

Ruby 3: The Big Picture

Discovering Ruby



Paolo Perrotta

Developer, Author

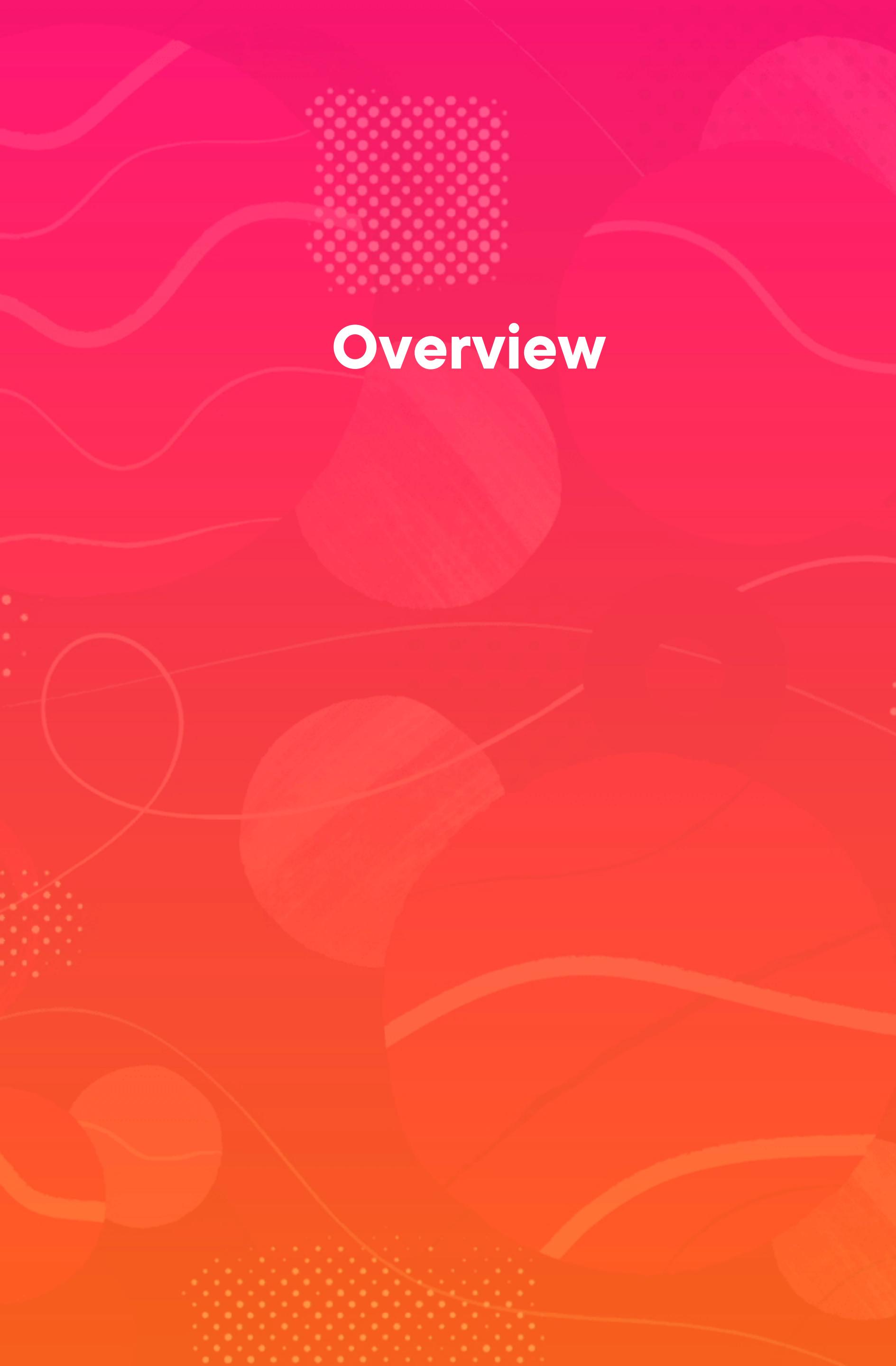
@nusco | www.paoloperrotta.com

Version Check



This course is 100% applicable to:

- Ruby 3.x
- Ruby 2.x



Overview

Discovering Ruby

- Let's write some Ruby!

Investigating Ruby Objects

- Ruby and object-oriented programming

Unlocking Ruby's Hidden Magic

- Ruby's cool metaprogramming features

Exploring Ruby's Ecosystem

- Interpreters, libraries, and community

Understanding Ruby's Pros and Cons

- Strong and weak points



Public Service Announcements

Public Service Announcements

Ignore the details

No stress – I just want to show you
what Ruby looks like

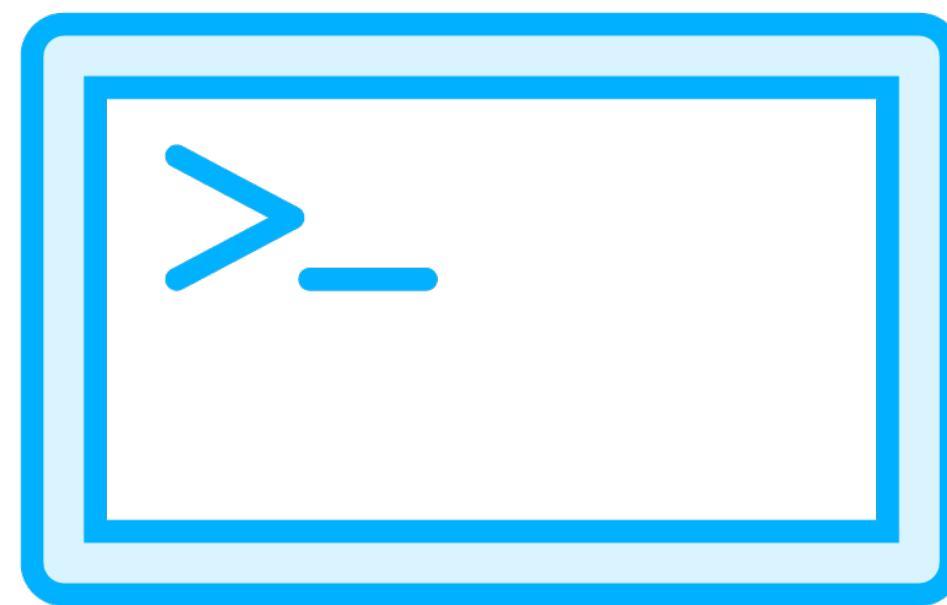
You can follow along

Type Ruby statements in your own
interpreter, if you wish



Running Ruby Code

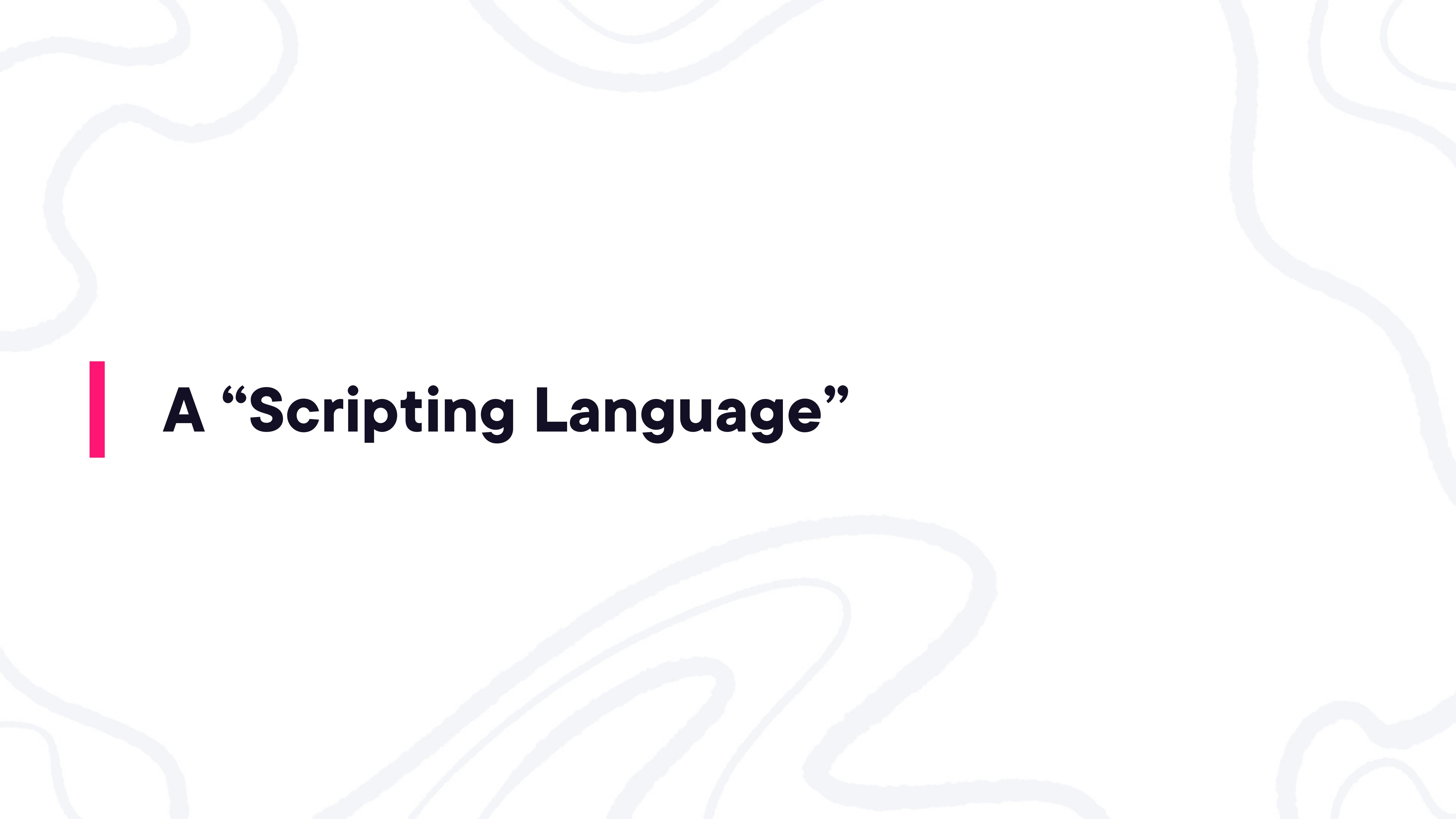
Running Ruby Code



As a program



In a shell



A “Scripting Language”

Comparing Languages

Java (static , compiled)

```
int doSomething(String a, int b, int c) {  
    int result = 0;  
    if (a.equals("mod")) {  
        result = b % c;  
    }  
    return result;  
}
```

JavaScript (dynamic , interpreted)

```
function doSomething(a, b, c) {  
    result = 0;  
    if (a === "mod") {  
        result = b % c;  
    }  
    return result;  
}
```

Ruby (dynamic , interpreted)

```
def do_something(a, b, c)  
    result = 0  
    if a == "mod"  
        result = b % c  
    end  
    return result  
end
```

Ruby is dynamic and interpreted – a “scripting language”.

Ruby Is a Scripting Language

Like...

...JavaScript, Python

Unlike...

...Java, C#, C



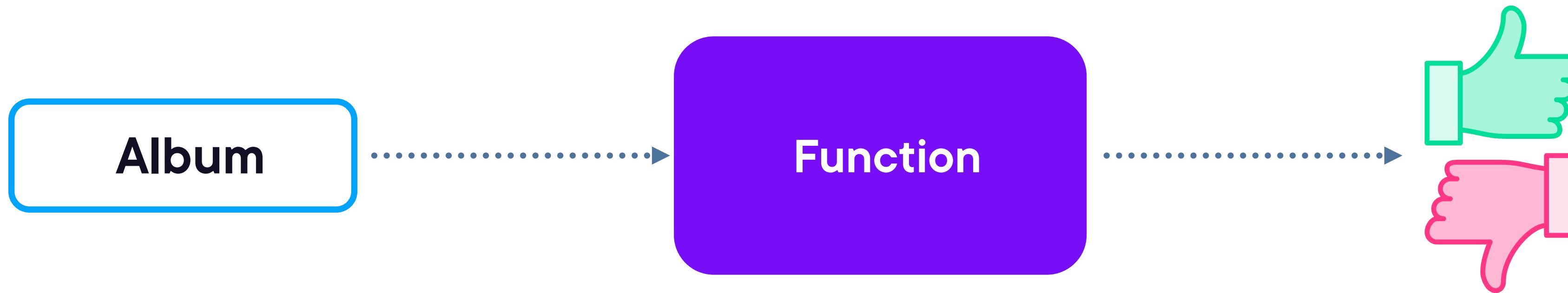
A Problem with Jazz

Loading CSV Data



Writing a Function

A Function to Recognize Classic Jazz



A Ruby Function

```
def function_name(argument1, argument2, argument3)
    return ... # some code to compute the result
end
```

A Ruby Function

```
def classic_jazz?(album)
    album[2] == "Jazz" and album[3].to_i.between?(1950, 1959)
end
```



A Different Way of Looping

A *for* Loop

```
selected_albums = []  
  
for i in 0...albums.size do  
  if classic_jazz?(albums[i])  
    selected_albums << albums[i]  
  end  
end
```



Ruby gives you more than
one way to do the same
thing.

Introducing Blocks

```
albums.select { |album| album[2] == "Jazz" and album[3].to_i.between?(1950, 1959) }
```



Completing the Program

Ruby is expressive.



A Few Things We Learned

Summary

Ruby is a scripting language

Ruby generally gives you more than one way to do the same thing

Ruby is expressive