

Prerequisites

The participants taking the Ruby on Rails Training course must be familiar with the general principles of object oriented programming (OOP). Prior exposure to the following concepts and technologies is very helpful, but not required:

- General understanding of web development principles
- Basic knowledge of HTML and CSS
- Basic knowledge of JavaScript
- Basic understanding of the HTTP protocol, GET vs POST, etc.
- Basic knowledge of SQL
- Familiarity with MySQL (or any other relational database)

Aim

- Learn to install and configure Ruby and Rails
- Understand the Model-View-Controller framework architecture
- Learn to program in Ruby
- Learn to build database-driven applications with Ruby on Rails
- Learn to work with templates
- Learn to use Ajax in Ruby on Rails applications

Topics Covered

Introduction

- ✓ Ruby
- ✓ Rails

Ruby on Rails - Theory

- ✓ The Architecture of Rails Applications
- ✓ Models, Views, and Controllers -MVC
- ✓ Philosophy
- ✓ Ruby and Rails Features

Installing Rails

- ✓ Installing on Windows
- ✓ Development Environments
- ✓ Rails and Databases

Rails in Depth

- ✓ Directory Structure
- ✓ Rails Configuration



Instant Startup

- ✓ Creating a New Application
- ✓ Hello, Rails!
- ✓ Linking Pages Together
- ✓ Scaffolding

Introduction to Ruby

- ✓ OOPL
- ✓ Ruby Names
- ✓ Ruby Methods
- ✓ Classes
- ✓ Modules
- ✓ Arrays
- ✓ Hashes
- ✓ Control Structures
- ✓ Regular Expressions
- ✓ Blocks
- ✓ Iterators
- ✓ Files and IO
- ✓ Ranges
- ✓ Methods
- ✓ Mixins
- ✓ String
- ✓ Fixnum
- ✓ Exceptions
- ✓ Operators



Active Record

- ✓ Tables and Classes
- ✓ Columns and Attributes
- ✓ Primary Keys and IDs
- ✓ Connecting to the Database
- ✓ CRUD—Create, Read, Update, Delete
- ✓ Migrations
- ✓ Creating and Running Migrations
- ✓ Relationships between Tables
- ✓ Association Types
- ✓ Specifying Relationships in Models
- ✓ Validation
- ✓ Callbacks
- ✓ Query Interface



Action Controller

- ✓ Routing
- ✓ RESTful Resources
- ✓ URLs
- ✓ Resource-Based Routing
- ✓ Filters
- ✓ Sessions
- ✓ Cookies
- ✓ Parameters

Action View

- ✓ Templates
- ✓ Using Helpers
- ✓ Helpers for Formatting, Linking
- ✓ How Forms Work
- ✓ Form Helpers
- ✓ Layout Integration

Action Mailer

- ✓ Sending E-mail
- ✓ With Attachments

Gems and Plugins

- ✓ Ruby Gems
- ✓ Comparing with Plugins
- ✓ Examples

Deployment and Production

- ✓ Application Deployment
- ✓ Git
- ✓ Moving On to Launch – Heroku

Tests at week ends

- Week 1 – Written
- Week2 – Online
- Week 3 Or 4 – Written

Practical Sessions

- The students will do simple assignments at the end of the day/session.
- They will develop a mini project when studying the theory part.

