

ruby FTW / Linuxtage 2021

Christoph Lipautz

April 10, 2021

Lets say:

Programming Languages are (kind of) Tools

Tools FTW¹



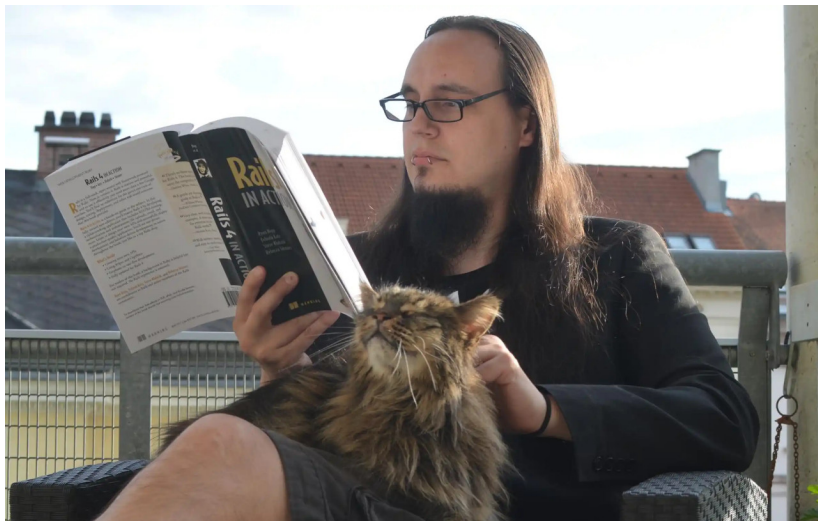
¹https://unsplash.com/photos/NL_DF0Klepc

Learn a Programming Language Every Year²



²https://unsplash.com/photos/FwF_fKj5tBo

Me Reading Stuff



Overview of this Talk

- Why did I stick with Ruby for so many years?
- An Example dealing with Time (Code)
- Resources, Getting Started, More Code(?)
- Question and Answer Session

Ruby - Interpreted, Object Oriented³



Designed for Developer Happiness

³<https://www.ruby-lang.org/>

Hello World!

```
7.times { print "Hello World!\n" }
```

Hello World!!

```
7.times { print "Hello World!\n" }  
# Hello World!  
# Hello World!  
# Hello World!  
# Hello World!  
# Hello World!  
# Hello World!  
# Hello World!
```

Yukihiro “Matz” Matsumoto



A Welcoming Community

Matz is nice, so we are nice.

Expect Conventions and Best Practice, but no Strict Rules?⁴



⁴<https://unsplash.com/photos/cvQzH3npXT8>

Conventions?

*# as convention: expect methods ending with ? to
respond with a boolean*

```
user.active?
```

```
a = [1, 2, 3]
```

```
a.member? 2 # true
```

Conventions!

```
a = [1, 2, 2]
a.uniq # [1, 2]
print a # [1, 2, 2]
```

```
# as convention: expect methods with ! to do something
# destructive (or dangerous)
a.uniq! # [1, 2]
print a # [1, 2]
```

Everything is a File

Everything in Unix is a file.

Everything is a Object

Everything in Ruby is a object.

Everything is an Object

Everything in Ruby is an object.

```
users = User.where :created_at.gte => 3.days.ago
```

Timeless Project

00_README.png

```
[me:timeless 22:11:08.Tue Apr 06(main)]
> cat README.md

# Timeless

A time handling package to showcase the beauty of
[Ruby](https://www.ruby-lang.org).

## Usage

```ruby
require 'timeless'
print (5.days + 5.hours + 5.mintes).from_now # Time<2021...
```

## Development

```sh
$ bundle install # install dependencies
$ bundle exec ruby tests/ # run testsuite
$ bundle exec irb -r './timeless' # interactive ruby shell
```
```

```
[me:timeless 22:14:00.Tue Apr 06(main)]  
> cat Gemfile  
# frozen_string_literal: true  
  
source "https://rubygems.org"  
  
git_source(:github) {|repo_name| "https://github.com/#{repo_name}" }  
  
gem "minitest"  
[me:timeless 22:14:13.Tue Apr 06(main)]  
> bundle install  
Using bundler 2.1.4  
Using minitest 5.14.4  
Bundle complete! 1 Gemfile dependency, 2 gems now installed.  
Bundled gems are installed into `./vendor/bundle`
```

```
1
2 require 'minitest/autorun'
3 require 'minitest/pride'
4
5 class TestTimeless < Minitest::Test
6   def test_convert_days
7     assert_equal 5.days.to_i, 5 * 24 * 60 * 60
8   end
9 end
```

```
[me:timeless 22:09:24.Tue Apr 06(main)]  
> bundle exec ruby tests/timeless.rb  
Run options: --seed 23655  
  
# Running:  
  
E  
  
Fabulous run in 0.000324s, 3084.9249 runs/s, 0.0000 assertions/s.  
  
1) Error:  
TestTimeless#test_convert_days:  
NoMethodError: undefined method `days' for 5:Integer  
    tests/timeless.rb:7:in `test_convert_days'  
  
1 runs, 0 assertions, 0 failures, 1 errors, 0 skips
```


04_timeless.png

```
1 # file: timeless.rb
2
3 module Timeless
4   class Duration
5     def initialize(seconds)
6       @seconds = seconds
7     end
8
9     def self.days(i)
10      i * 24 * 60 * 60
11    end
12
13    def ==(other)
14      @seconds === other.to_i
15    end
16
17    def to_i
18      @seconds
19    end
20  end
21 end
22
23 class Integer
24   def days
25     Timeless::Duration.days self
26   end
27 end
```

```
> bundle exec ruby tests/timeless.rb
Run options: --seed 47404

# Running:

*

Fabulous run in 0.000390s, 2561.6329 runs/s, 2561.6329 assertions/s.

1 runs, 1 assertions, 0 failures, 0 errors, 0 skips
```

06_extend-testsuite.png

```
3 require 'minitest/autorun'
4 require 'minitest/pride'
5
6 require_relative '../timeless'
7
8 class TestTimeless < Minitest::Test
9
10   def test_convert_week
11     assert_equal 1.week, 7 * 24 * 60 * 60
12   end
13
14   def test_compare
15     assert_equal 1.week, 7.days
16   end
17
18   def test_combination
19     assert_equal 1.week.from_now - 14.days, 1.week.ago
20   end
21 end
22
23 class TestTimelessDuration < Minitest::Test
24   def setup
25     @duration = Timeless::Duration.new 7
26   end
27
28   def test_class_convert_method
29     assert Timeless::Duration.respond_to? :days
30   end
31 end
```

07_extend_timeless.png

```
3 module Timeless
4   class Duration
5     def initialize(seconds)
6       @seconds = seconds
7     end
8
9     def self.days(i)
10      new i * 24 * 60 * 60
11    end
12
13    def self.weeks(i)
14      days i * 7
15    end
16
17    def ==(other)
18      @seconds === other.to_i
19    end
20
21    def to_i
22      @seconds
23    end
24    alias to_int to_i
25
26    def ago
27      Time.at(Time.now.to_i - @seconds).utc
28    end
29
30    def from_now
```

```
[me:timeless 22:34:32.Tue Apr 06(main)]  
> bundle exec ruby tests/timeless.rb  
Run options: --seed 20289  
  
# Running:  
  
****  
  
Fabulous run in 0.000370s, 10806.5466 runs/s, 10806.5466 assertions/s.  
4 runs, 4 assertions, 0 failures, 0 errors, 0 skips
```

```
class Integer
  def days
    Timeless::Duration.days self
  end
  alias :day :days

  def weeks
    Timeless::Duration.weeks self
  end
  alias :week :weeks
end
```

```
[me:timeless 22:31:29.Tue Apr 06(main)]  
> cat Gemfile  
# frozen_string_literal: true  
  
source "https://rubygems.org"  
  
git_source(:github) {|repo_name| "https://github.com/#{repo_name}" }  
  
gem "minitest"  
gem "mongoid"  
gem "faker"  
gem "pry"
```

11_final-example.png

```
1 require_relative './timeless'
2 require 'mongoid'
3 require 'faker'
4 require 'pry'
5
6 Mongoid.configure do |config|
7   config.clients.default = {
8     hosts: ['localhost:27017'],
9     database: 'timeless_example',
10   }
11 end
12
13 class User
14   include Mongoid::Document
15
16   field :name, type: String
17   field :joined_at, type: Time
18 end
19
20 User.delete_all unless User.count.zero?
21
22 puts "Generating test data..."
23 500.times do
24   User.create name: Faker::Name.name,
25             joined_at: Faker::Time.backward(days: 14)
26   print "."
27 end
28 print "\n"
```


12_example-run-1.png

```
[me:timeless 22:38:11.Tue Apr 06(main)]
```

```
> bundle exec ruby example.rb
```

```
Generating test data...
```

```
.....
.....
.....
.....
.....
.....
.....
.....
```

```
From: /home/me/Documents/Presentations/ruby-ftw/timeless/example.rb:30 :
```

```
25:         joined_at: Faker::Time.backward(days: 14)
```

```
26:     print "."
```

```
27: end
```

```
28: print "\n"
```

```
29:
```

```
=> 30: binding.pry
```

```
[1] pry(main)> User.count
```

```
=> 500
```

```
[2] pry(main)> User.last.name
```

```
=> "Anjelica Walsh"
```

```
[3] pry(main)> █
```

13_example-run-2.png

```
[3] pry(main)> User.limit(5).pluck(:name, :joined_at) [13/273]
=> [{"Magdalena Kling", 2021-03-23 04:06:08 UTC},
    ["Chong Lockman", 2021-03-28 23:02:51 UTC],
    ["Eric Altenwerth DVM", 2021-03-31 02:34:24 UTC],
    ["Rosa Farrell", 2021-04-03 09:16:46 UTC],
    ["Lorri Weissnat I", 2021-03-25 06:26:07 UTC]]

[4] pry(main)> User.where(:joined_at.gte => 1.day.ago).pluck(:name, :joined_at)
=> [{"Sen. Antone Hahn", 2021-04-05 20:50:13 UTC},
    ["Rich Carroll", 2021-04-05 21:28:06 UTC],
    ["Wilma Botsford", 2021-04-05 21:29:10 UTC]]

[5] pry(main)> User.where(:joined_at.gte => 3.days.ago).order_by(joined_at: :desc)
.pluck(:name, :joined_at)

=> [{"Wilma Botsford", 2021-04-05 21:29:10 UTC},
    ["Rich Carroll", 2021-04-05 21:28:06 UTC],
    ["Sen. Antone Hahn", 2021-04-05 20:50:13 UTC],
    ["Lakia Bruen", 2021-04-05 20:11:06 UTC],
    ["Garrett Bartell", 2021-04-05 18:27:56 UTC],
    ["Robert Reichel", 2021-04-05 18:24:06 UTC],
    ["Teodoro Mosciski JD", 2021-04-05 18:23:35 UTC],
    ["Argentina Champlin", 2021-04-05 16:46:04 UTC],
    ["Rev. Ilse Crooks", 2021-04-05 16:19:56 UTC],
    ["Dorian Homenick Sr.", 2021-04-05 15:32:34 UTC],
    ["Berry Herman CPA", 2021-04-05 14:39:48 UTC],
    ["Mohammad West", 2021-04-05 14:18:50 UTC],
    ["Willard Lemke", 2021-04-05 12:57:59 UTC],
    ["Cary Ondricka", 2021-04-05 11:06:07 UTC],
    ["Sade Dietrich V", 2021-04-05 09:51:43 UTC],
    ["Sen. Shae McKenzie", 2021-04-05 09:28:43 UTC],
    ["Minnie Mante", 2021-04-05 09:17:53 UTC]]
```

A Word of Warning: Don't mess with primitives!⁵



⁵<https://unsplash.com/photos/QeYLUoIK1XY>

Where should I go now?

This Presentation at GitHub⁶

The screenshot shows the GitHub repository page for 'unused/ruby-ftw'. The repository is a public repository with 1 branch and 0 tags. It has 748e263 commit 21 hours ago and 7 commits. The repository contains several files and folders: coding-backup, coding-example, media, templates, .gitignore, Makefile, README.md, q-and-a-session.md, slides-backup.rb, and slides.md. The README.md file is selected and shows the following content:

ruby FTW

A biased presentation of the Ruby programming language.

Ruby is easy to read, understand and learn. Originating back to 1995 it has aged well and was recently published to version 3.0. The talk provides a basic introduction, discusses the language very goals and shows some nice examples.

Usage

```
$ make # generate slides
```

On the right side of the repository page, there are sections for 'About', 'Releases', 'Packages', and 'Languages'. The 'About' section describes the repository as 'A presentation of the Ruby programming language'. The 'Releases' section shows 'No releases published' with a link to 'Create a new release'. The 'Packages' section shows 'No packages published' with a link to 'Publish your first package'. The 'Languages' section shows a bar chart with the following data:

| Language | Percentage |
|----------|------------|
| Ruby | 88.3% |
| Makefile | 8.9% |
| TeX | 2.8% |

⁶<https://github.com/unused/ruby-ftw>

Try Ruby⁷

The screenshot shows a web browser window with the URL <https://try.ruby-lang.org>. The page has a navigation bar with links for 'Articles', 'Playground', and 'About'. The main content area is titled 'A Tally' and contains the following text:

One of the amazing new things we've just used is a **block**. We're going to explore these more in this and the next lesson. But, basically, a block is a bit of Ruby code surrounded by curly braces.

Let's try another block:

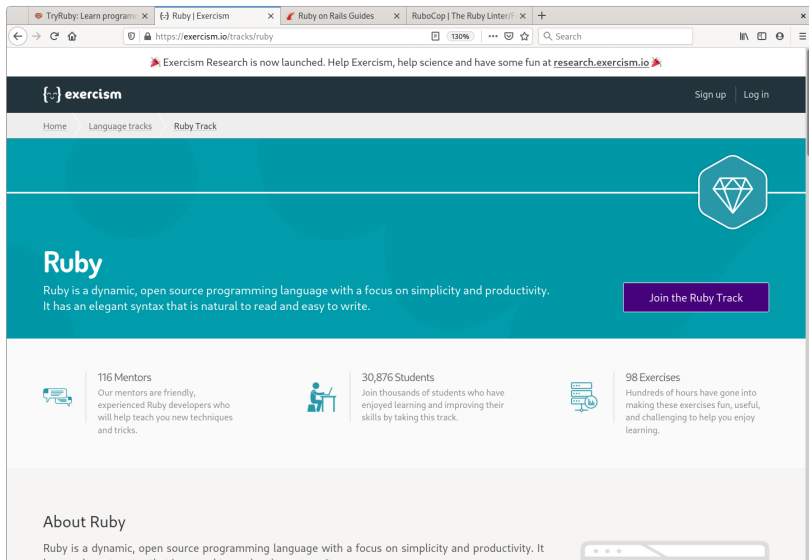
```
5.times { print "0delay! " }
```

Blocks are always attached to methods. Like the **times** method, which takes the block and runs the code over and over. (In our example: five times.)

On the right side of the page, there are two large empty boxes labeled 'Output' and 'Editor'.

⁷<https://try.ruby-lang.org/>

Join Exercism⁸



The screenshot shows a web browser with multiple tabs open: 'TryRuby: Learn programming', 'Ruby | Exercism', 'Ruby on Rails Guides', and 'RuboCop | The Ruby Linter'. The address bar shows 'https://exercism.io/tracks/ruby'. The page features a dark header with the Exercism logo and navigation links for 'Sign up' and 'Log in'. Below the header, a teal banner displays the word 'Ruby' in large white text, followed by a description: 'Ruby is a dynamic, open source programming language with a focus on simplicity and productivity. It has an elegant syntax that is natural to read and easy to write.' A purple button labeled 'Join the Ruby Track' is positioned on the right. The main content area is divided into three columns, each with an icon and text: '116 Mentors' (speech bubble icon), '30,876 Students' (person at desk icon), and '98 Exercises' (stack of books icon). The footer section is titled 'About Ruby' and repeats the language description.

TryRuby: Learn programming | Ruby | Exercism | Ruby on Rails Guides | RuboCop | The Ruby Linter | +

https://exercism.io/tracks/ruby

Exercism Research is now launched. Help Exercism, help science and have some fun at research.exercism.io


{ } exercism Sign up Log in

Home Language tracks Ruby Track


Ruby

Ruby is a dynamic, open source programming language with a focus on simplicity and productivity. It has an elegant syntax that is natural to read and easy to write.


Join the Ruby Track



116 Mentors
Our mentors are friendly, experienced Ruby developers who will help teach you new techniques and tricks.



30,876 Students
Join thousands of students who have enjoyed learning and improving their skills by taking this track.



98 Exercises
Hundreds of hours have gone into making these exercises fun, useful, and challenging to help you enjoy learning.

About Ruby

Ruby is a dynamic, open source programming language with a focus on simplicity and productivity. It has an elegant syntax that is natural to read and easy to write.

⁸<https://exercism.io/tracks/ruby>

Visit Rails Guides⁹

More at rubyonrails.org: [Blog](#) | [Guides](#) | [API](#) | [Forum](#) | [Contribute on GitHub](#)

RAILSGUIDES

Home **Guides Index** Contribute

Ruby on Rails Guides (v6.1.3.1)

These are the new guides for Rails 6.1 based on [v6.1.3.1](#). These guides are designed to make you immediately productive with Rails, and to help you understand how all of the pieces fit together.

The guides for earlier releases: [Rails 6.0](#), [Rails 5.2](#), [Rails 5.1](#), [Rails 5.0](#), [Rails 4.2](#), [Rails 4.1](#), [Rails 4.0](#), [Rails 3.2](#), [Rails 3.1](#), [Rails 3.0](#), and [Rails 2.3](#).

! Rails Guides are also available for [Kindle](#).

! Guides marked with this icon are currently being worked on and will not be available in the Guides Index menu. While still useful, they may contain incomplete information and even errors. You can help by reviewing them and posting your comments and corrections.

Start Here

[Getting Started with Rails](#)

Everything you need to know to install Rails and create your first application.

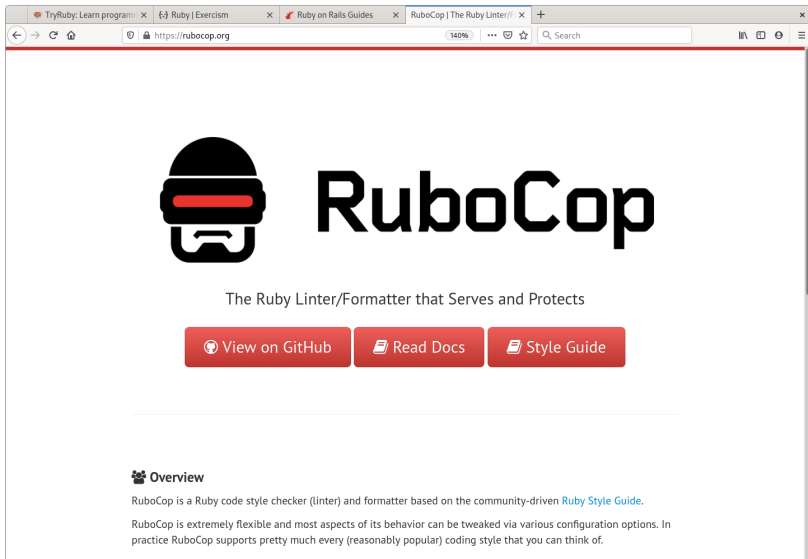
Models

[Active Record Basics](#)

This guide will get you started with models, persistence to database, and the Active Record pattern and library

⁹<https://guides.rubyonrails.org/>

Run RuboCop¹⁰



¹⁰<https://rubocop.org/>

Christoph Lipautz

- @unused in #glt21 chat at IRC OFTC
- @unused at GitHub
- @lipdaguit on Twitter
- <https://github.com/unused/ruby-ftw>