

Web Languages Series - Course 2:

Perl Fundamentals (March 2002)

Perl Fundamentals is an 18-hour course that teaches students how to fully utilize the Perl programming language. Students learn the Perl syntax, the basics of using regular expression, how to use Perl data types, and how to access and manipulate files. Students are also introduced to database connectivity and debugging techniques.

Topics

Introduction to Perl

Practical Extracting and Reporting Language (Perl)
Getting Started with Perl
Scalar Variables
Numerical Variables
String Variables
Retrieving Data from STDIN

Flow Control in PERL

Boolean Expressions in PERL
The if statement
The *for*, *while*, and *do {} while* Loop Statements
Loop-Control Commands
I/O Redirection

Regular Expressions in PERL

Introduction to Regular Expressions
Character Classes
Pattern Matching and Substitution

Arrays in Perl

Introduction to Perl Arrays
Accessing Array Elements
The *sort* Function
The *foreach* Statement
The *push*, *pop*, *shift* and *unshift* Functions
The *split* and *join* Functions

Hashes in Perl

Introduction to Perl Hashes
Adding and Deleting Hash Elements
The *keys*, *values*, *each*, and *reverse* Functions

Subroutines in Perl

Introduction to Perl Subroutines
Variable Scope
References

File Input and Output in Perl

Introduction to Perl File Input and Output
What is a Filehandle?
The *open* Function
Outputting Data to a File

Opening Files for Reading
Determining Information About Files
The *stat* and *lstat* Functions

Environmental Variables and Command Line Arguments

Environment Variables
Command Lines Arguments

Packages and Modules in Perl

Using Packages in Perl
BEGIN and END Blocks
Using Modules in Perl
The *use* and *require* Statements

Object-Oriented Perl

Introduction to Object-Oriented Perl
Creating Objects in Perl
Inheritance

Database Connectivity in Perl

Introduction to Database Connectivity
Database Programming with Perl
Interacting with Databases
Connecting to Databases
Structured Query Language (SQL)
Quoting Operations

Debugging Perl Programs

Introduction to Debugging Perl Scripts
Using the *print* Command
Using the *-w* Switch
Using the *strict* Module
The Perl Debugger
Writing Bug-free Perl Code

Target Audience

Webmasters, software developers, application programmers, client/server developers, and desktop publishers.

Job Responsibilities

Implement and maintain hypertext-based Web sites using authoring and scripting languages; apply human-factors principles to design; create Web content; and use Web management tools and digital media tools.

Prerequisites

Students must have CIW Foundations certification or equivalent experience, and be proficient in Hypertext Markup Language (HTML) authoring. No previous programming experience is required.

Duration

18 hours