`. A C++ extension module.

Much of the tutorial will be based on taking these basic examples and expanding them with various features.