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# Advanced Ruby on Rails training

3 days (21 hours)

## Presentation

[Ruby on Rails](#) (RoR) is an open source framework written in Ruby in July 2004, and used in many well-known applications such as Github, Twitch, SoundCloud and Airbnb. Ruby on Rails follows the [MVC](#) architecture and is designed to facilitate web development, notably thanks to functionalities with default behavior, minimizing configuration at the start of a project.

This framework favors convention over configuration, so it can be used without the need to spend hours configuring. This does not make it any less powerful, as it can be fully customized during the development cycle. This approach also reduces the number of lines of code and makes the code more readable. The course will introduce you to the latest stable release and its new features, [Rails 7.1](#).

Take our training course and discover one of the most popular frameworks in the world of web development!

## Objectives

- Integrating Ruby on Rails into a project
- Adopting good practices
- Learn about the advanced features and concepts of Ruby on Rails

## Target audience

- Web Developer

## Prerequisites

- Notions in Web development (HTML5/CSS3/JS) and Ruby (or another high-level language)

## Technical requirements

- One computer with Ruby and Docker installed per participant

## Training in best development practices with Ruby on Rails

### Rails&Ruby improvements

- Notable improvements from Ruby 2.0 to Ruby 3.5
- Notable improvements from Rails 4.0 to Rails 7.1

### Project management and maximizing the use of git

- Overview of a classic git workflow
- Branch organization
- The hidden powers of git

### Testing in Rails

- Overview of the different types of test
- The benefits of Test-Driven Development
- Coverage and balance between different tests
- The different Ruby&Rails test libraries

### Continuous integration - Intégration continue

- The importance of continuous integration
- Rails tool horizons
- Common problems and solutions
- Possible increase in Continuous Delivery

### Minimalist controllers

- Push towards lightweight controllers
- ActiveRecord API powers
- Get minimalist controllers

### Well-managed models

- How models evolve
- The need to organize models
- Use of concerns or service classes

## JavaScript and rails

- Rails can be used as an API Rest
- A tour of the different application frameworks: Angular, React, Vue
- JS package integration via NPM or Yarn
- Using AJAX with js.erb files

## Rails application ecosystem

- The importance of controlling your stack
- How to choose your gems
- Training your Gemfile

## Application deployment with Nginx reverse proxy

- Different choices of application server gems
- Using Apache or Nginx as a reverse proxy
- Proxy options vs. application options
- Rapid prototyping with Docker

## Rails and safety

- Access policy and permissions management
- The underlying protection of Rails
- OWASP recommendations
- What remains to be protected
- Using vulnerability scanners
- How to stay informed and safe?

## Companies concerned

This training course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced computer technology, or to acquire specific business knowledge or modern methods.

## Positioning on entry to training

Positioning at the start of training complies with Qualiopi quality criteria. As soon as enrolment is finalized, the learner receives a self-assessment questionnaire enabling us to assess his or her estimated level of proficiency in different types of technology, as well as his or her expectations and objectives.

This questionnaire also enables us to anticipate any connection or internal security problems (intra-company or virtual classroom) that could be problematic for the follow-up and smooth running of the training session. This questionnaire also enables us to anticipate any connection or internal security difficulties within the company (intra-company or virtual classroom) that could be problematic for the follow-up and smooth running of the training session.

## Teaching methods

Practical course: 60% Practical, 40% Theory. Training material distributed in digital format to all participants.

## Organization

The course alternates theoretical input from the trainer, supported by examples, with brainstorming sessions and group work.

## Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

## Sanction

A certificate will be issued to each trainee who completes the course.