COURSE SYLLABUS

Ruby on Rails Bootcamp

Master the Ruby programming language and the Rails framework to quickly build dynamic web applications with Ruby on Rails. Learn how to create fully functioning web applications from scratch and launch them live on the web.

For more information, visit
https://www.creativelive.com/classes/ruby-on-rails-bootcamp



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Course Outline

Introduction to Ruby on Rails

Scaffolding

- The Scaffold command
- Overview of Models, Views, and Controllers (MVC)

Adjusting the Templates Created by Scaffolding

- Formatting in Rails
- Working with Dynamic web pages
- Editing the text in the tab
- Redirecting the homepage URL
- Editing the CSS

Version Control with Git

- Initializing a repository
- Committing and Pushing changes
- Creating, switching, and deleting branches
- Merging branches

Ruby Fundamentals

Ruby Data Types & Variables

- String, Integer, Float, Boolean and Nil values
- Properties of Ruby data types
- Instance variables & Local variables
- Global variables

Functions & Control Flow

- Built-in functions
- Creating your own functions
- Passing arguments and returning values
- If/Else and Unless Statements
- While/Until Loops

Ruby Data Structures

- Arrays: The Simplest Collections
- Hashes
- Enumerators
- Common Iterators

Classes

- Creating classes
- Inheritance
- Class Methods
- Overriding Methods

Controllers and Views

Generating a Controller

- Creating a New Rails Site for Flix
- How Controller methods relate to views
- Private methods
- The params hash

Views

- Generating and creating Views
- When you don't need a View
- Mapping Views to controller actions and routes
- Dynamic Views
- The rails routes command

Models & Forms

Models

- Generating a Model
- How Migration Files work
- Migrating the Database
- Rolling back a migration

Rails Forms

- Rails forms vs HTML forms
- HTTP Overview
- Rails Form Helpers
- Rails forms: form_for, form_tag, and form_with
- Connecting a form to a Model

Uploading Files

- Installing ActiveStorage
- Allowing users to upload images

Views

- Creating a View
- Adding Dynamic Data
- Rendering a Partial
- Optional Bonus: Rendering a View

Advanced Models

Model Validations

- The purpose of validations
- Adding basic validations
- Preventing submission of empty forms
- Customizing validations
- Adding Error Messages

Model Methods

- Built-in Model methods
- Adding methods to models

Model Relationships

- has_one and belongs_to relationships
- has_and_belongs_to_many: Simple Many-to-Many Relationships
- has_many, through: Advanced Many-to-Many Relationships with Additional Metadata
- Polymorphic Relationships

Other Important Relationships in Rails

- Delegates: Sharing Methods Between Related Objects
- Self-Joins: Relationships Between Instances of the Same Model

ActiveRecord Associations

Model Relationships

- Has_one and belongs_to relationships
- Has_many relationships
- Joining models together via the controller
- Writing Simple Tests Using Fixtures
- Optional Bonus: Writing Tests Using Embedded Ruby Code
- Additional Bonus: Helpers

Integrating Front-end Code

Rails Asset Pipeline

- What the Asset Pipeline does

- Adding CSS
- Adding JavaScript
- Conditional CSS and JavaScript files

Launching an Application

Preparation

- Managing Ruby environments
- Locking Gem versions
- Environment variables

Amazon Web Services

- Setting up an AWS account
- Where to store credentials
- Remote Asset Storage with Amazon S3

Heroku

- Heroku Account Setup
- Installing Heroku Toolbelt
- How Heroku works
- Types of Dynos
- Deploying your application