

# flatMappy bird

Martin Carolan

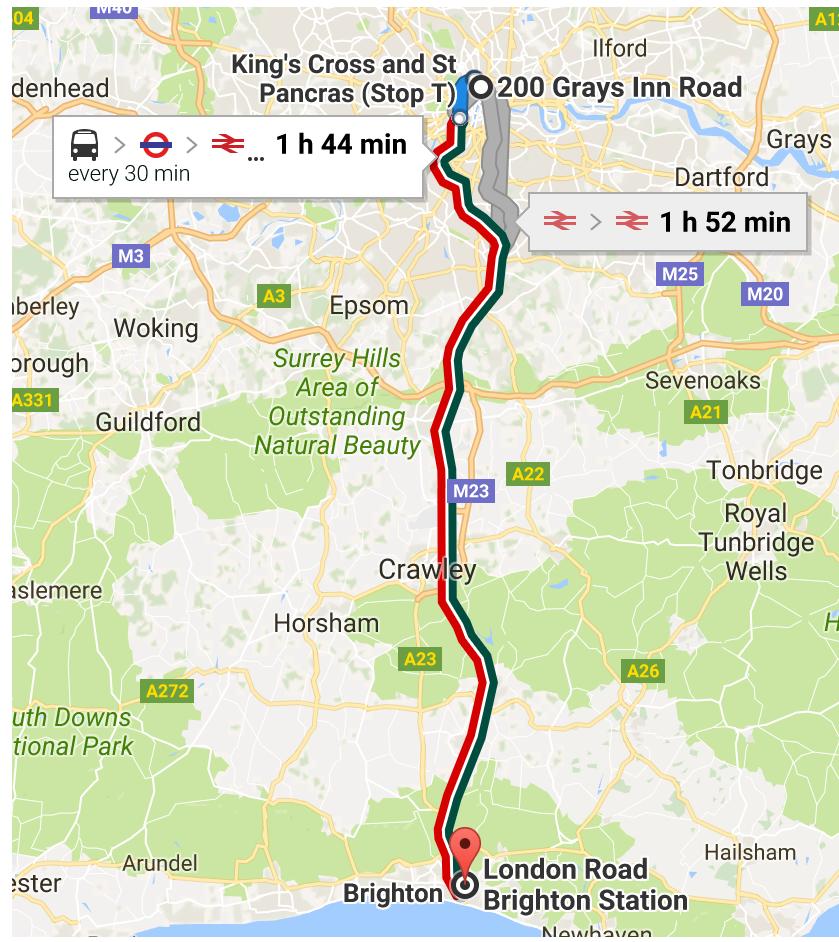
<https://github.com/mcarolan/flatmappy-bird>

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**How did this all start?**





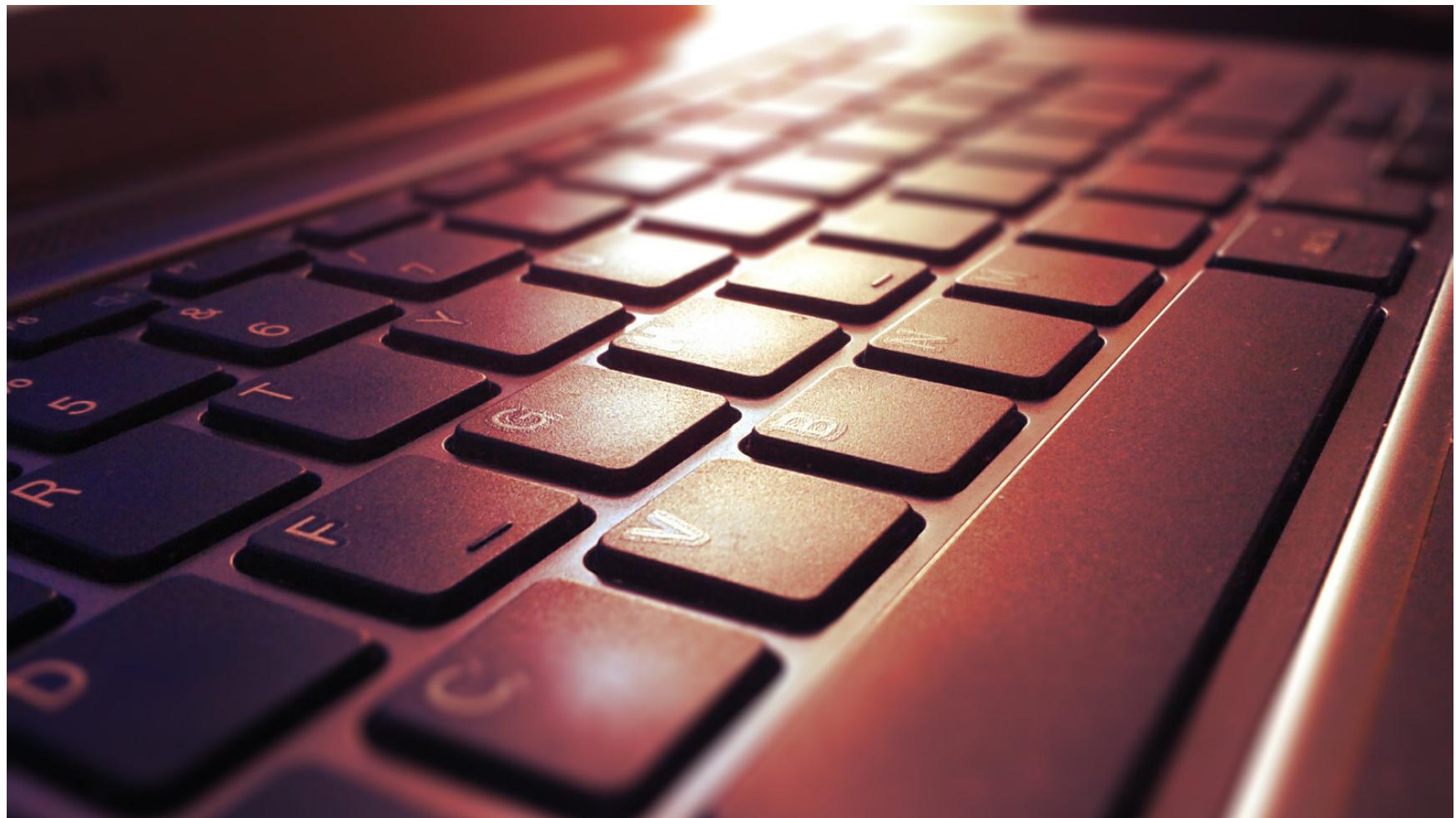
















Hands-on Scala.js

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Hands-on Scala.js

Intro to Scala.js

About Javascript

About Scala.js

Hands On

Getting Started

Making a Canvas App

Interactive Web Pages

The Command Line

Cross Publishing Libraries

Integrating Client-Server

In Depth

Advanced Techniques

# Hands-on Scala.js

Writing client-side web applications in Scala

`var x = 0.0`

`type Graph = (String, Double => Double)`

`val graphs = Seq[Graph](`

`("red", sin),`

`("green", x => abs(x % 4 - 2) - 1),`

`("blue", x => sin(x/12) * sin(x))`

`).zipWithIndex`

`dom.setInterval(() => {`

`x = (x + 1) % w; if (x == 0) clear()`

`for (((color, f), i) <- graphs) {`

`val offset = h / 3 * (i + 0.5)`

`val y = f(x / w * 75) * h / 30`

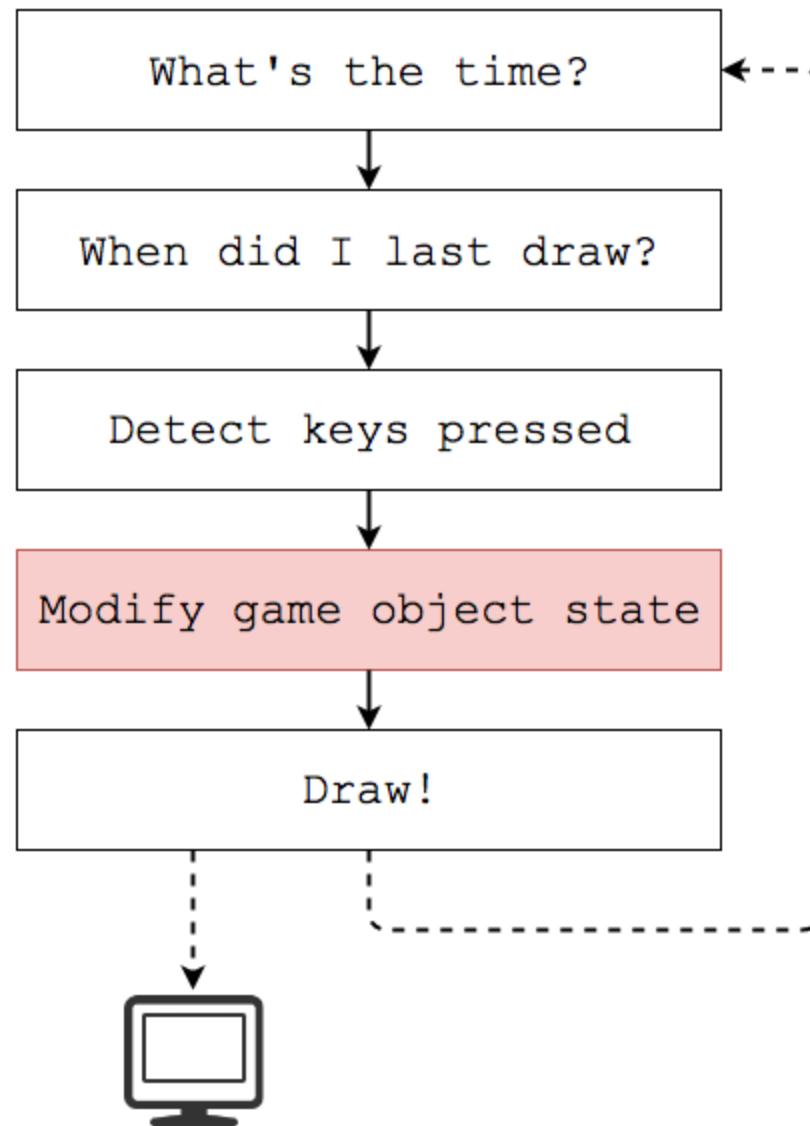
`brush.fillStyle = color`

`brush.fillRect(x, y + offset, 3, 3)`

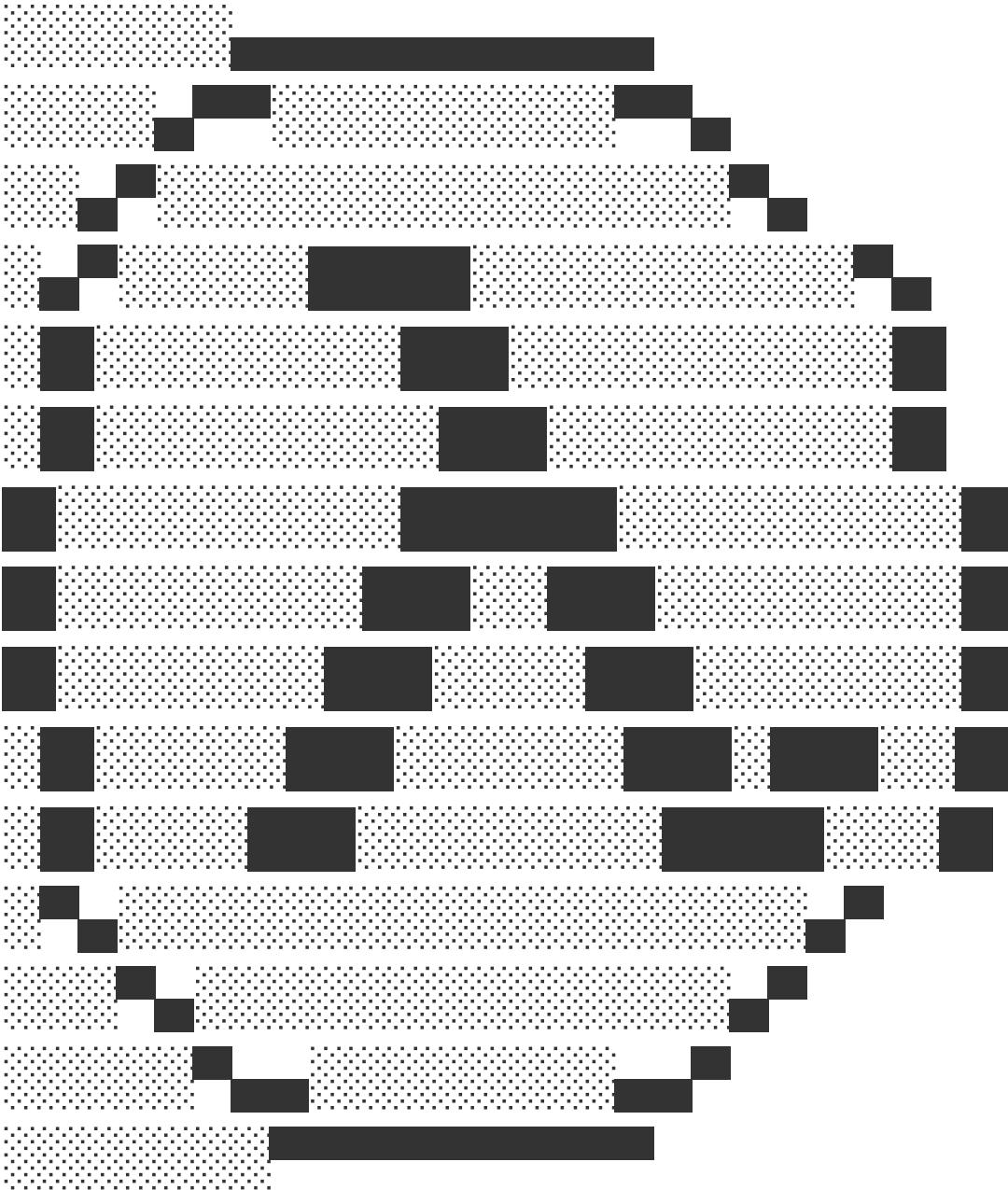
`}`

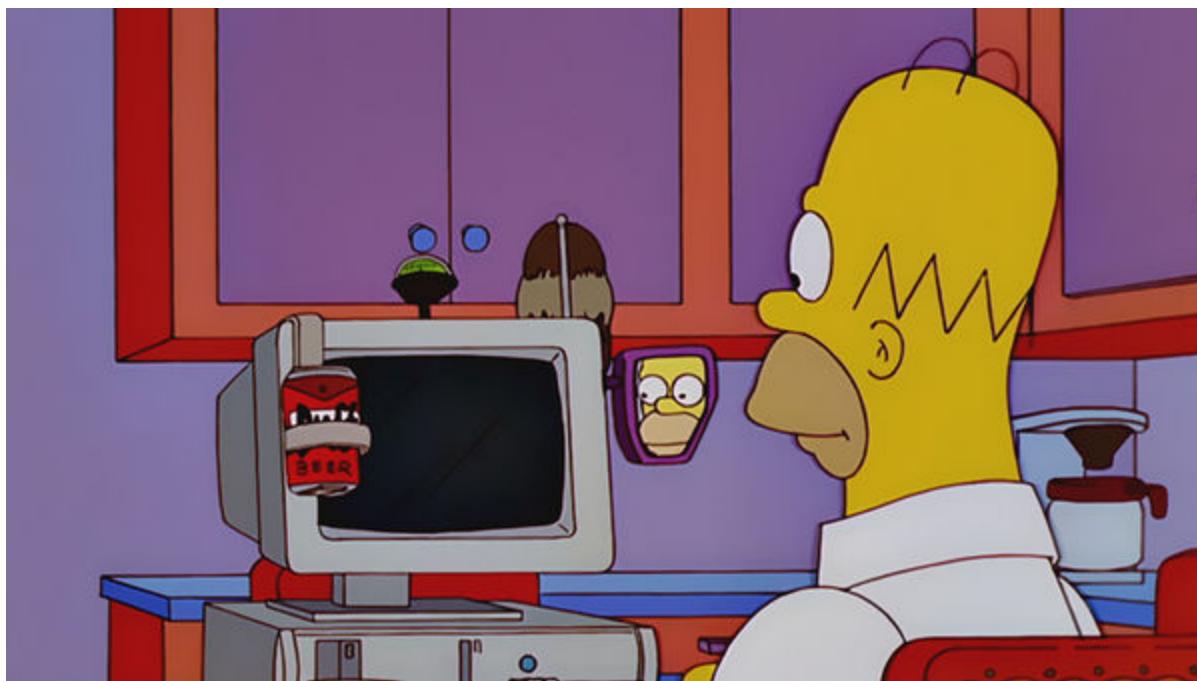


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blastrock Fixed typos ca581f2 on 1 Oct 2013

2 contributors

429 lines (301 sloc) 18.2 KB Raw Blame History

# Purely Functional, Declarative Game Logic Using Reactive Programming

In the [previous article](#) I introduced the `Coroutine` data type. In this second part I will show how coroutines can be used to implement a fixed time-step reactive programming library and use that library for modeling a simple game. The code examples will require a [basic proficiency](#) in reading Haskell code.

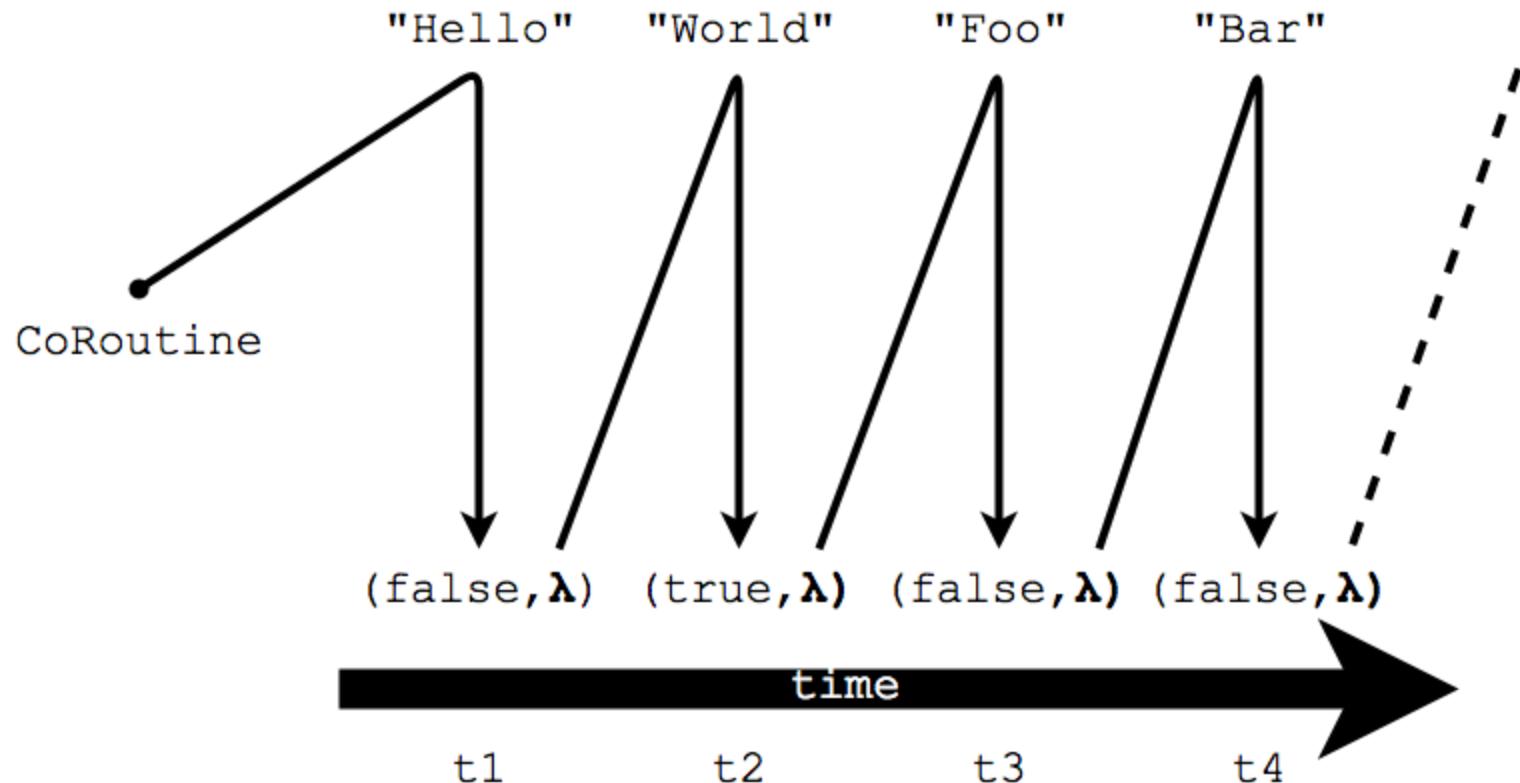
<https://github.com/leonidas/codeblog/blob/master/2012/2012-01-08-streams-coroutines.md>

<https://github.com/leonidas/codeblog/blob/master/2012/2012-01-17-declarative-game-logic-afrp.md>

# CoRoutine

**Problem:** identify when the provided string is "World" AND the previously provided string is "Hello"

**Problem: identify when the provided string is "World" AND the previously provided string is "Hello"**



```
trait CoRoutine[A, B] {  
    def apply(input: A): (B, CoRoutine[A, B])  
}
```

```
trait CoRoutine[A, B] {
    def apply(input: A): (B, CoRoutine[A, B])
}

object CoRoutine {
    def lift[A, B](f: A => (B, CoRoutine[A, B])): CoRoutine[A, B]
        new CoRoutine[A, B] {
            override def apply(input: A): (B, CoRoutine[A, B]) =
                f(input)
        }
}
```

7 minutes

How does this relate to games programming?

Redraw gameloop as game function

1. Intro
2. Fundamentals of a CoRoutine
3. How does can this be applied to a game?
4. Case study: flatMappy bird player
5. When would you use this?
6. Why would you use this?
7. Questions

6pypTD-kZSzJ3-fcryvD-ajC5LU-9De9QT-7zizEa-eCgF8-  
kj3Ru-eV1rEG-aEuC9-6dVK9j-6pypBR-jm7aq-5g1duM-  
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69QmoH-8cNM7c-pTTjA

<http://www.deviantart.com/art/Gaming-Icons-179546229>

<https://www.flickr.com/photos/marianopaulin02/16895155137/in/photolist-rJY61e-dN1SXG-49sN6T-dZa635-tfS3xJ-tfTcFJ-xNNHo6-bvVDie-wR9Mt9-5Z5q7d-o4EsFw-7q9qBF-6dYoeL-4qyEp4-cRGCeL-72tLMF-bFxRCV-5tWxwf-5tWxV3-7x7o1q-d8atD7-5tSaJe-4nWKA7-ese74Y-xAMYw-4myiwF-oqisgw-cRGCh-9BVHmk-7dcFo-8jqLdc-6sHJFL-6yq1bj-g9FyfG-DWtde-7bNZYS-cRGCD1-662Gp4-cRJxT1-7edja8-bw1FpU-kZo7LT-4WrmRD-obNw2V-69W4Z4-7FSUUK-c55zTU-7TawMW-d8auR5-36Tf5s>