

# Perl Programming

## (DTP-250-PERL, 5 days)

### Course Description

The Perl Programming course is a comprehensive course that explains the Perl programming language, from basic through advanced syntax. This course is aimed at a wide range of people - programmers, system administrators, web authors, and operators. It explains how to use the Perl programming language to write quick yet powerful scripts to take advantage of Perl's system administration capabilities and issue Perl commands.

### Who Can Benefit

Students who can benefit from this course are system administrators and web administrators, although Perl is a language for everyone. The course is taught on the UNIX platform (Solaris Operating Environment), however the material is suitable for any operating system (for example MSDOS, VMS, and so on).

### Prerequisites

**To succeed fully in this course, students should be able to:**

- Use basic UNIX commands such as rm, cp, man, more, mkdir, ps, and chmod (or be able to learn these quickly during the course)
- Create and edit text files in vi or another available text editor
- Exposure to any other programming language (C, C++, BASIC, Fortran, Java, Pascal, Shell...) and shell programming skills (Bourne/Korn) are a large advantage, although not essential

### Skills Gained

**Upon completion of this course, students should be able to:**

- Write scripts that create and change scalar variables
- Use control structures to branch or loop
- Create and change array variables
- Create and change hash variables
- Read files supplied on the command line, and search the files for specific text patterns
- Execute regular expression tests, and recognize backwards referencing.
- Read and write files and system processes using file handles
- Create, remove, and change directory and file properties
- Create Perl subroutines, packages, and modules and use public modules
- Create real-world administration scripts

### Related Courses

**Before:** UNIX Essentials



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#### REGISTRATION AND INFORMATION

[education@ecs.com.sg](mailto:education@ecs.com.sg)  
[www.ecs.com.sg/training](http://www.ecs.com.sg/training)

# Perl Programming (DTP-250-PERL, 5 days) Course Content

## Course Content

### Module 1 - The Perl Programming Language

- Determine your version of Perl
- Identify the default directories searched for Perl library files
- Create a command-line script that prints a simple message
- Create a simple script that prints a simple message
- Test a script's syntax without executing the script

### Module 2 - Scalars

- Define and describe numeric and string scalar data
- Create string and numeric scalar variables
- Modify scalar variables using operators
- Print scalar values using single and double quotes
- Remove \n from user input using the chomp command
- Calculate a value using scalar operators based on user input

### Module 3 - Control Structures

- Print a message using an if statement
- Print a message using an if/else statement
- Print a message using a compound if/elsif/else statement
- Use a for loop to display a list numbers
- Use a foreach loop to perform calculations on a list of numbers
- Use while loops to repeatedly perform logical tests using an if/elsif/else statement
- Print formatted text with a Here document
- Exit from a loop using loop controls and statement modifiers
- Use a switch construct in Perl to print a message

### Module 4 - Arrays

- Create an array variable and assign scalar values to the array
- Determine the length of an array using an array operator
- Use array slices to assign new values to an array
- Determine the length of an array using a scalar variable
- Reverse the contents of an array
- Use pop to modify the contents of an array
- Sort an array
- Create an array from a scalar using split
- Process the values passed in the command-line array, @ARGV
- Read the output of a UNIX command into an array

### Module 5 - Hashes

- Print a hash using a foreach statement
- Access, add, and delete keys and values from a hash
- Print a hash using a while loop and the each function
- Determine the number of occurrences of a string in an array using a hash
- Determine if a key and value exist in a hash

### Module 6 - Basic I/O and Regular Expressions

- Use the <> operator to read a file specified on the command line, line-by-line
- Use the printf command to format the output of the script
- Test for a word or phrase in a file using regular expressions
- Use anchors and character classes in regular expressions
- Use alternation in regular expressions
- Use variable interpolation to define regular expressions
- Substitute one text string for another using regular expressions
- Extract parts of strings using regular expressions

### Module 7 - Filehandles and Files

- Use filehandles to open a file
- Use die to display an error message if there is an error accessing a file
- Append data to the end of a file
- Use a filehandle to read the output of a program

### Module 8 - Subroutines and Modules

- Create script that uses the strict pragma
- Create subroutines that accept passed parameters and return desired results based on the values passed
- Include a subroutine that uses the my operator to create private variables
- Use a Perl library file in your script
- Use a Perl package in your script
- Create a Perl module and call it from a script

### Module 9 - File and Directory Operations

- Use file operators to determine the characteristics of a file
- Display the contents of a directory using chdir and globbing
- Display the contents of a directory using directory handles and readdir
- Rename files
- Create symbolic links to files
- Display all symbolic links in a directory
- Set file permissions for files based on their extensions

### Module 10 - Overview of CGI Programming

- Send a Hypertext Markup Language (HTML) page to a browser using a Common Gateway Interface (CGI) script
- Use a Here document in a CGI script to send an HTML page to a browser
- Read an HTML form using the GET or POST method

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