ANDY CALLAGHAN - MARCH 2024

# RUBY ON RALLS As a solo app developer



## WHAT IS RUBY?

- Server-side programming language
- Now used mainly for web application applications
- Dynamically typed, metaprogramming & interpreted by a C runtime - MRI - "Matz's Ruby Interpreter"
- Can be used by itself puts 'Hello World'
- Slow compared to C++ et al, but fast enough for the web

```
app > services >   price_change_service.rb
       class PriceChangeService
  1
         attr_reader :prices
  2
         def initialize
  4
           @prices = Price.all
  5
  6
  7
         def multiple!(multiple)
  8
           @prices.each do |price|
  9
             old_price = price.price
 10
 11
 12
             new_price = old_price * multiple
             price.update(price: new_price)
 13
 14
 15
 16
 17
```

## **RUBY IS BEAUTIFUL!**

- Expressive and English-like
- Syntax only when absolutely needed
- Complex ideas expressed precisely
- Emphasis is on readability

a = [0, 1, 2]
a.repeated\_combination(2)
=> [[0, 0], [0, 1], [0, 2], [1, 1], [1, 2], [2, 2]]

### WHAT IS RAILS?

- Web application framework for Ruby
- **Started in 2007 by DHH, David Heinemeier Hansson**
- Powers Github, Square, Twitch, Airbnb, Twitter, Shopify, <u>gov.uk</u> & many others
- MVC separating 'business logic' away from presentation & routing
- Convention over configuration
- 'One Person Framework' everything is included
- All projects look roughly the same
- Now on Rails 7.1 new major version every 2/3 years
- Extracted from real applications

memt	ership.rb M •
app > models > 🥔 membership.rb	
1	<pre>class Membership &lt; ApplicationRecord</pre>
2	<pre>belongs_to :band</pre>
3	belongs_to :customer
4	
5	<pre>validates_uniqueness_of :customer_id,</pre>
6	<pre>scope: :band_id,</pre>
7	message: "This customer is already in this band"
8	end
9	

## HOW I USE RAILS

#### Jammed.app

Entire app uses Rails 7.0. Due and JS frontend for fancy booking controls. Built from scratch. Database connections and business logic handled by ActiveRecord.

#### **UK Government apps**

Freelancing for central UK government. Open source & public build github.com/OfficeForProductSafetyAndStandards/product-safety-database github.com/OfficeForProductSafetyAndStandards/cosmetic-product-notifications github.com/alphagov/whitehall

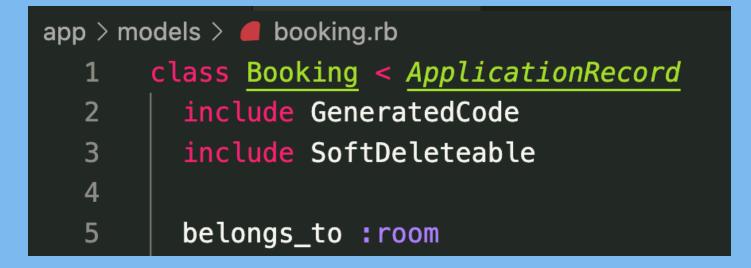
## NAMING CONVENTIONS IN RAILS

BACK END Active Record Active Support Active Model Active Job Active Storage

FRONT END Action Mailer Action Pack Action View Action Cable Action Text Action Mailbox

## META PROGRAMMING

```
app > models > @ room.rb
1 class Room < ApplicationRecord
2 include GeneratedCode
3 4 has_many :bookings
5 has_many :blocked_times
6 has_many :prices, dependent: :delete_all</pre>
```



## **CODE REUSE**

```
app > models > concerns > d generated_code.rb
       require 'code_generator'
  1
  2
       module GeneratedCode
  3
         extend ActiveSupport::Concern
  4
  5
         included do
  6
  7
           before_create :generate_code
  8
         end
  9
 10
         private
 11
 12
         def generate_code
 13
           code = CodeGenerator.generate_code(8)
           generate_code if self.class.where(code: code).count > 0
 14
 15
           self.code = code
 16
         end
 17
       end
```

## DON'T REINVENT THE WHEEL

### **EMBRACE THE MONOLITH!**



Michael Jackson 🤣 @mjackson

Counterpoint: Java (Scala) microservices we're an absolute nightmare for us at Twitter as we migrated off Ruby on Rails. Much of the complexity that Elon mentioned after he bought the company was from this architecture.

#### Ben Hughes @schleyfox · Sep 11

At @Airbnb, while we appreciated the flexibility of Ruby on Rails earlier on, it absolutely became unsuitable at scale (both traffic and organizationally) and we had to work miracles while replacing much of it with java microservices. twitter.com/dhh/status/170...

## BUT HOW IS THIS GOOD As a solo developer?

### THINGS I WOULD DO AGAIN

- -Build something that I want to use
- -Build with a customer
- Don't take investment 😁
- Don't be afraid to be small
- -Plan to grow in years of sustainable growth

### WHAT I WOULD DO DIFFERENTLY

- Find a non-tech co-founder
- Don't build a booking app before a global pandemic that shuts all studios
- Don't underestimate mobile & native apps
- Be guided but not lead by customers

