

ADVANCED TOPICS IN PERL SCRIPTING

General:

This intermediate/advanced level course presents the Perl capabilities and notations used in working with complex data structures, modules and objects. More than 60 complete programs illustrate how to use these features.

Objectives:

Upon successful completion of this course, the student will be able to:

- Avoid the use of symbolic references by "use strict refs"
- Make use of hard references, anonymous lists, and anonymous hashes to create, populate, and use multi-dimensional lists and hashes
- Pass complex data structures to subroutines, and make use of them within subroutines.
- Quickly grasp the structure of multi-dimensional arrays and hashes by use of `ref()`, `dumpvar.pl` and `dumpValue()`.
- Make use of packages and modules, including `@INC`, `use`, `use(LIST)`, and `require`.
- Describe and use the `pragma integer` and the `declaration no`.
- Use the `AUTOLOAD` feature to load modules during runtime
- Describe and use classes, objects, `bless()`, `class` and instance data members and methods, constructors and destructors.
- Manage Perl inheritance by using `@ISA`.

Audience:

Programmers, technical managers, and system and network administrators having a solid familiarity with basic Perl.

Prerequisites:

Solid familiarity with Perl scalar, list, and hash literals and variables and the common operations on them; control structures and related operators; file operations; and subroutines, including the use of local and my variables.

Duration:

Two (2) days including classroom lecture and lab sessions.

*ADVANCED TOPICS IN PERL SCRIPTING
COURSE OUTLINE*

I. INTRODUCTION TO REFERENCES

- A. Symbolic References
- B. use strict refs
- C. Hard References
- D. Hard References To Anonymous Lists, Hashes, And Subs
- E. Passing List and Hash References To Subroutines
- F. Lists Of References
- G. `ref()`
- H. `dumpvar.pl` And `dumpValue()`

II. ANONYMOUS AND MULTI-DIMENSIONAL LISTS AND HASHES

- A. Dereferencing With Blocks
- B. Infix Operator `->`
- C. Two-Dimensional Arrays
- D. References To Hashes
- E. Hashes with Nested Lists
- F. Two-Dimensional Hashes

III. PACKAGES AND MODULES

- A. Packages
- B. Symbol Tables And Qualified Names
- C. The Include Path `@INC`
- D. Importing A Module with `use` and `require`
- E. `Pragma` integer And Declaration `no`
- F. `AUTOLOAD`

IV. INTRODUCTION TO CLASSES AND OBJECTS

- A. Objects And `bless()`
- B. Class Methods and Variables
- C. Instance Methods and Variables
- D. Constructors and Destructors
- E. Reusable Code: Store The Class As A Module
- F. Inheritance

V. BRIEF INTRODUCTION TO DBI.PM

- A. Open A Database Connection Handle
- B. SQL Access Via `$db_handle->do`
- C. Queries with a Statement Handle
- D. Queries With `fetchrow()`