

## What is Ruby on Rails Training?

Ruby on Rails is quickly establishing itself as the preferred choice amongst developers. Quick and easy to install and use, Rails takes web applications development to a new level for programmers. Whether you're an experienced developer or completely new to [web programming](#), Ruby on Rails is the best thing you'll ever discover.

Both Ruby and Rails provide a lot of code for you, making it quick and simple to create skeletal applications that are both highly customisable and extendable.

This two day training course is led by an instructor who provides a valuable introduction to Ruby on Rails. This training course is intended for delegates who are familiar with web technologies and are looking to gain a core practical understanding of the advantages and excitement that developing with Ruby on Rails brings.

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## Course Objectives

Upon completion of this Ruby on Rails training course, the delegate will:

- Program in Ruby
  - Understand the Rails Framework
  - Harness the speed and ease of developing a Rails application
  - Create and use XML in Rails applications
  - Use Ajax in Rails applications
  - Build dynamic database-driven web sites
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## Course Introduction

- Administration and Course Materials
- Structure and Agenda of Course
- Introductions to Delegate and Trainer

## Session 1: What is Ruby?

- Introduction to Ruby
- What is it used for?
- Installing Ruby
- Ruby Basics

## **Session 2: Ruby Language Elements**

- Variables and Constants
- Operators
- Assignments
- Integer, Float and String Formats
- Single and Double Quotes
- Here Documents

## **Session 3: Control Structures**

- Blocks and if Statements
- Boolean and Range Operators
- Conditionals - Else and Case
- Loops - While, For, Until
- Break, Next, Retry and Redo

## **Session 4: Classes and Objects**

- Objects, Classes and Methods
- Constructors and Attributes
- Instance and Class Variables
- Local and Global Variables
- Class and Instance Methods
- Including External Files - Load and Require

## **Session 5: Input and Output in Ruby**

- Opening and Closing Files
- Reading From and Writing to Files

## **Session 6: Arrays and Hashes in Ruby**

- Arrays and Hashes
- Building an Array
- The %w Shortcut
- Nested Arrays
- Iterators

## **Session 7: Object Orientation**

- Inheritance
- Base Classes and Subclasses
- What's Inherited
- Overriding
- Abstract Classes
- Polymorphism
- Multiple Inheritance
- Class Structure
- Visibility

### **Session 8: Classes and Object Scoping**

- Singletons
- Namespaces and Modules
- Mixins
- Destructors and Garbage Collection
- Freezing Objects

### **Session 9: Object Orientation Techniques**

- Programming and Method Standards
- Formal Methods
- Unified Modelling Language (UML)

### **Session 10: Strings and Regular Expressions**

- Meta Characters
- Anchors, Literals, Character Groups and Counts
- Matching in Ruby
- Modifiers i, o, x and m
- Pattern Matching Variables

### **Session 11: Special Variables and Pseudo - Variables**

- ARGV and \$0
- Special Variables
- Environment Variables
- Pseudo-Variables
- Reserved Words

### **Session 12: Exceptions**

- Begin and End

- Raise and Rescue
- Throw and Catch

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