

## **PERL Course Content:35-40hours**

---

### Course Outline

#### **Chapter 1:**

- Introduction
- A Quick Review of Perl
- Perl Libraries
- The Standard Perl Library
- Packages
- Modules
- Using .pm Modules
- Exporter.pm
- Standard Perl Modules
- Comprehensive Perl Archive Network (CPAN)
- Roman.pm
- Miscellaneous Perl Topics – wantarray

#### **Chapter 2: Associative Arrays**

- Introduction
- Associative Arrays as Dual Arrays
- A Hashing Algorithm
- Collisions
- Associative Arrays
- Sorting by Keys or Values
- Finding Unique Tokens in a File
- Reverse Lookups
- Selecting the Top n Elements

#### **Chapter 3: References**

- Introduction
- Summary of References
- Array References
- Anonymous Arrays
- Anonymous Hashes

- Prototypes
- Higher Dimensional Arrays
- Complex Hashes
- References and Subroutines
- Anonymous Subroutines
- Lists of References

#### **Chapter 4: Object-Oriented Programming**

- Introduction
- Object-Oriented Vocabulary
- The class Definition
- Defining and Using Objects
- Information Hiding
- Instance Methods
- Destructors
- Class Methods
- Inheritance
- Polymorphism
- Documenting Perl Code
- IO.pm

#### **Chapter 5: The TK.PM Module**

- Introduction
- Event Driven Programming
- Geometry Management
- pack()
- grid()
- grid()Options
- place(): Absolute Coordinates
- place(): Relative Coordinates
- The Label Widget
- The Button Widget
- The Checkbutton Widget
- The Radiobutton Widget
- The Dialog Widget
- Text Input Widgets
- The Listbox Widget
- Menus
- Frames
- Toplevel Widgets
- Bind

#### **Chapter 6: Client-Server Applications and CGI**

- Introduction
- Internet Terminology
- Data Delivery
- Writing a Simple Client
- Writing a Simple Server
- Writing an Iterative Server
- ftp
- The Common Gateway Interface
- HTML Forms
- The CGI Environment
- Administering the Server
- The HTTP Protocol
- Header Information
- The CGI Script
- Extracting Form Data
- The CGI Response
- CGI Output
- Database Access
- What Can Go Wrong?
- Images
- Extra Path Information

#### **Chapter 7: CGI.pm**

- Using CGI.pm?
- Simple Form Elements
- Parameters
- HTML Tags
- Form Processing
- checkbox\_group and radio\_group
- Text Areas
- Popup Menus and Scrolling Lists
- Debugging

#### **Chapter 8: Accessing Real Databases in Perl**

- Introduction
- Architecture
- Review of SQL
- Accessing Databases from Perl
- Executing a Query in Perl
- Accessing Database Metadata
- Interactive Requests
- Adding a Graphical Front-End

- Accessing a Real Database via a Web Form

### **Chapter 9: XML Fundamentals**

- Introduction
- What is a Markup Language?
- SGML vs. HTML
- Sample HTML Document
- XML
- Creating Semantic Tags
- XML Syntax
- Elements
- Attributes
- Comments
- Unicode and Character Sets
- Character References
- Entity References
- Character Data Sections (CDATA)
- Processing Instructions
- Parsing XML

### **Chapter 10: Processing XML With Perl**

- Creating an XML Document With Perl
- Creating an XML Document
- Using an XML Parser
- XML::Simple
- XML::Parser

### **Appendix A: An HTML (P)review**

- An HTML (P)review
- An HTML (P)review: Basics
- An HTML (P)review: Formatting Basics
- An HTML (P)review: Links
- An HTML (P)review: Forms