

## Ruby on Rails Course Content

### Ruby

#### Introduction

- What is Ruby
- Why ruby
- General purpose of ruby
- Brief History of Ruby
- Where does ruby get its ideas
- Ruby Installation with RVM
- Creating a basic script in ruby
- Sample demo of ruby program

#### RVM(ruby version manager)

- Rvm installation
- Rvm commands
- Rvm Usage

#### Working in Linux(Ubuntu) Platform

- Basic Linux commands
- File/Directory Permissions
- Changing access rights
- Text Editors used for ROR

#### Ruby Operators & Ruby Shell

- IRB – Ruby Shell
- Working with Ruby operators and expressions
- Numeric Methods
- Rand and Ranges
- Strings, Escaping, Interpolation
- String methods
- Dates and Times

#### Ruby Datatypes & Variables

- Ruby Datatypes
- Numbers, Boolean, Strings, Arrays, Hashes, Symbols.
- Types of Variables(Global, Instance, Class, Local, Constant, Pseudo)

- Difference between local & instance variables
- Parallel Assignment
- Variable conditions

## Ruby methods and modules

- Basic ruby methods
- Return values from methods, return statements
- Class methods
- Different ways to call methods
- Ruby modules and Mixins
- Ruby require and include statement
- Difference between class and module

## OOP in Ruby

- OOP
- Class
- The initialize method
- The accessor & setter method
- Access Control
- Class Inheritance
- Method Overriding
- Operator Overloading
- Singleton methods
- Metaclass
- Defining Attributes
- Variable types in Ruby
- Super
- Regular Expressions
- Exceptions

## Basic loops and iterators

- Conditional operators
- Case Statement

## Rails

### Rails Installation and Ruby gems

- What is Rails
- Full tack Framework
- Rails Strength

- COC(convention over configuration)
- Rails Installation
- Ruby and Rails installation on Linux
- Ruby Gems
- Working with RubyGems
- Gem commands
- Framework Technology
- MVC
- Rails Components
- How do Rails works in MVC

## Databases

- MySQL Introduction
- Installation
- Start/Stop MySQL
- Basic Mysql operators
- Creating user and database in MySQL

## Statements

- Creating a Sample Application with Rails
- Rails Installation
- Folder Structure
- Setup the application
- Rake

## RAILS Model, Controller and Views

### Controller

- What is the controller?
- Architecture Diagram for Controller
- Creating a Controller
- Methods and Actions
- Parameters(params)
- Controller Default methods
- Scaffolding
- Routing
- Restful Resources
- CRUD Verbs and Actions
- Filters(Before,After,Around)

### Models

- What is model
- Active record Basics
- Destroy a model
- Migrations
- Modify, update a model
- Dropping a database
- Association, Validation and callbacks
- Why Association
- Without and with Association
- Types of Association
- Active Record validations
- Callbacks & types of callbacks

## Views

- Embedded Ruby
- Working in HAML
- Working with Ajax, JQuery in Rails framework

## Testing

- TDD & BDD