

Advanced Perl Programming

Topics

Debugging

- Warnings
- Diagnostic Messages
- Carping, Confessing, and Croaking
- Strict Checks
- Compiler Pragmas
- Debugging Flags
- Your Perl Configuration
- The Devel: Peek Module
- Tha Data: Dumper Module
- Labs

Expert List Manipulation

- The Grep Operator
- Lists, Arrays and List Operators
- Context
- Context and Subroutines
- Initializing, Arrays and Hashes
- Reference Syntax
- Auto-vivification
- Defined Values
- Other List Operators
- Usage of map, grep, and foreach
- Labs

Blocks and Code References

- Blocks
- Subroutines
- Subroutine Prototypes
- Code Refs and Anonymous Subroutines
- Typeglobbing for the Non-Squeamish

- Lexical Variables
- Persistent Private Subroutine Variables
- Closures
- The eval operator
- The Block form of eval
- The String form of eval
- Block Form of Eval for Exception Handling
- Labs

Packages

- Review of Packages
- BEGIN and END Blocks
- Symbol Tables
- Package Variables
- Calling Package Subroutines
- Importing Package Symbols
- Exporting Package Symbols
- Using the Exporter Package
- The Use Function
- AUTOLOAD and @ISA
- AutoLoader and SelfLoader
- Labs

Objects and Classes

- Object-Oriented Stuff
- Making Perl Object-Oriented
- References
- The bless Function
- So, what's a blessed thing good for?
- Calling Class and Object Methods
- Object Methods
- Writing Classes
- Constructors

- Inheritance
- What Perl Doesn't Do
- Labs

Tied Variables

- Why Use tie?
- Tying a Scalar
- Inside Tied Variables
- untie
- Another Tied Scalar Example
- Tying and Array
- A Tied Array Example
- Tying Hashes
- Using the DRM Modules
- Labs

Installing and Using Perl Modules

- Laziness, Impatience and Hubris
- CPAN
- Using Modules
- Installing a Perl Module
- The Configuration Step
- The Build Step
- The Test Step
- The Install Step
- Using CPAN pm
- Labs

Introduction to DBI/DBD

- The Old Way - DBPerls
- A Better Way DBI/DBD
- Database Programming
- Handles
- Connecting to the Database

- Creating a SQL Query
- Finishing Up
- Labs

DBI/DBD SQL Programming

- Error Checking in DBI
- Drivers
- Using Parameterized Statements
- Other Handle Attributes
- Column Binding
- BLOBs and LONGs and Such
- Installing DBI Drivers
- Labs

Introduction to Perl/TK

- Tel, Tk, TCL/Tk, TKperl
- Perl/Tk
- Scrolled Widgets
- Configuring Widgets
- Using FileSelect
- Labs

Perl/Tk Programming

- Tk:Error and Tk:ErrorDialog
- Geometry Management
- Geometry Management with grid
- Bindings
- Nonblocking I/O with fileevent
- Tags
- Other Tk Commands
- Labs

Extending Perl with C/C++

- Extending the Perl Interpreter
- Overview of Perl5 XSUBs

- Get started with h2xs
- Set Up the Perl Wrapper Class
- Write the XS Code
- The XS File
- Arguments to XSUBs
- Other h2xs Options
- Labs

Embedding the Perl Interpreter

- Why Embed Perl?
- Embedding Perl in a C Program
- perlmainc
- Perl Data Types
- Manipulating Scalars
- Memory Management
- Evaluating Perl Expressions
- Dynamic Loading
- Labs

Module Development and Distribution

- Distributing Modules
- Get started with h2xs
- Files created by h2xs
- Unit testing and test.pl
- Using blib
- POD
- POD translators
- Other Niceties
- MakefilePL
- Labs

Design and Implementation

- Think First
- Object-Oriented Design

- Object-Oriented Development
- Library Modules
- Utility Programs
- Filters
- Performance
- Timing with Benchmark
- Labs