

Introduction to Perl Programming

Course Duration: 24 Hours

Course code: IPP

1. Course Overview

This course provides a comprehensive introduction to Perl Programming, one of the most powerful and flexible scripting languages used for text processing, automation, system administration, web development, and data manipulation. Designed for beginners and non-programmers, the course builds a strong foundation in Perl syntax, logic, and practical usage. Learners will gain hands-on experience to write efficient Perl scripts for real-world applications.

2. What you'll learn?

By the end of this course, learners will be able to:

- Understand the fundamentals of Perl programming and scripting
- Write and execute Perl scripts using proper syntax and structure
- Work with variables, data types, operators, and control statements
- Perform string manipulation and text processing
- Use arrays, hashes, and file handling techniques
- Implement regular expressions for pattern matching
- Create reusable code using subroutines
- Debug and optimize Perl scripts
- Apply Perl in automation, log analysis, and system tasks

3. Target Audience

This course is ideal for:

- Beginners with no prior programming knowledge
- System administrators and IT support professionals
- DevOps and automation engineers
- Software testers and QA professionals

- Data analysts working with text-based data
- Students and freshers entering programming roles
- Developers looking to add Perl to their skillset

4. Pre-Requisites

To get the most out of this course, learners should have:

- Basic understanding of computer operations
- Familiarity with command-line concepts (helpful but not mandatory)
- Logical thinking and interest in scripting or automation
- No prior coding experience required

5. Course content

Module 1: Introduction to Perl

- Overview of Perl and its applications
- History and features of Perl
- Perl installation and environment setup
- Writing and executing your first Perl script

Module 2: Perl Basics

- Perl program structure
- Variables and scalar data types
- Operators and expressions
- Comments and coding conventions

Module 3: Control Statements

- Conditional statements (if, else, elsif, unless)
- Looping constructs (for, while, do-while, foreach)
- Flow control keywords

Module 4: Strings and Text Processing

- String operations and functions
- Input and output handling
- Working with standard input and output

Module 5: Arrays and Hashes

- Introduction to arrays
- Array operations and functions
- Introduction to hashes
- Hash manipulation and real-world use cases

Module 6: File Handling

- Reading from files
- Writing to files
- File operations and file test operators
- Handling directories

Module 7: Regular Expressions

- Introduction to regular expressions
- Pattern matching and substitutions
- Practical text-processing examples

Module 8: Subroutines

- Creating and using subroutines
- Passing arguments
- Returning values
- Scope of variables

Module 9: Error Handling and Debugging

- Common Perl errors

- Warnings and strict mode
- Debugging techniques and best practices

Module 10: Practical Use Cases

- Automation scripts
- Log file analysis
- Data parsing examples
- Real-world Perl scripting scenarios

