

# Web Languages Series - Course 2:

## Perl Fundamentals

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*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.

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### 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

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### 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