Web Development Series

Perl Specialist

The *Perl Specialist* course (formerly titled *Perl Fundamentals*) focuses on the fundamental concepts of the Perl programming language. In this course, you will learn the basic syntax and control structures needed to write Perl scripts. Topics such as data types, flow control, arrays and hashes, regular expressions, and subroutines will be discussed. You will learn how to interact with text files and how to access command line arguments and environment variables. You will also learn about packages and modules, and you will be introduced to database connectivity using Perl. Finally, you will receive an overview about debugging Perl scripts.

Although the knowledge that you gain in this course is designed to widen your understanding of server scripting in general, you will focus on the Perl language in particular.

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 *while* Statement
The *do {} while* Statement
The *for* Statement
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* and *pop* Functions
The *shift* and *unshift* Functions
The *split* and *join* Functions

Hashes in Perl
Introduction to Perl Hashes
Adding and Deleting Hash Elements
The *keys* Function
The *values* Function
The *each* Function
The *reverse* Function

Subroutines in Perl
Introduction to Perl Subroutines
Variable Scope
References

File Input and Output
Introduction to 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

Environment Variables and
Command Line Arguments
Environment Variables
Command Line 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 and Perl
Introduction to Database
  Connectivity
Database Programming with Perl
Interacting with Databases
Connecting to Databases
Structured Query Language
Quoting Operators

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

The CIW *Perl Specialist* course is for individuals who want to understand how to fully use the features of the Perl programming language in Web application development. These specialized Web language skills can help you begin or grow a career in advanced Web development and technologies:

- Web developers

- Software developers

- Application programmers

- Client/server developers

- Desktop publishers

Job Responsibilities

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

Prerequisites

No prior knowledge of the Perl programming language is necessary. However, students should be familiar with using the Internet, developing Web pages and configuring networks to a level consistent with that found in the CIW Web Foundations series, and be able to demonstrate Web scripting knowledge equivalent to that found in the *JavaScript Specialist* course.