

## **PRL-102 Perl programming**

**Delivery Method:** Instructor-led training (ILT)

**Course Length:** 5 days

### **Course Outline**

#### **Chapter 1. Language Basics**

- Course objectives
- Perl documentation
- Perl history
- Perl availability
- Perl popularity
- Interpreter environment
- Running a perl script
- Anatomy of a perl script
- Controlling the interpreter
- General Perl syntax
- A look ahead

#### **Chapter 2. Fundamental Variables**

- Variable types
- Variable definitions
- About scalars
- Defined and undefined scalars
- Scalar literals
- Arrays and hashes introduced
- Variable interpolation
- Predefined variables
- Some useful literal constants

#### **Chapter 3. Arrays and Hashes**

- About arrays
- Array constructors
- Array constructors
- `$#array`  magic
- Array slices
- About hashes
- Hash literals
- Hash slices

## **Chapter 4. Expressions and Operators**

- Perl operators
- Numeric scalar operators
- Precedence and associativity
- String scalar operators
- Compound assignment operators
- Increment and decrement operators
- Comma operator
- Assignment in list context
- Context and type conversions

## **Chapter 5. Scalar Functions**

- Numeric functions
- The magic variable `$_`(1)
- String functions
- String functions: index
- String functions: substr
- Assigning to substrings
- String functions: split
- String functions: join

## **Chapter 6. Decision Making in Perl**

- Basic conditional statements
- Boolean and logical operators
- What is truth?
- Short-cuts for the lazy
- File condition functions
- Loops
- foreach
- The BLOCK
- Lexical variables – reminder
- Unconditional flow control

## **Chapter 7. Array and Hash Functions**

- Array and list functions
- Array functions: shift
- Array functions: pop
- Array functions: unshift
- Array functions: push
- Array functions: splice
- List functions: reverse, sort, grep, map
- Hash functions

- Hash examples
- undef and exists
- defined vs. exists
- Deleting hash elements

## **Chapter 8. Input and Output**

- The basics
- File handles
- Default file handles
- New file handles
- Reading files
- The magic variable `$_(2)`
- Writing files
- Formatted output – printf
- Typical behaviour of filters – ARGV
- Common input idioms
- Counting lines and bytes in Files
- Changing the default output handle

## **Chapter 9. Running Processes**

- Family life
- Running a process from perl
- `Back ticks`
- The system function
- Creating pipelines
- Command pipelines
- Special variables

## **Chapter 10. File System Interaction**

- The filename globbing operator
- Working with files and directories
- Working with files and directories
- Detailed file information
- Stat conversion
- Directory information

## **Chapter 11. Regular Expressions**

- Regular expressions
- Uses of regular expressions
- Perl regular expressions
- Perl regular expression patterns
- Basic pattern match syntax
- Basic substitution syntax
- Processing of regular expressions

- Matching alternatives
- Anchors
- Class shortcuts
- Repeat quantifiers
- Quantifiers
- What did we match?
- What did we match? Sub-patterns
- More capturing sub-patterns
- Substitution
- Substitution with interpolation

## Chapter 12. Subroutines and Modules

- Subroutines
- Subroutine return values
- Subroutine return values: example
- Passing subroutine arguments
- Subroutine arguments
- Getting at subroutine arguments
- Lexical variables revisited
- Find the bugs!
- Modules
- The library directories
- Using subroutines from modules
- Using subroutines from modules
- Standard modules