

Web Development with Ruby and Rails

Duration: 5 days (9 hours each day with working lunch)

Rails changed the world's view of web development. By making phenomenal use of the metaprogramming capabilities and fluency of Ruby, it lead the way to rapid application development. This course has been design to make programmers productive in both Ruby and in Rails. Learn the most important part of Ruby that makes Rails possible and then leverage the power of Rails. Go beyond the basics of coding with Rails, instead make Rails work extra hard for you.

The course has a good balance of interactive lectures and hands-on exercises. The attendees are expected to pair-up and work on the lab exercises. The instructor will assist the attendees as they work on the labs. The objective of the course is for the attendees to gain an in depth practical knowledge of the concepts so they can put them to immediate use on their real projects.

The course content will be customized to meet your teams' specific needs. Please review this detailed outline and suggest changes (additions, deletions, modifications) as you feel fit.

Topics

A quick introduction to Ruby

- * The power of Ruby
- * The fluency of Ruby
- * Ruby conventions
- * Ruby functions and classes
- * Automated testing with Ruby
- * Exercises

Working with Collections

- * Collections in Ruby
- * Arrays and Hashes
- * Using functional style with collections
- * Exercises

Metaprogramming in Ruby

- * Metaprogramming
- * Method injection
- * Method synthesis
- * Mixins
- * Creating fluent interfaces and DSLs
- * Exercises

Using Rake

- * The power and fluency of Rake

- * Rake tasks
- * Creating Rake tasks
- * Automating builds
- * Exercises

ActiveRecords

- * Working with database
- * ActiveRecord, power and limitations
- * Conventions
- * Working with a single table
- * Working with one-one-relationships
- * Working with one-to-many relationships
- * Working with many-to-many relationships
- * Deviating from the conventions
- * Creating custom queries
- * Testing activerecords
- * Exercises

A Quick Introduction to Rails

- * Rapid application creation
- * Understanding the structure of the projects
- * Creating applications
- * Moving away from scaffolds
- * Exercises

Working with Controllers

- * Creating controllers
- * Interaction of controller and view
- * Objects and lifetimes
- * Working with models
- * Working with multiple models
- * Using filters
- * Creating RESTful services
- * Testing controllers
- * Exercises

Working with Views

- * Views
- * Rendering of views
- * Working with partials
- * Forms and tags
- * Testing views
- * Exercises

Using Ajax

- * Creating Ajax applications
- * Creating rich interfaces
- * Testing Ajax interactions

* Exercises

Automated testing

- * Testing from the ground up
- * Measuring code coverage
- * Exercises

About the Instructor

Dr. Venkat Subramaniam is an award-winning author, founder of Agile Developer, Inc., creator of agilelearner.com, and an instructional professor at the University of Houston.

He has trained and mentored thousands of software developers in the US, Canada, Europe, and Asia, and is a regularly-invited speaker at several international conferences. Venkat helps his clients effectively apply and succeed with sustainable agile practices on their software projects.

Venkat is a (co)author of multiple technical books, including the 2007 Jolt Productivity award winning book Practices of an Agile Developer. You can find a list of his books at agiledeveloper.com. You may read more about Venkat and Agile Developer, Inc. at <http://agiledeveloper.com>.

