



# RUBY PROGRAMMING LANGUAGE



Programming & development

Course Curriculum

Basic – 45 Hours



# RUBY PROGRAMMING LANGUAGE

## **Module 1 : Introduction to RUBY**

- Introduction to RUBY
- History of RUBY
- Understanding Ruby's Principle

## **Module 2: Environment Setup in Ruby**

- Installation Ruby on Linux
- Installation Ruby on Windows

## **Module 3: Basics of Ruby**

- Keywords
- Data types
- Basic Syntax
- Comments
- Ranges
- Literals
- Directories



## **Module 4: Operators in Ruby**

- Operator Precedence in Ruby
- Operator Overloading in Ruby

## **Module 5: Variables**

- Types of Variables
- Global Variable
- Pre-define variables & Constants

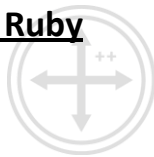


## **Module 6: Control Statements**

- Decision Making
- If
- If-else
- If-else-if
- Ternary
- Loops
- For
- While
- Do...while
- Until
- Case statement
- Control flow alteration
- Break and next statement
- Redo and retry statement
- BEGIN and END Blocks

## **Module 7: Methods in Ruby**

- Method Visibility
- Recursion
- Hook Methods
- Range class methods
- The Initialize Method
- Method Overriding
- Date and Time



## **Module 8: OOP Concepts in Ruby**

- Class & Object
- Private Classes
- Freezing Objects
- Inheritance
- Polymorphism
- Constructors
- Access Control
- Encapsulation
- Mixins



- Instance Variables
- Data Abstraction
- Static Members

## **Module 9: Exceptions**

- Exception handling
- Catch and Throw exception
- Raising Exception
- Exception Handling in Threads
- Exception Class and its Methods

## **Module 10: Ruby Regex**

- Regular Expressions
- Search and Replace

## **Module 11: Ruby Classes**



- Float Class
- Integer Class
- Symbol Class
- Struct Class
- Dir Class and its Methods
- MatchData Class

## **Module 12: Ruby Module**

- Module
- Comparable Module
- Math Module
- Include v/s Extend

## **Module 13: Collections**

- Arrays



- String Basics
- String Interpolation
- Hashes Basics
- Hash class
- Blocks

## **Module 14: Ruby Threading**

- Introduction to Multi-threading
- Thread Class-Public Class Methods
- Thread Life Cycle and its States

## **Module 15: Ruby Expression**

- Syntax
- Regular Expression
- Regular Expression Patterns



## **Module 16: Ruby Database Access (DBI)**

- Architecture of a DBI Application
- Obtaining and Installing Ruby DBI

## **Module 17: Ruby Database Connection**

- INSERT operation
- READ Operation
- UPDATE Operation
- DELETE Operation
- COMMIT Operation
- ROLLBACK Operation
- Disconnecting Database