ruby FTW / Linuxtage 2021

Christoph Lipautz

April 10, 2021

Lets say:

Programming Languages are (kind of) Tools

Tools FTW[1]

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

Learn a Programming Language Every Year[2]

[2] https://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 Oriented[3]

Designed for Developer Happiness

[3] https://www.ruby-lang.org/

Hello World!

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

Hello World!!

```ruby
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?

```ruby
# as convention: expect methods ending with ? to
# respond with a boolean
user.active?

a = [1, 2, 3]
a.member? 2 # true
```

Conventions!

```ruby
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.

Ruby in Action

```ruby
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
```
```

01_bundle.png

```
[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`
```

02_testsuite.png

```ruby

require 'minitest/autorun'
require 'minitest/pride'

class TestTimeless < Minitest::Test
  def test_convert_days
    assert_equal 5.days.to_i, 5 * 24 * 60 * 60
  end
end
```

03_test-fail.png

```
[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

```ruby
# file: timeless.rb

module Timeless
  class Duration
    def initialize(seconds)
      @seconds = seconds
    end

    def self.days(i)
      i * 24 * 60 * 60
    end

    def ==(other)
      @seconds === other.to_i
    end

    def to_i
      @seconds
    end
  end
end

class Integer
  def days
    Timeless::Duration.days self
```

05_testrun.png

```
 > 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
```

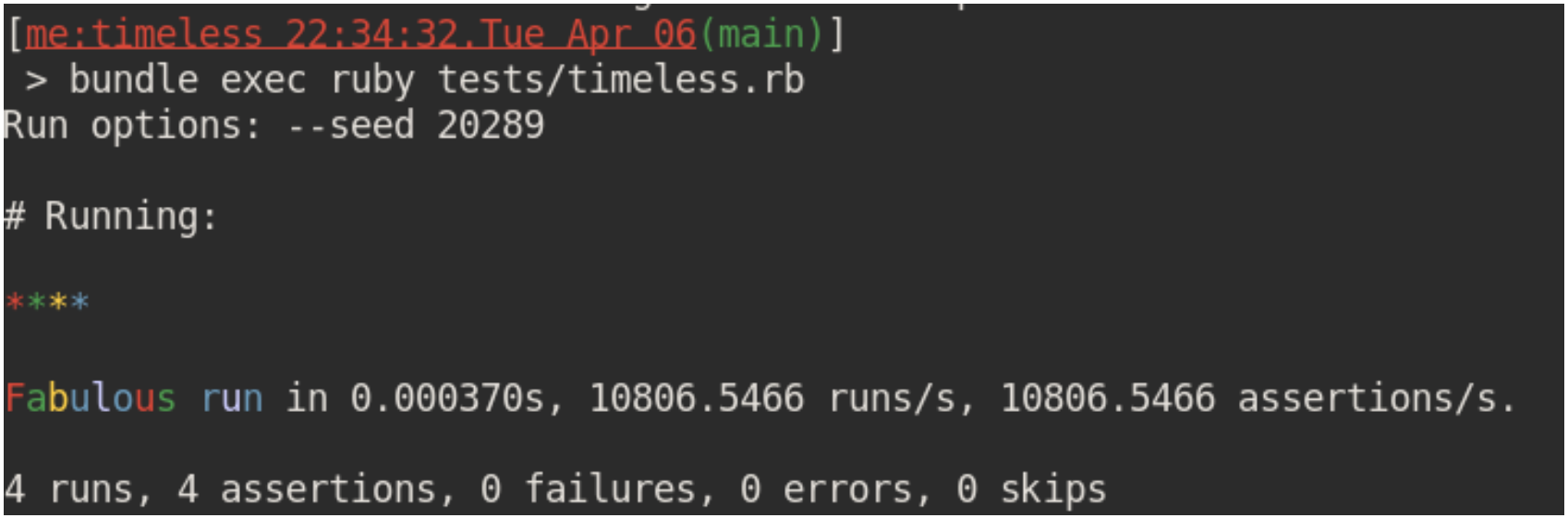
06_extend-testsuite.png

```ruby
require 'minitest/autorun'
require 'minitest/pride'

require_relative '../timeless'

class TestTimeless < Minitest::Test

  def test_convert_week
    assert_equal 1.week, 7 * 24 * 60 * 60
  end

  def test_compare
    assert_equal 1.week, 7.days
  end

  def test_combination
    assert_equal 1.week.from_now - 14.days, 1.week.ago
  end
end

class TestTimelessDuration < Minitest::Test
  def setup
    @duration = Timeless::Duration.new 7
  end

  def test_class_convert_method
    assert Timeless::Duration.respond_to? :days
  end
```

07_extend_timeless.png

```ruby
module Timeless
  class Duration
    def initialize(seconds)
      @seconds = seconds
    end

    def self.days(i)
      new i * 24 * 60 * 60
    end

    def self.weeks(i)
      days i * 7
    end

    def ==(other)
      @seconds === other.to_i
    end

    def to_i
      @seconds
    end
    alias to_int to_i

    def ago
      Time.at(Time.now.to_i - @seconds).utc
    end

    def from_now
```

08_testrun.png



09_extend_integer.png

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

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

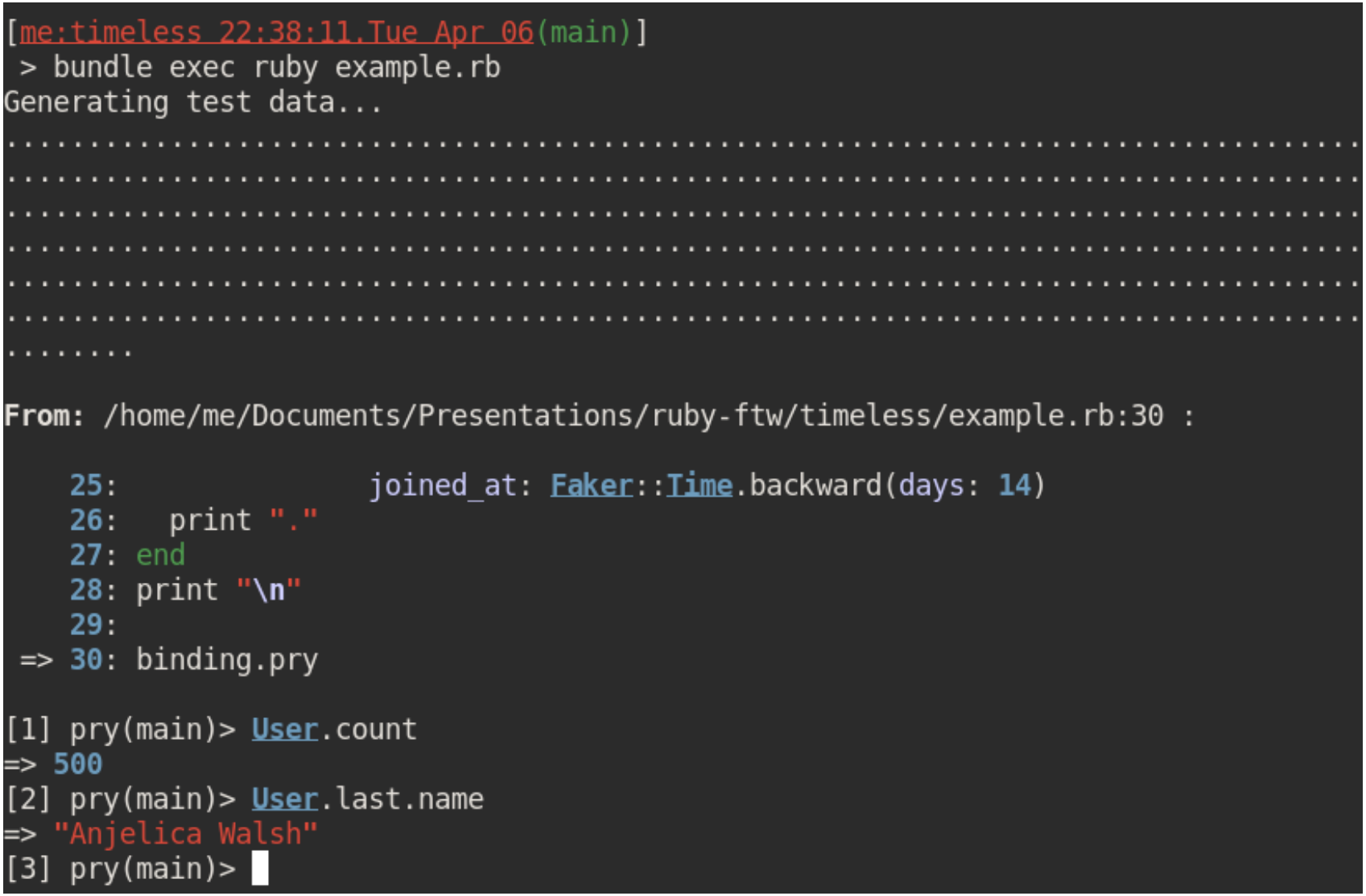
10_final-bundle.png

```
[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

```ruby
require_relative './timeless'
require 'mongoid'
require 'faker'
require 'pry'

Mongoid.configure do |config|
  config.clients.default = {
    hosts: ['localhost:27017'],
    database: 'timeless_example',
  }
end

class User
  include Mongoid::Document

  field :name, type: String
  field :joined_at, type: Time
end

User.delete_all unless User.count.zero?

puts "Generating test data..."
500.times do
  User.create name: Faker::Name.name,
              joined_at: Faker::Time.backward(days: 14)
  print "."
end
print "\n"
```

12_example-run-1.png



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],
 ["Hobert 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],
```

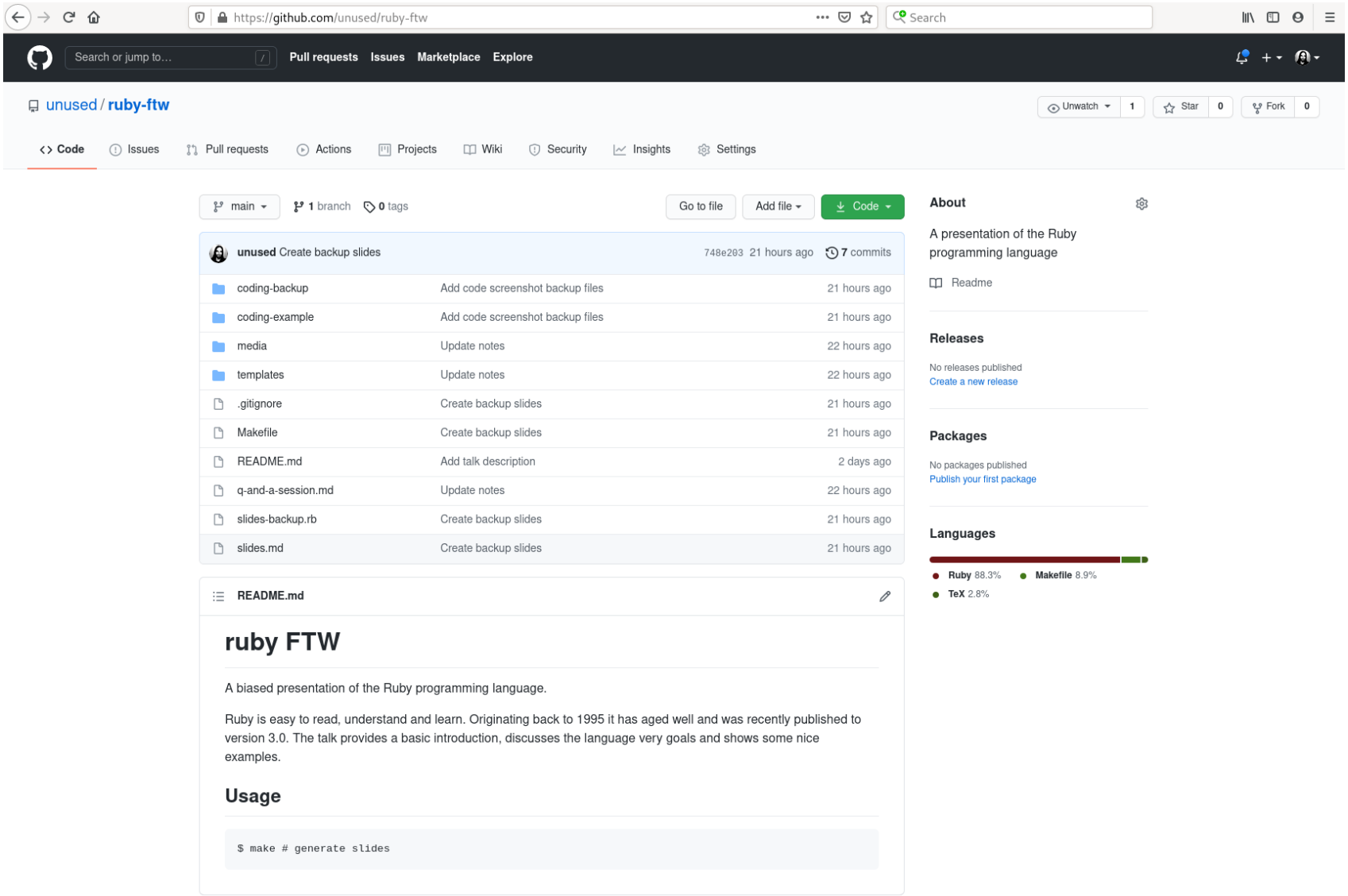
A Word of Warning: Don't mess with primitives![5]

[5] https://unsplash.com/photos/QeYLUolK1XY

Resources

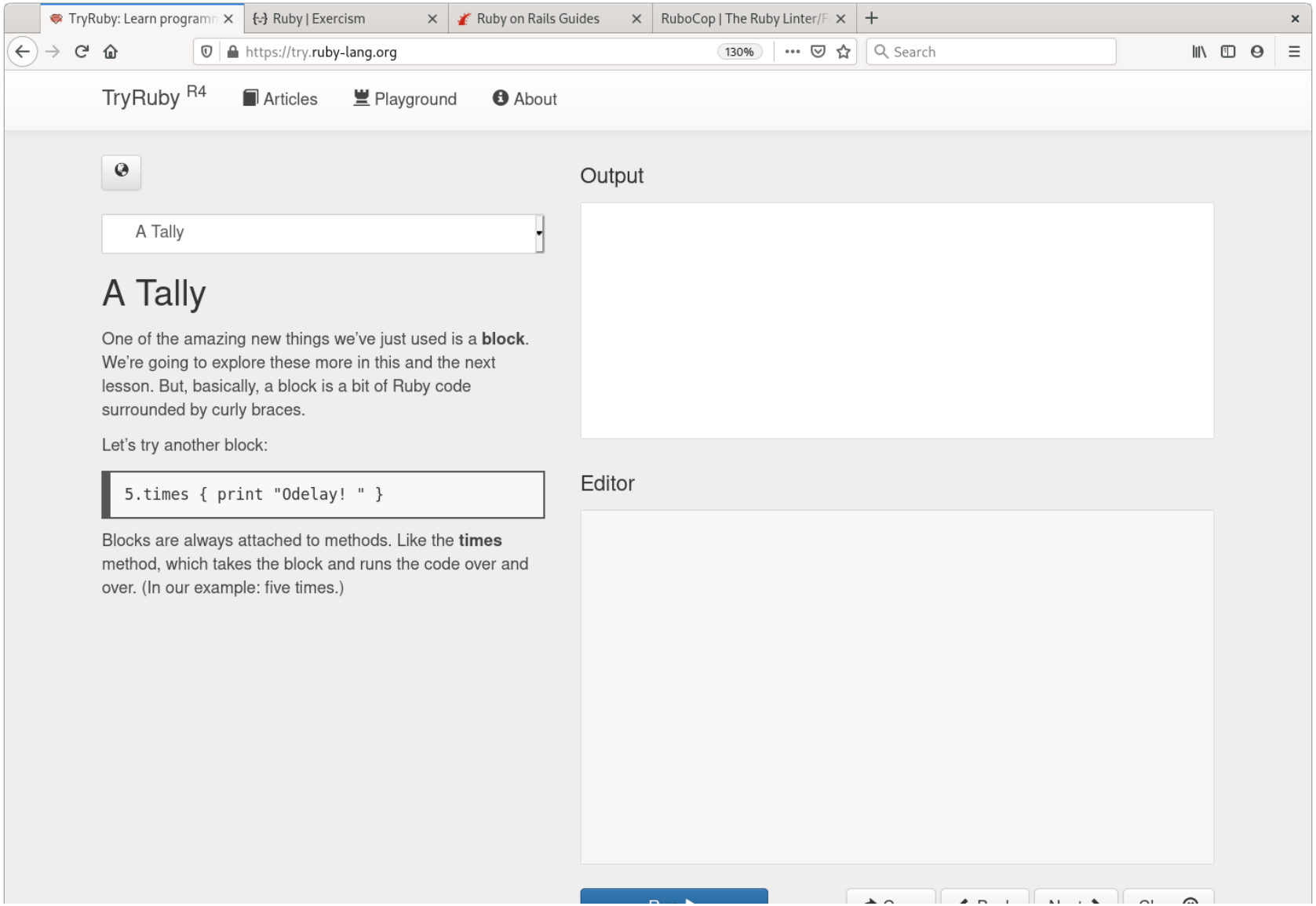
Where should I go now?

This Presentation at GitHub[6]



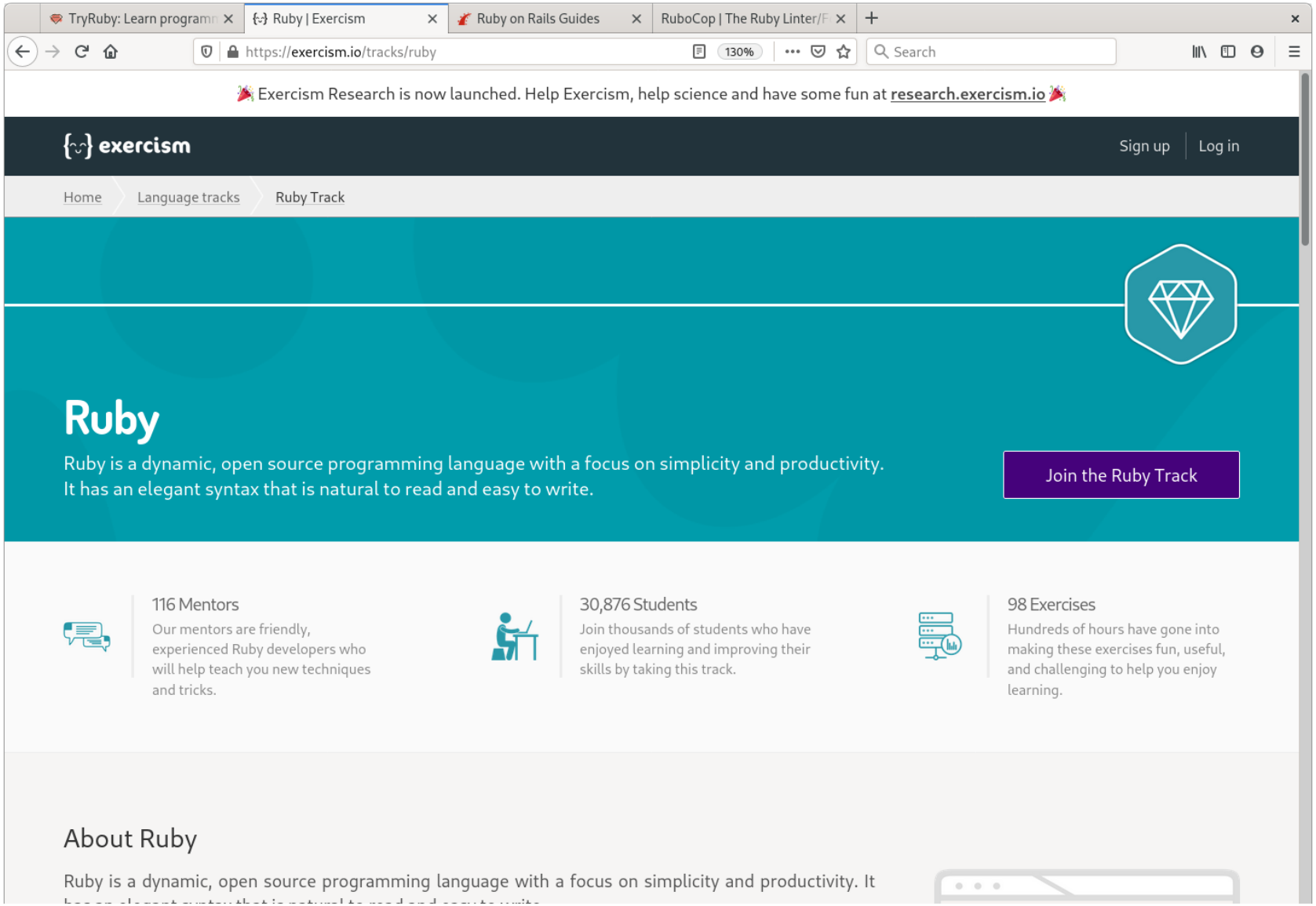
[6] https://github.com/unused/ruby-ftw

Try Ruby[7]



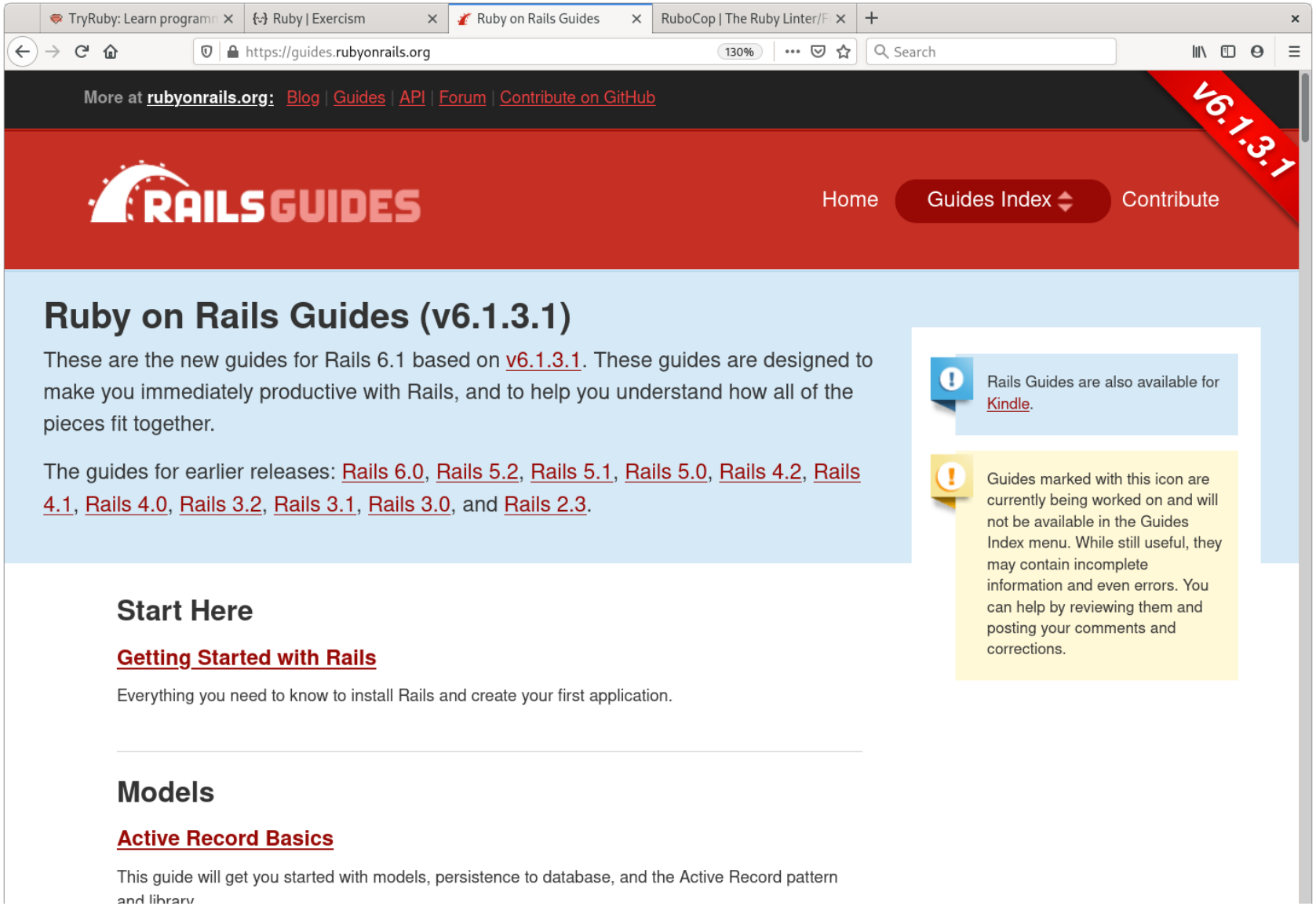
[7] https://try.ruby-lang.org/

Join Exercism[8]



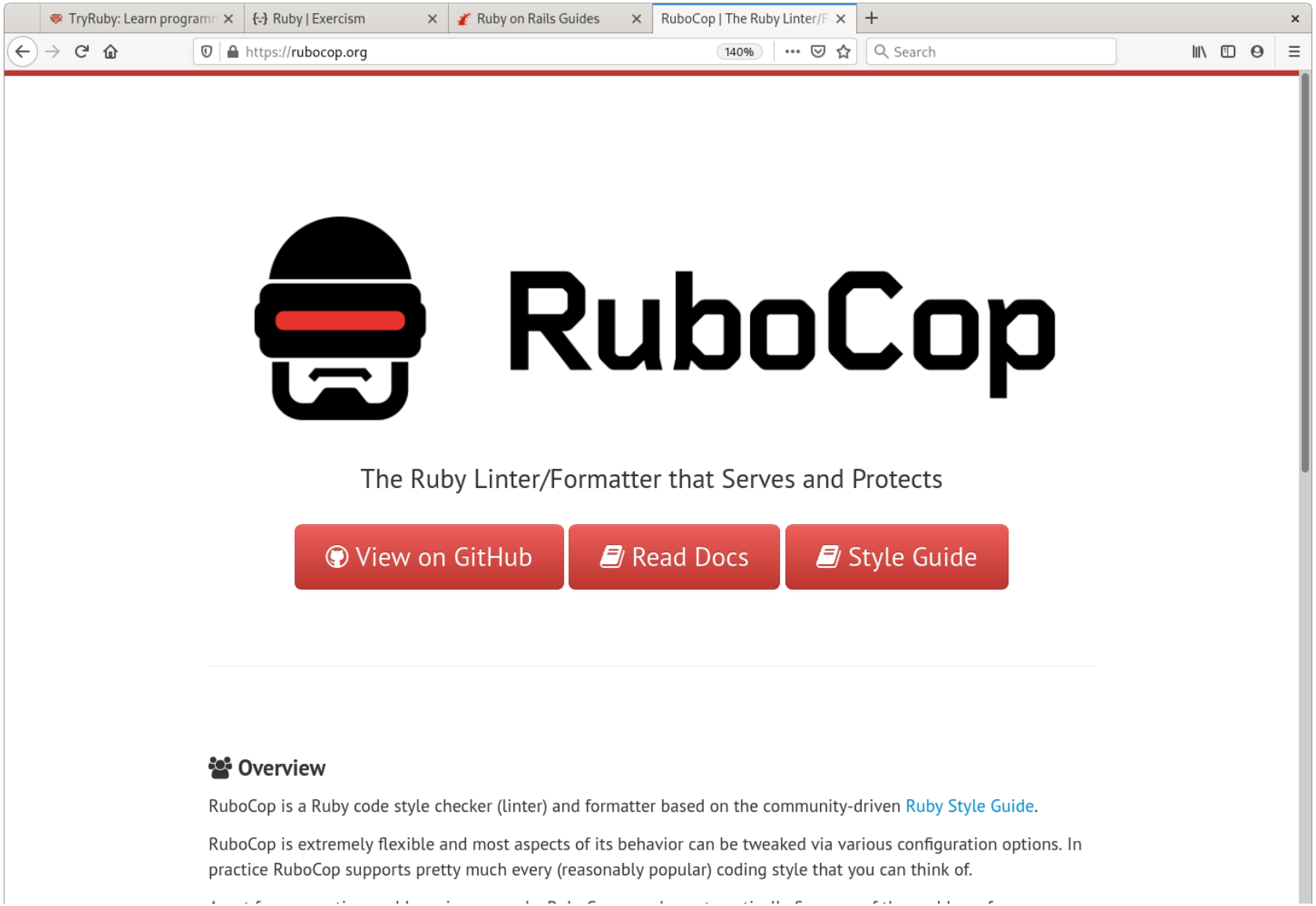
[8] https://exercism.io/tracks/ruby

Visit Rails Guides[9]



[9] https://guides.rubyonrails.org/

Run RuboCop[10]



[10] https://rubocop.org/

Slides, Code, Contact - Thanks a lot for Joining!!!

Christoph Lipautz

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