A Rubyist's Journey to Go

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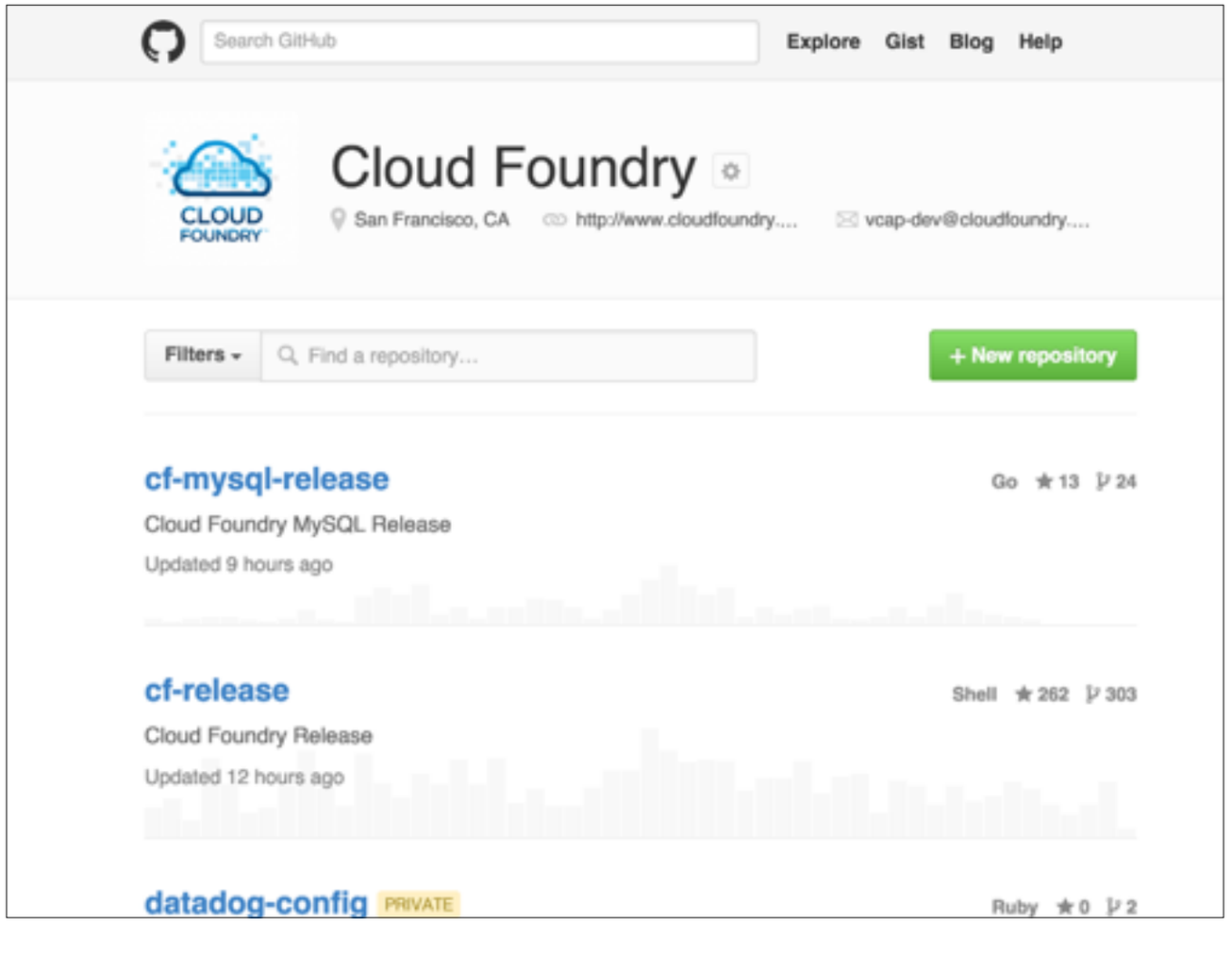
Search GitHub
Explore
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Help
Cloud Foundry
San Francisco, CA
http://www.cloudfoundry....
vcap-dev@cloudfoundry....
Filters
Find a repository...
+ New repository
cf-mysql-release
Go ★13 24
Cloud Foundry MySQL Release
Updated 9 hours ago
cf-release
Shell ★262 303
Cloud Foundry Release
Updated 12 hours ago
datadog-config
PRIVATE
Ruby ★0 2

My journey…

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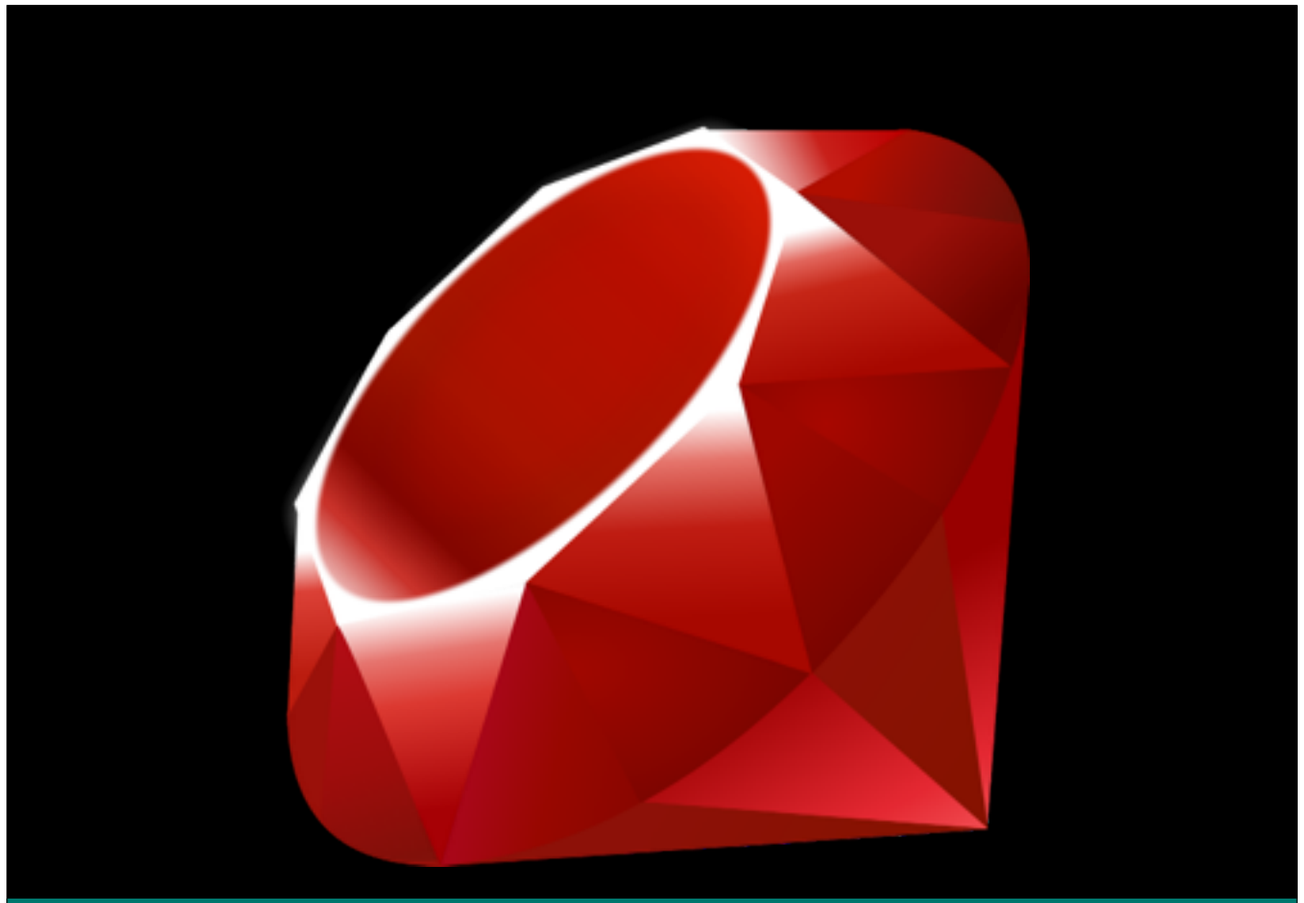

Wrote and have even taught others to program ruby.

The list goes on…

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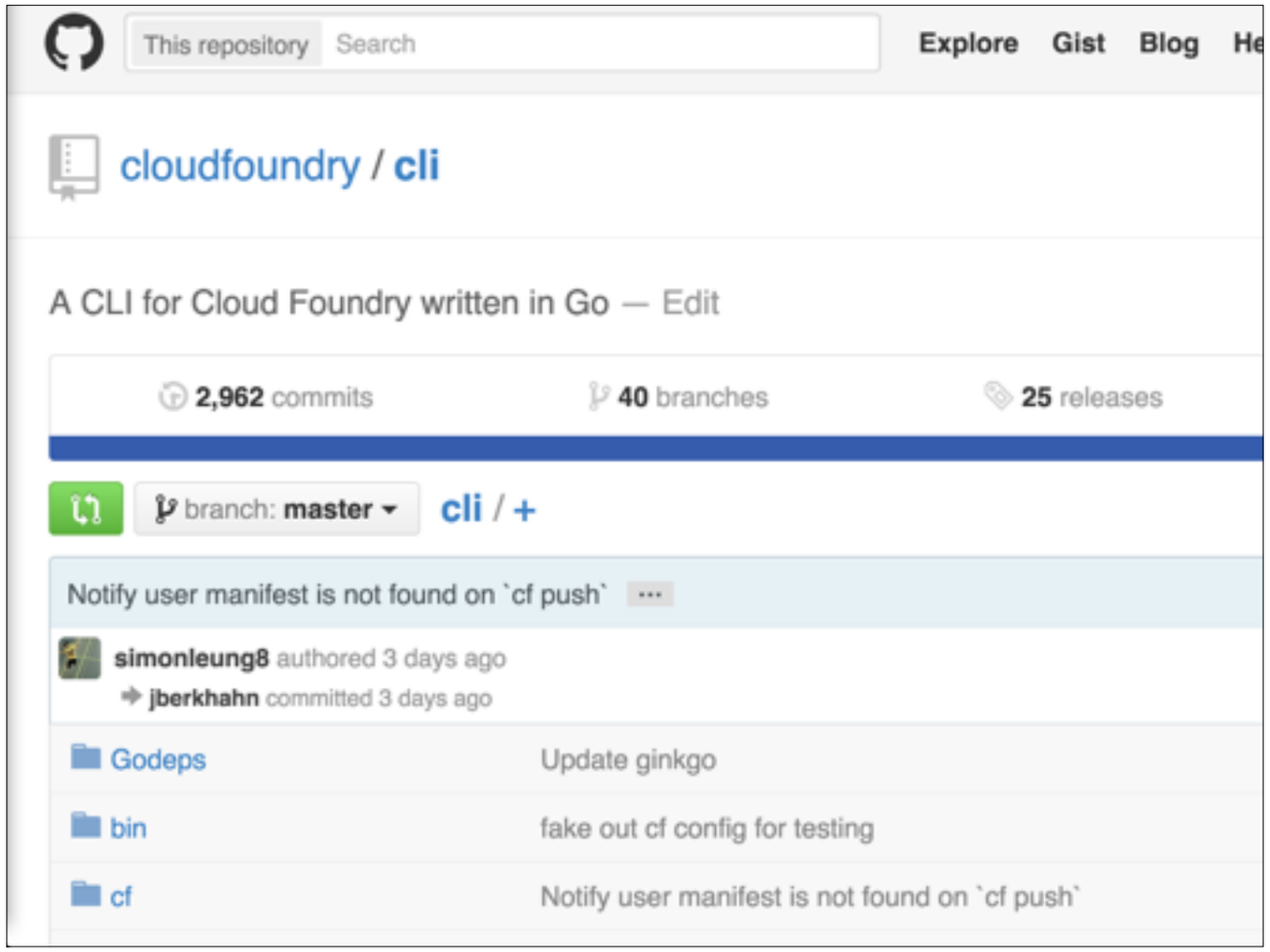
of languages I've used in production.

Playing with Haskell now in my spare time.

Many of you probably have learned many new languages, both computer and spoken.

How did I get into Go?


This repository
Search
Explore
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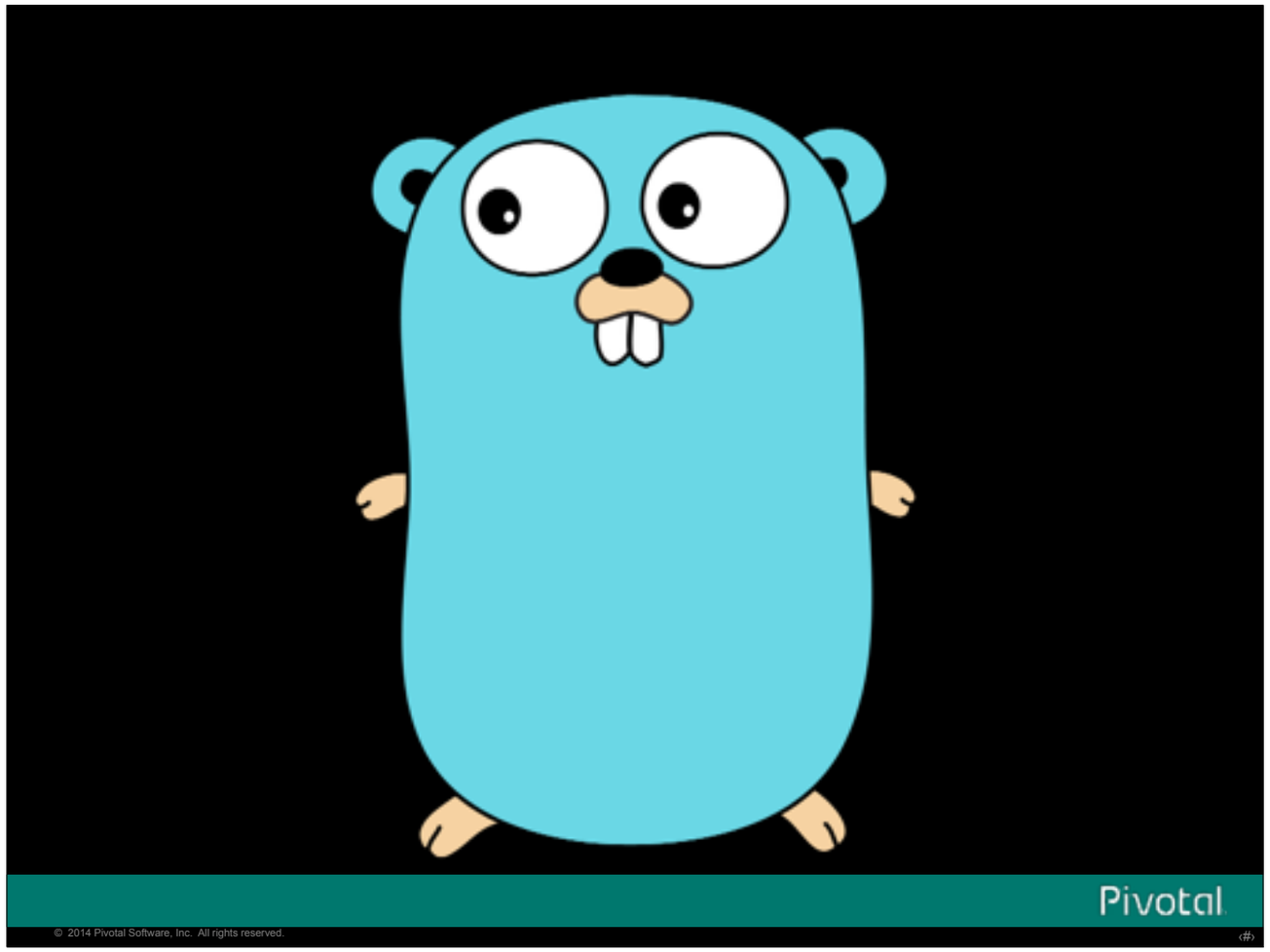
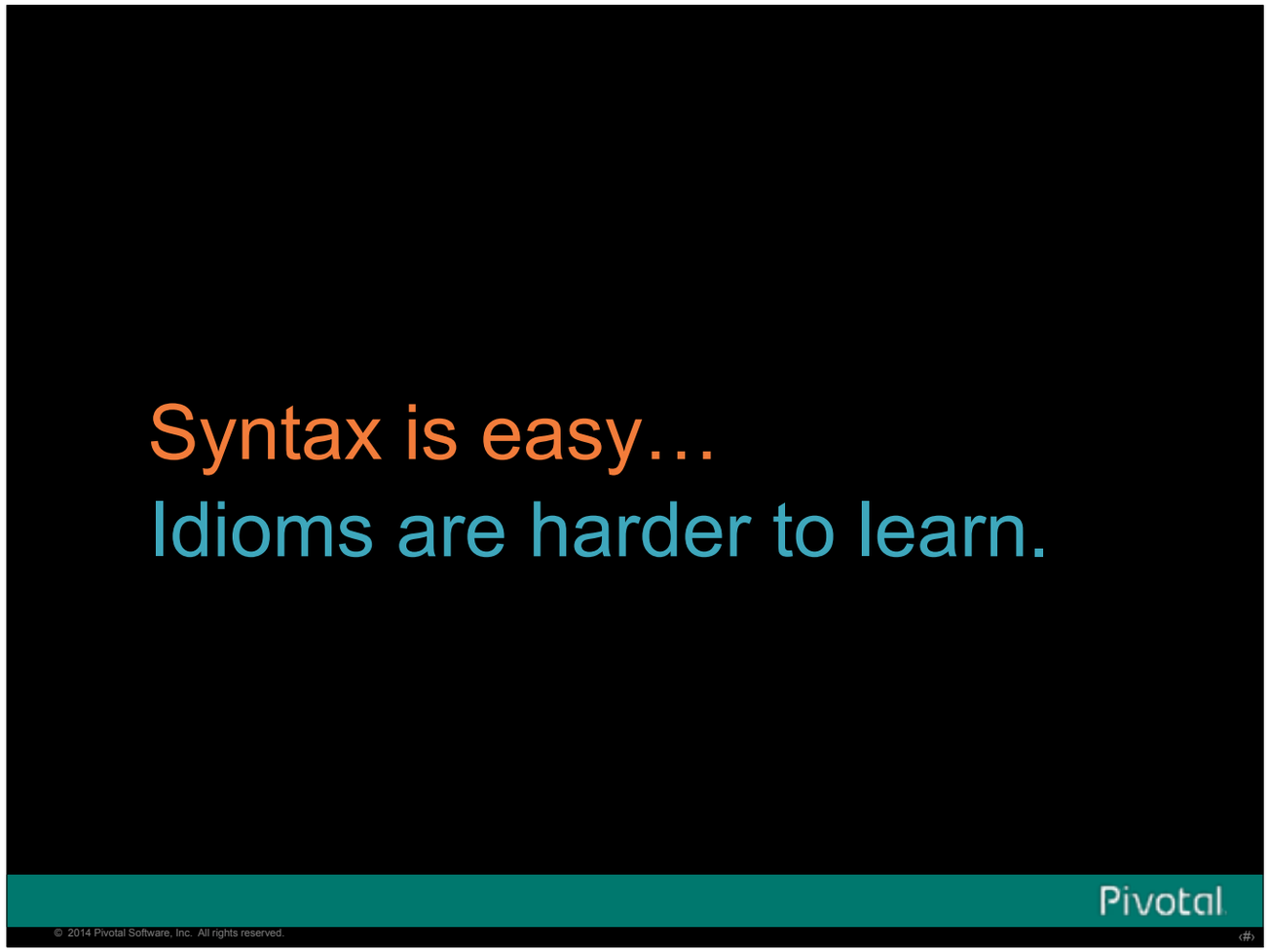
cloudfoundry / cli
A CLI for Cloud Foundry written in Go — Edit
2,962 commits
40 branches
25 releases
branch: master
cli / +
Notify user manifest is not found on `cf push`
simonleung8 authored 3 days ago
jberkhahn committed 3 days ago
Godeps
Update ginkgo
bin
fake out cf config for testing
cf
Notify user manifest is not found on `cf push`



I've never learned C and my C++ hasn't been used since 1998.

This was something newish for me.



It take me a very short time to learn the syntax of a new language.

How many people have seen Ruby written like Java?

Here come some tips on what I think it important when learning Go.

Learn the vocabulary

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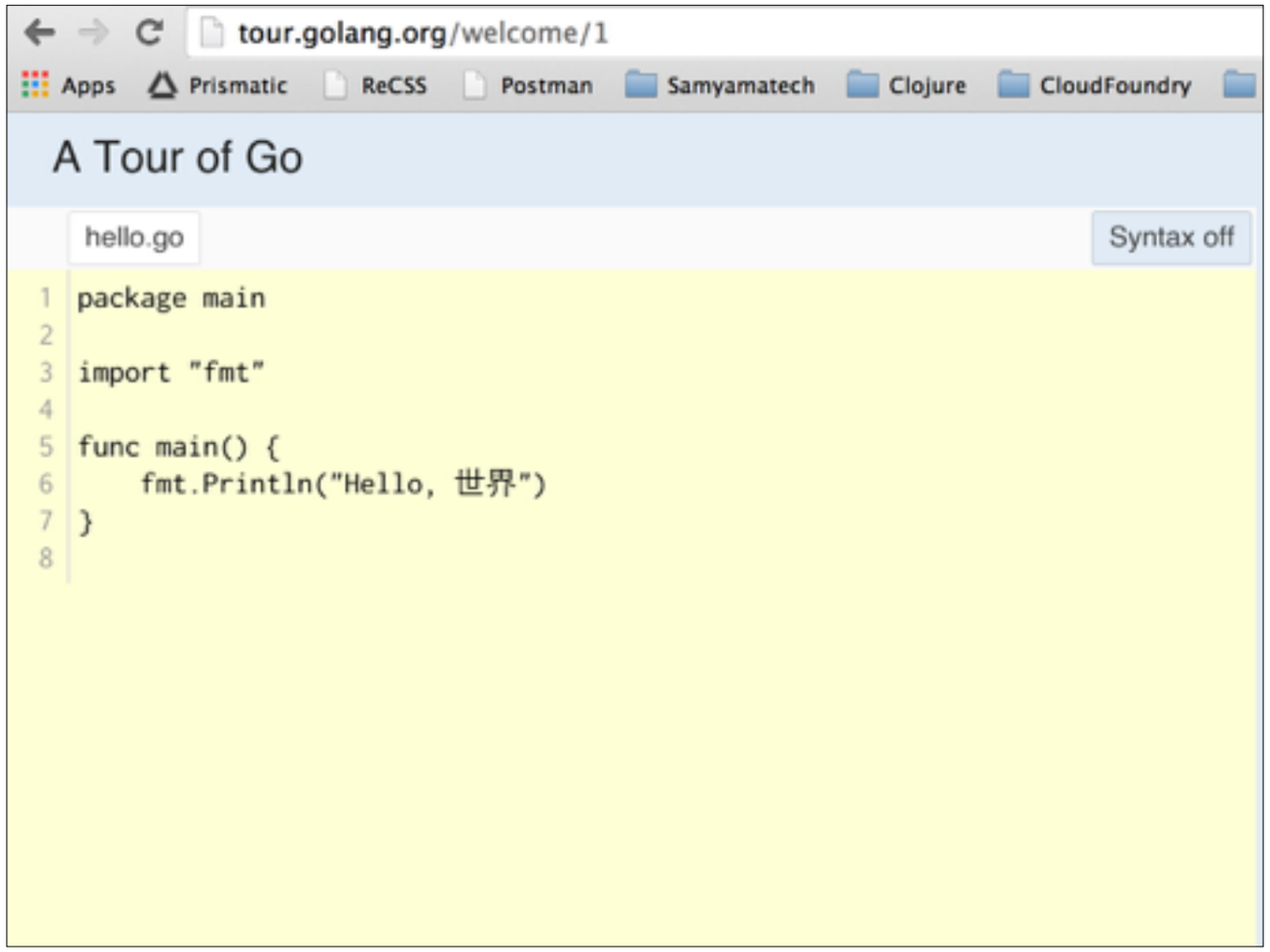
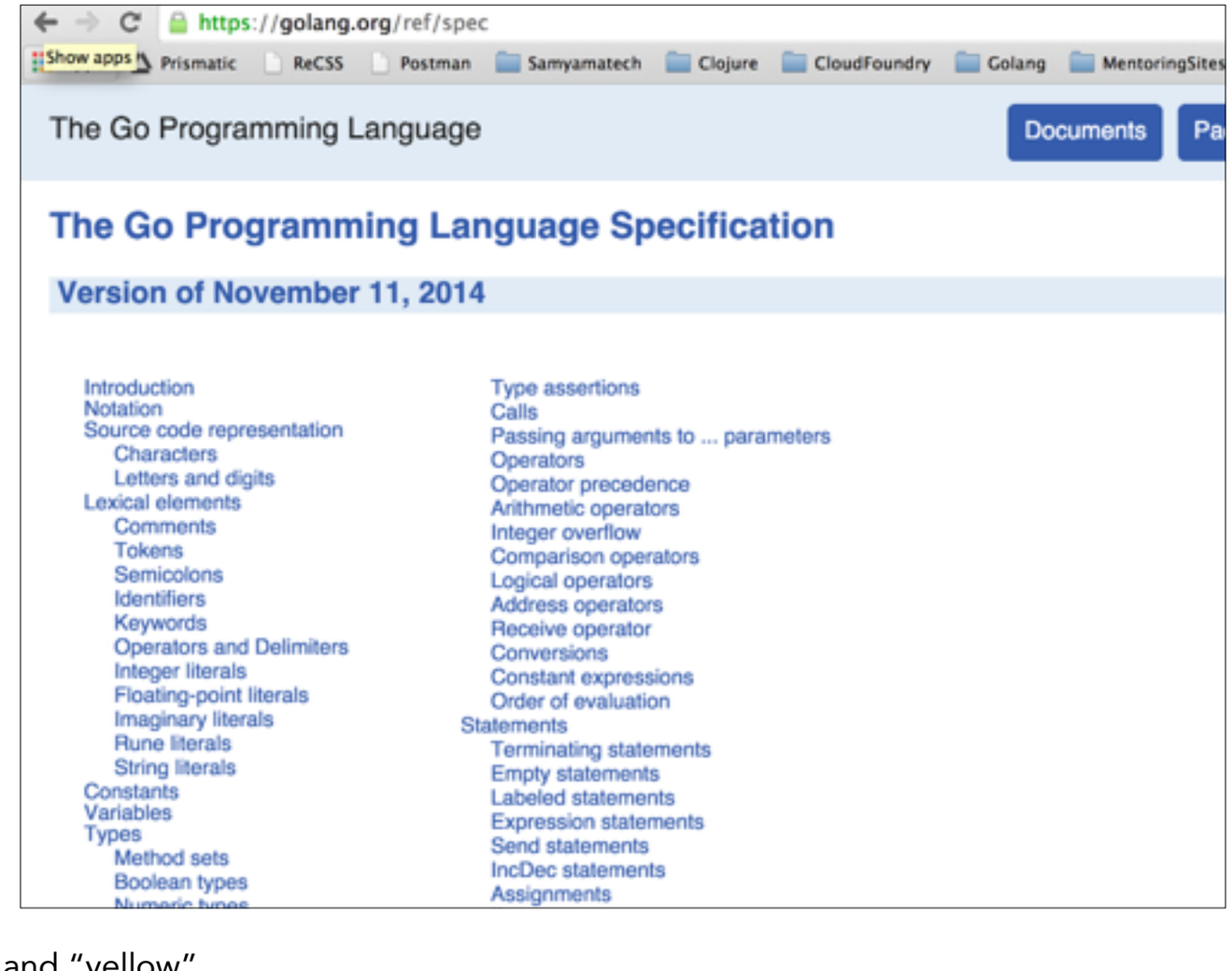
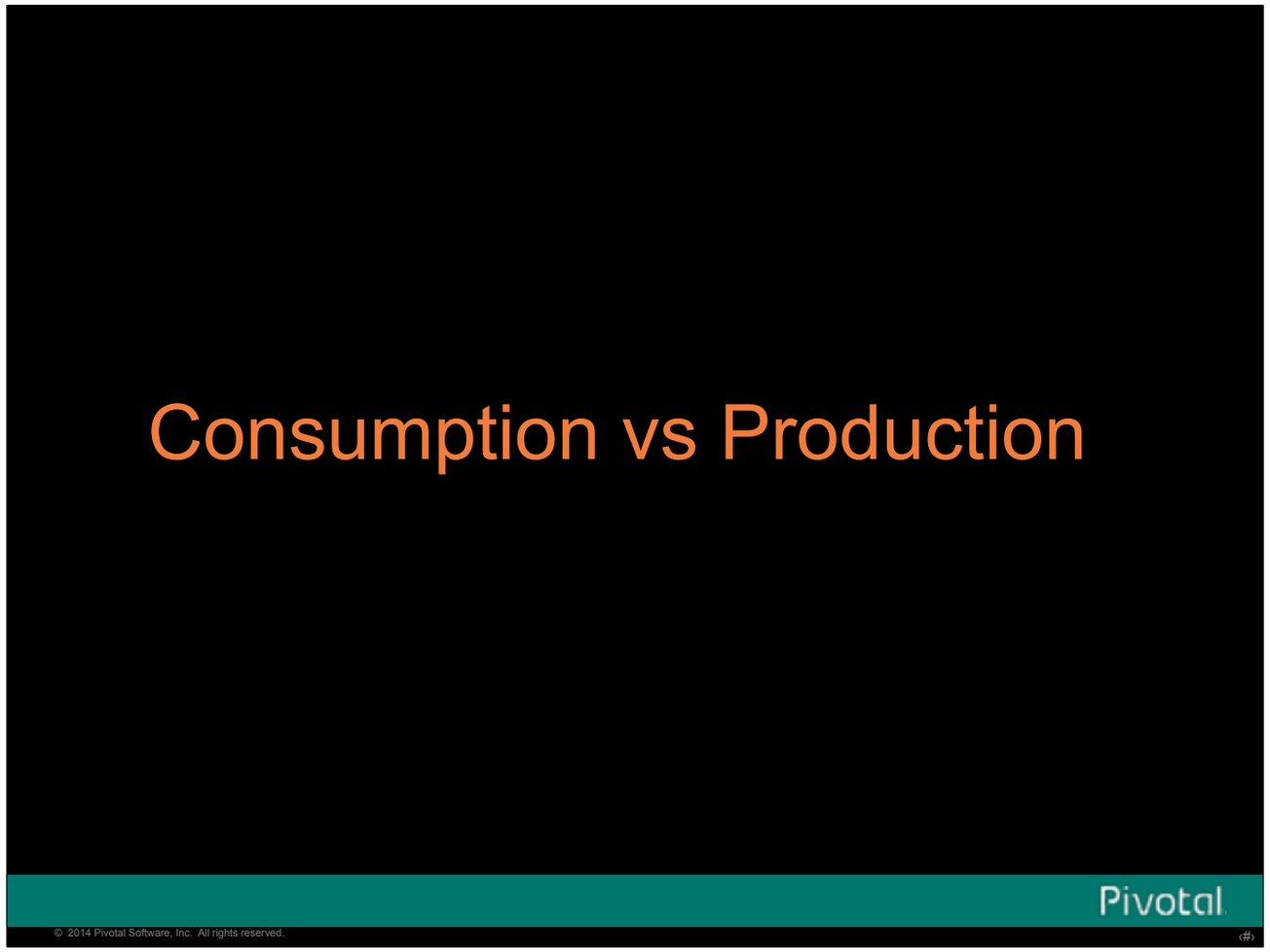
aka syntax


tour.golang.org/welcome/1
Apps
Prismatic
ReCSS
Postman
Samyamatech
Clojure
CloudFoundry
A Tour of Go
hello.go
Syntax off
1 package main
2
3 import "fmt"
4
5 func main() {
6 fmt.Println("Hello, 世界")
7 }
8



Now you know how to say “house” and “yellow”.



This allows you to consume other people’s work.

I can read Spanish much easier than I can speak Spanish.

Idiom

special feature

special phrasing

a peculiarity

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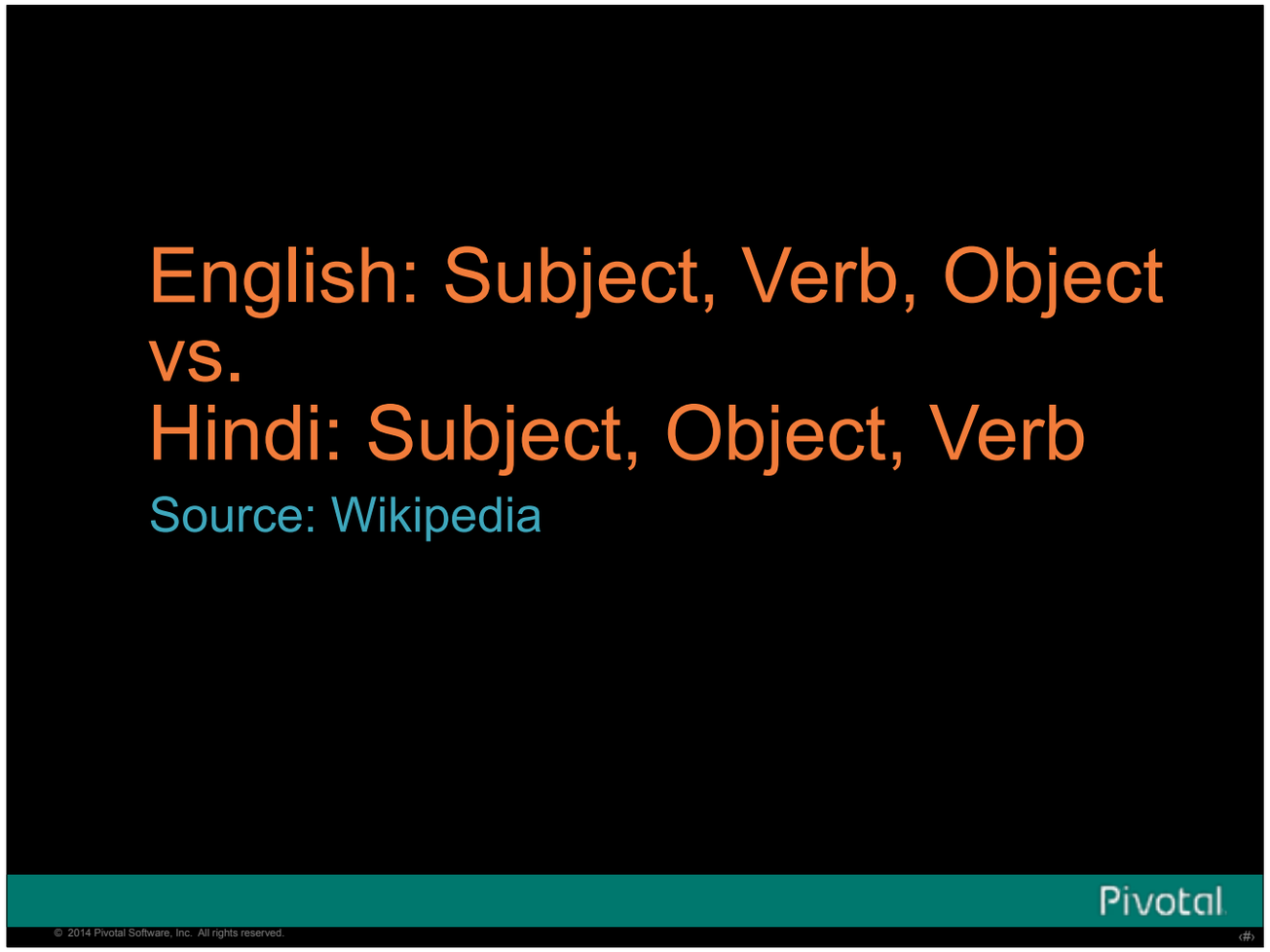
Idioms are present in our spoken languages as well as our programming languages.



Here is an example.

English - SVO - I love her.

Hindi - SOV - I her love.

Hypothesis:
Writing idiomatic code makes using the language easier.

It also allows others to more easily understand your code.

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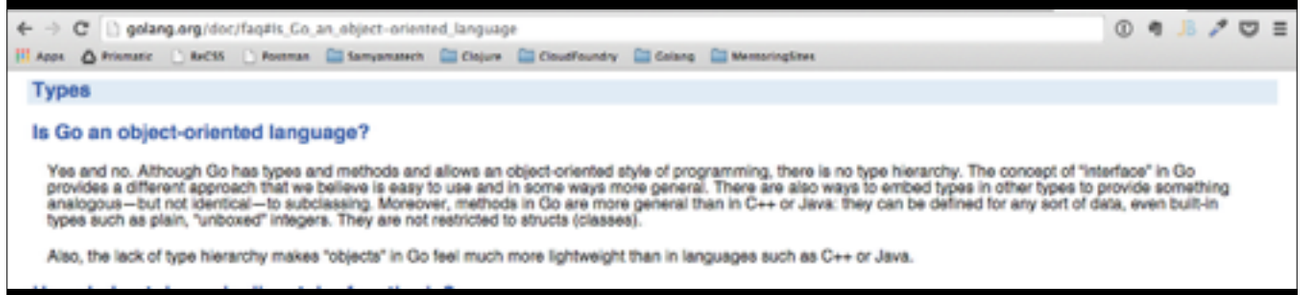
Like learning functional programming if you are coming from an OO language.

If you are coming from Ruby (OO), Go is a different way of thinking.

I learned this one the hard way in my first Go project.



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Go object orientation is different that Ruby's.

http://nathany.com/good/

Thanks Nathan Youngman (@nathany)

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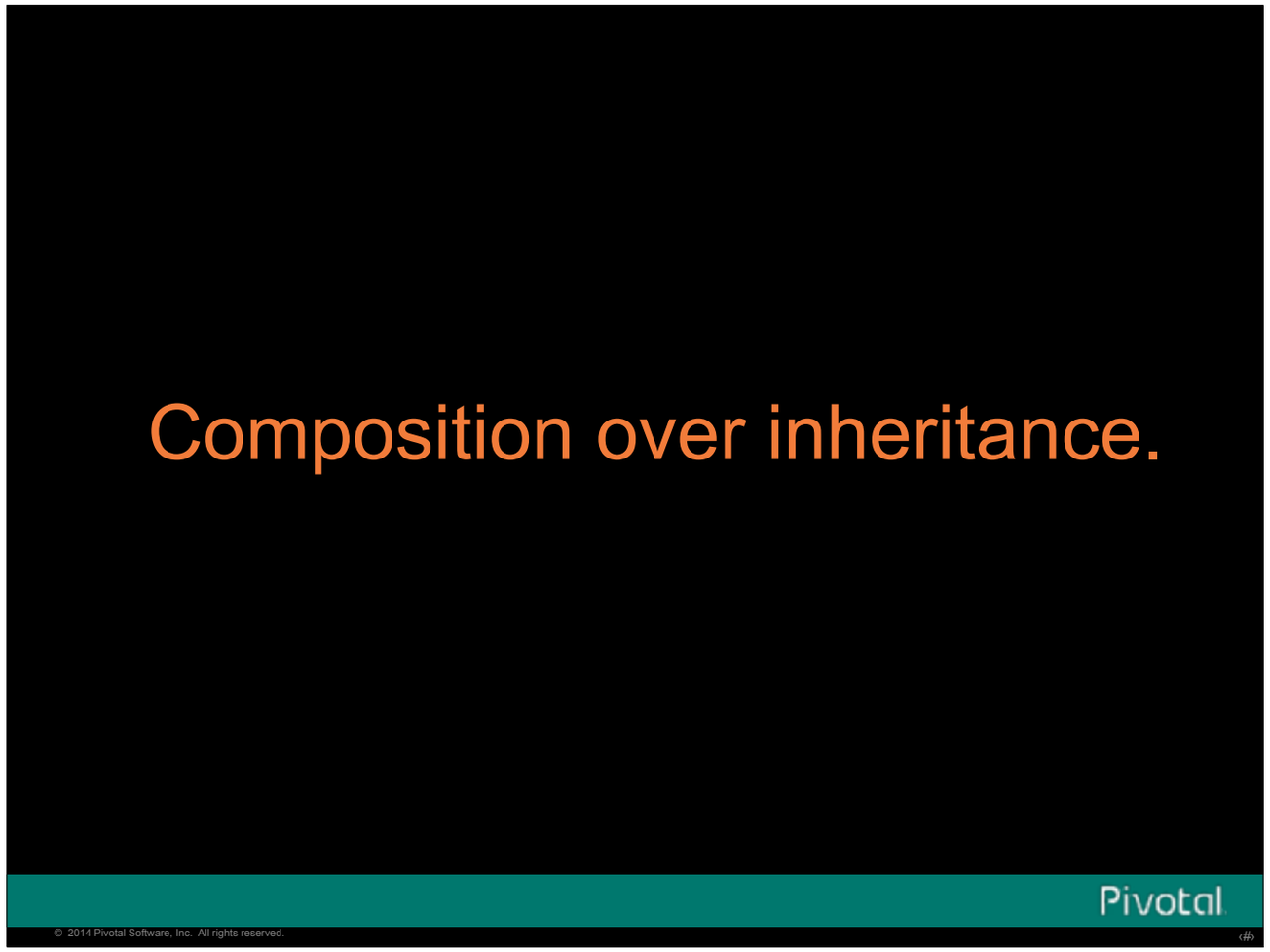

Small boxes

This one took me a while to really understand and utilize.

type Reader

```
type Reader interface {
        Read(p []byte) (n int, err error)
}
```

type Closer

```
type Closer interface {
        Close() error
}
```

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type ReadCloser

```
type ReadCloser interface {
        Reader
        Closer
}
```

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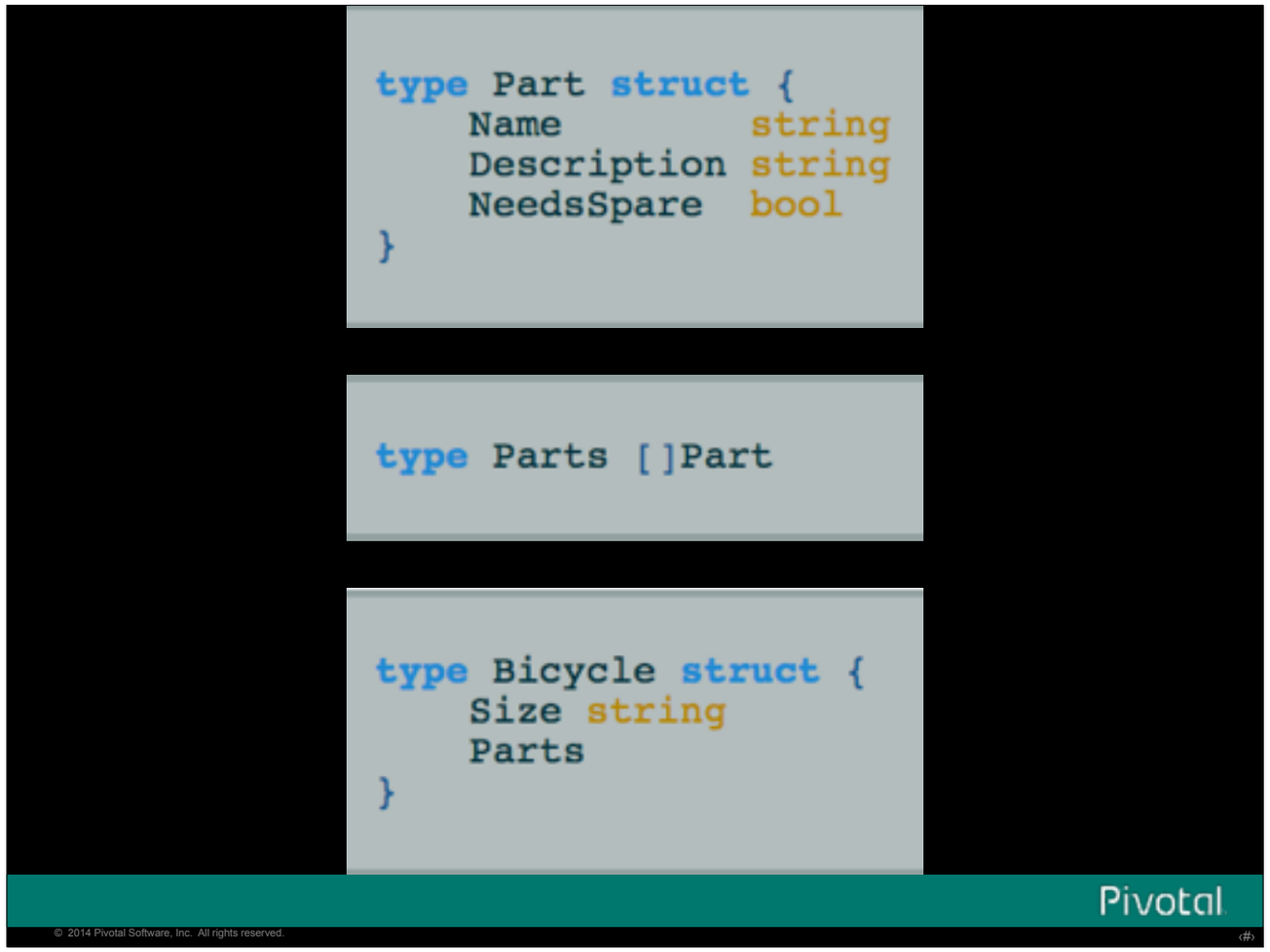

One way to materialize this is via struct embedding.

Experiment:
Use “objects” sparingly

Favor functions that act on structs.

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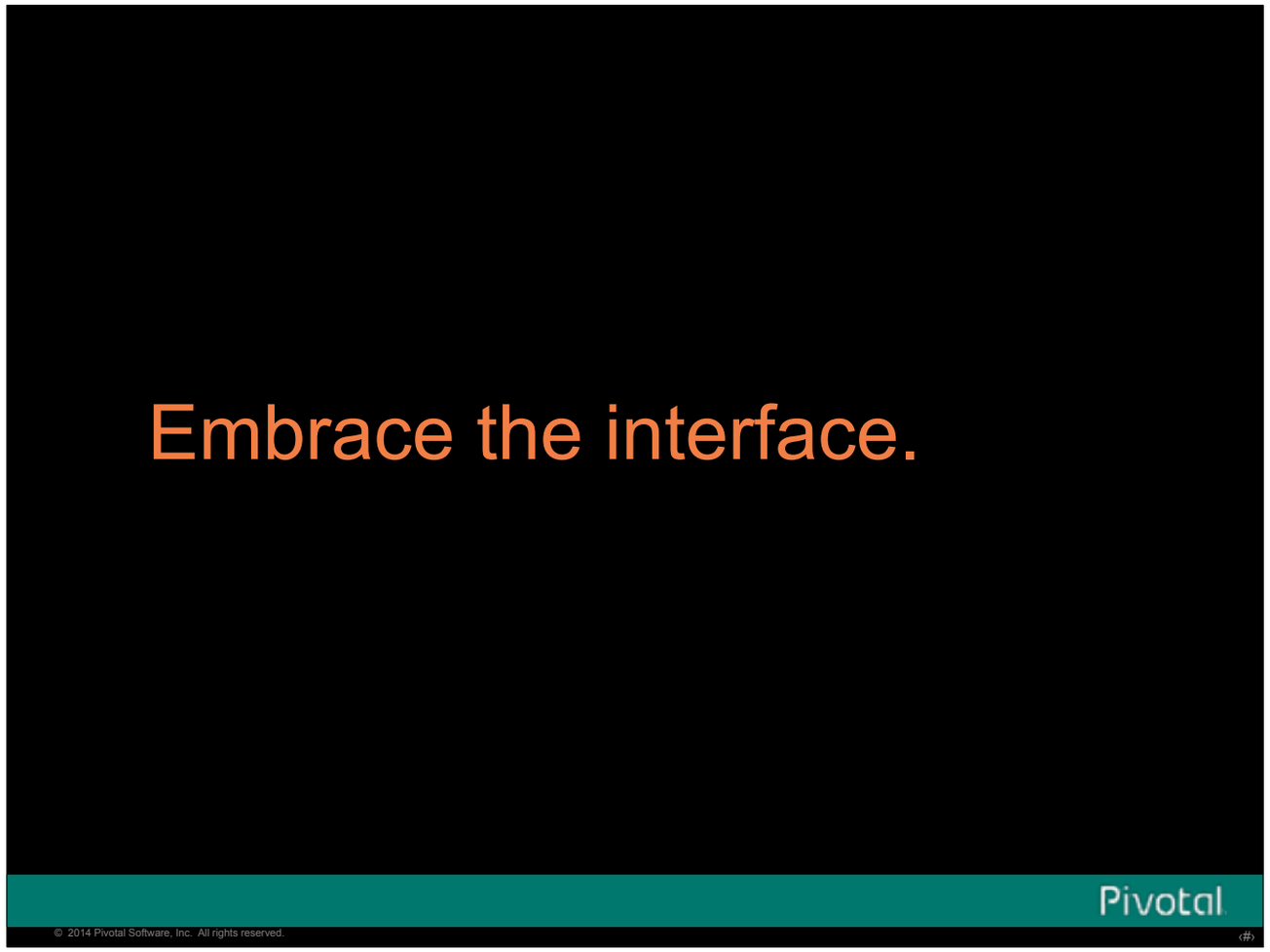
You can write OO Go but it will not serve you well. We found out the hard way.

This is a cool experiment to try.

Start with functions that act on data and then figure out if you need to attach those functions to structs.



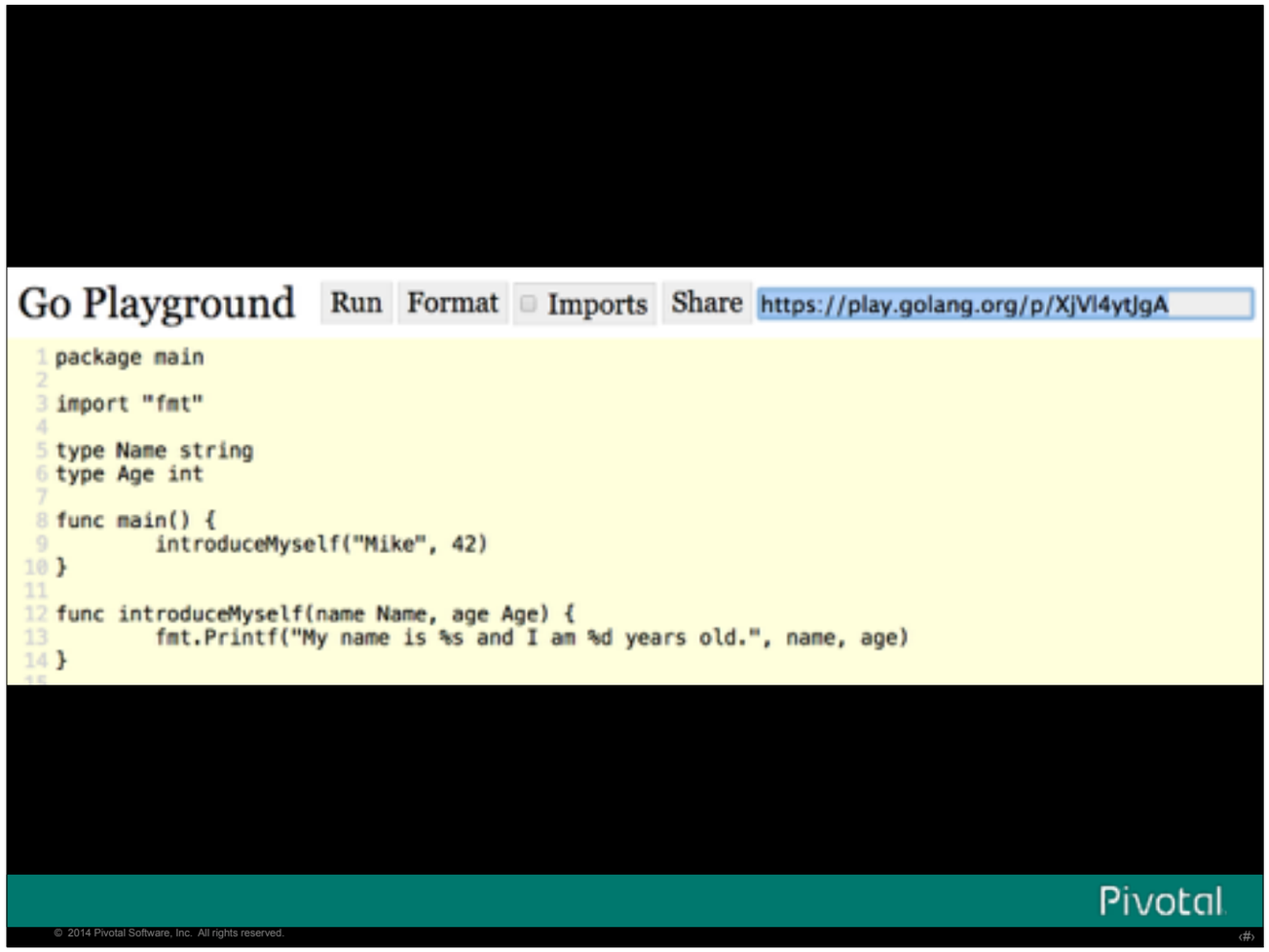
Ruby doesn’t give us the opportunity to practice this.

This is one of the powerful things about Go’s type system.

And the hardest for a Rubyist to get sometimes.

Define your own types

This one



Extra documentation for your code.

Study Go concurrency patterns

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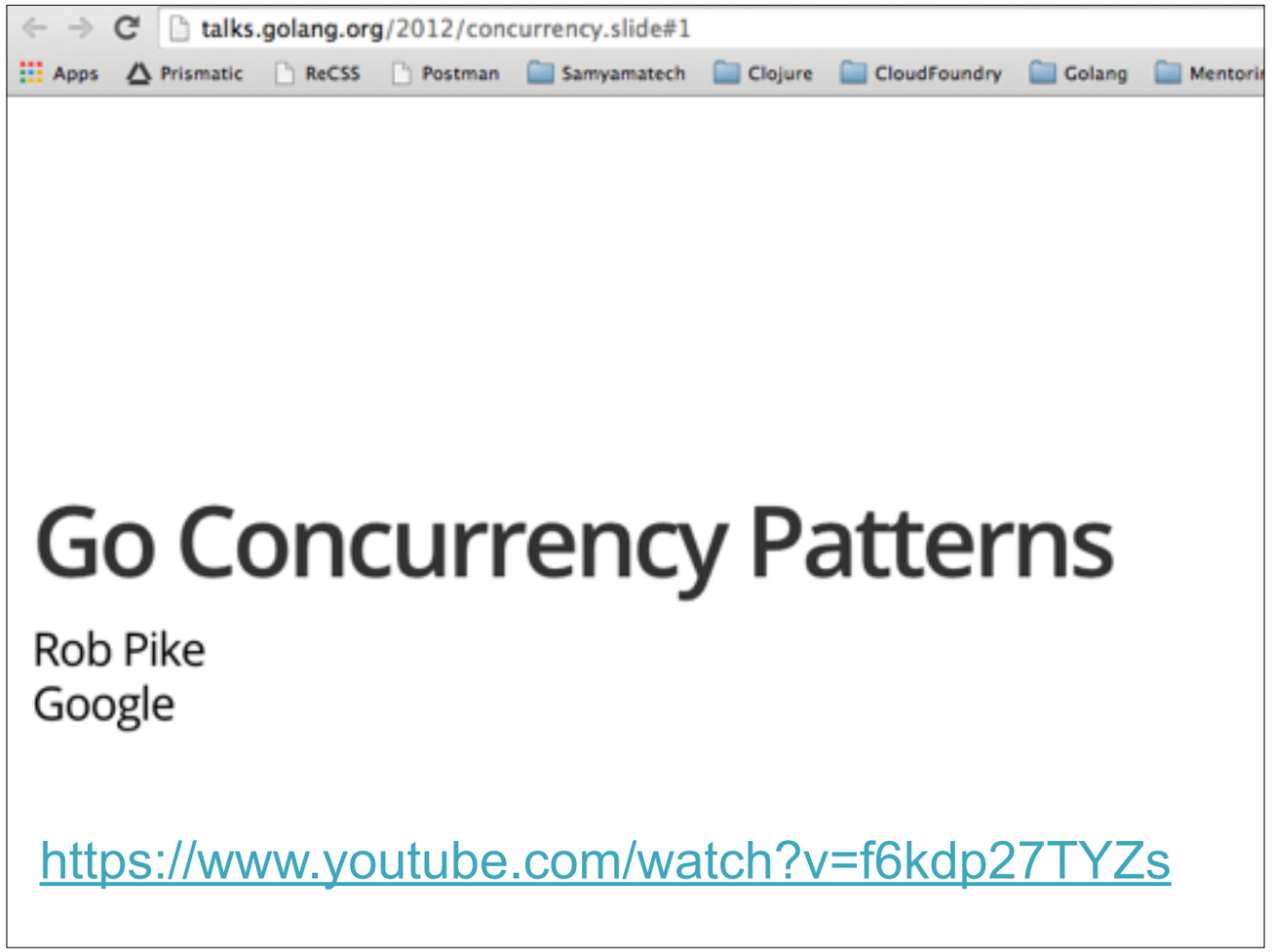
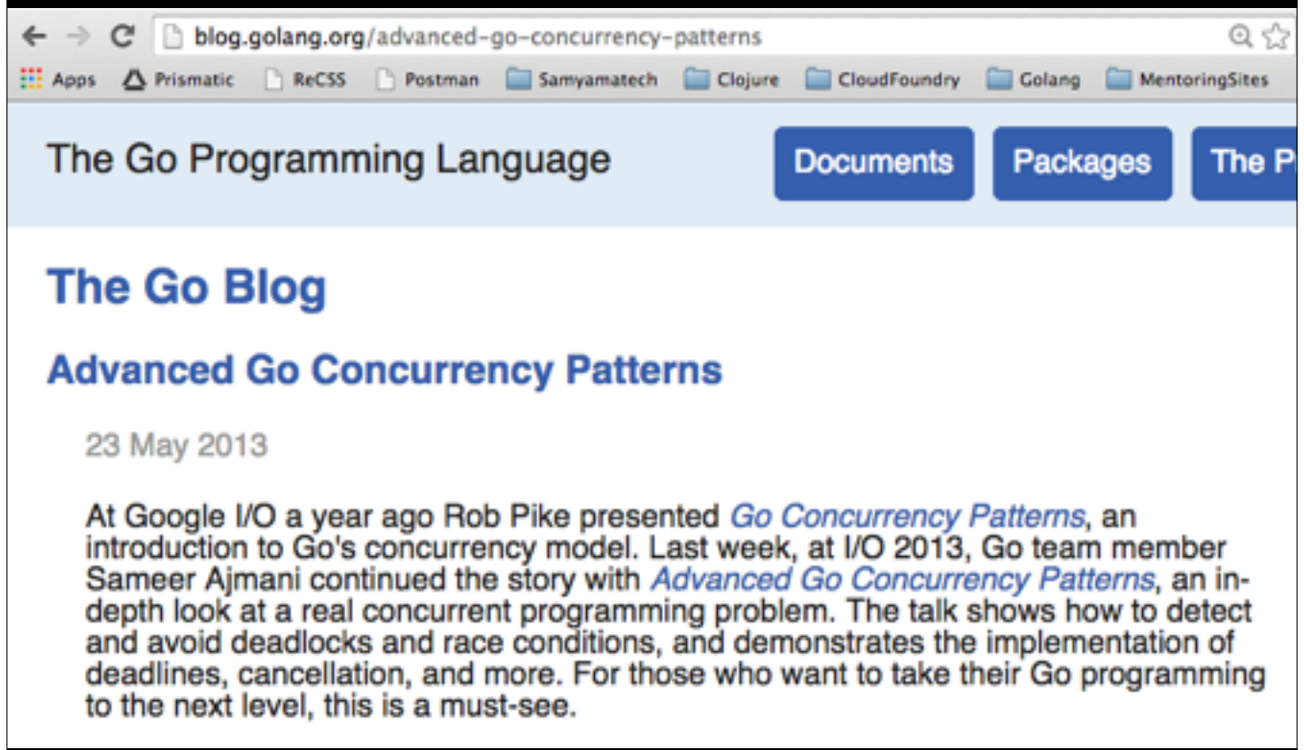
This is not your languages concurrency model.

This can be a huge benefit or a huge detriment.

With great power comes great responsibility.

Another one that can be tricky to get the first time.


talks.golang.org/2012/concurrency.slide#1
Apps
Prismatic
ReCSS
Postman
Samyamatech
Clojure
CloudFoundry
Golang
Go Concurrency Patterns
Rob Pike
Google
https://www.youtube.com/watch?v=f6kdp27TYZs


blog.golang.org/advanced-go-concurrency-patterns
Apps
Prismatic
ReCSS
Postman
Samyamatech
Clojure
CloudFoundry
Golang
MentoringSites
The Go Programming Language
Documents
Packages
The P
The Go Blog
Advanced Go Concurrency Patterns
23 May 2013
At Google I/O a year ago Rob Pike presented Go Concurrency Patterns, an introduction to Go's concurrency model. Last week, at I/O 2013, Go team member Sameer Ajmani continued the story with Advanced Go Concurrency Patterns, an in-depth look at a real concurrent programming problem. The talk shows how to detect and avoid deadlocks and race conditions, and demonstrates the implementation of deadlines, cancellation, and more. For those who want to take their Go programming to the next level, this is a must-see.
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Have fun and makes lots of mistakes!

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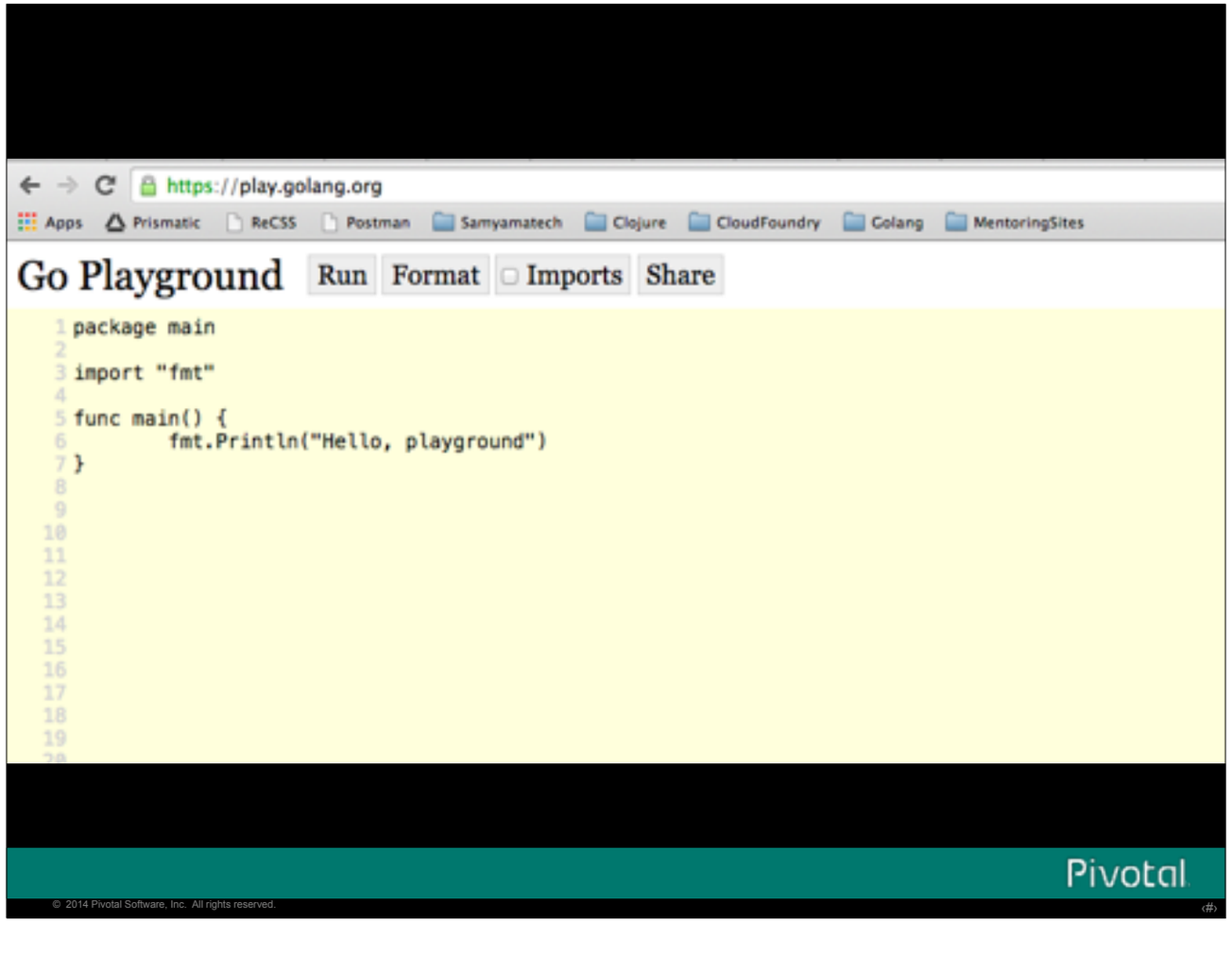
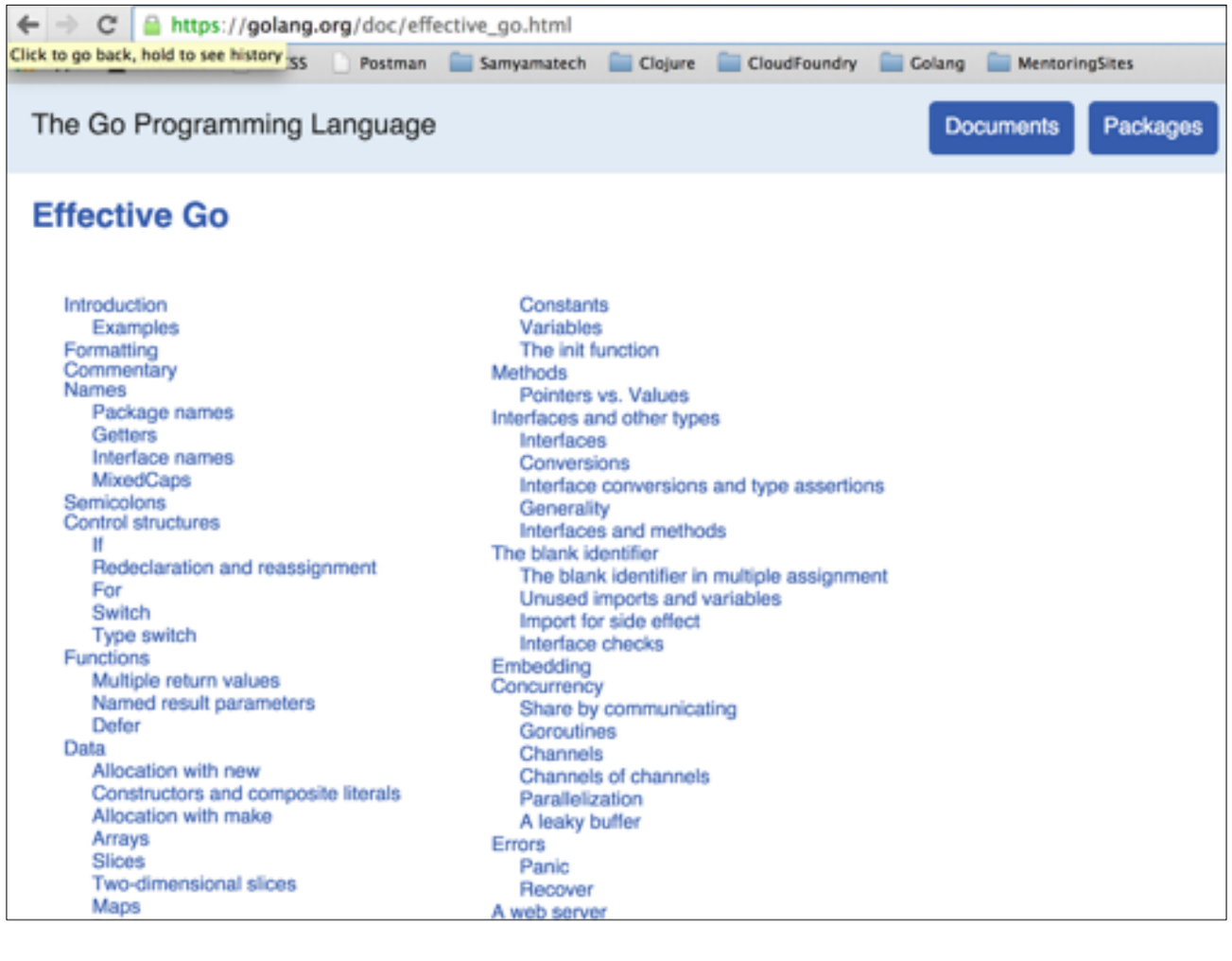
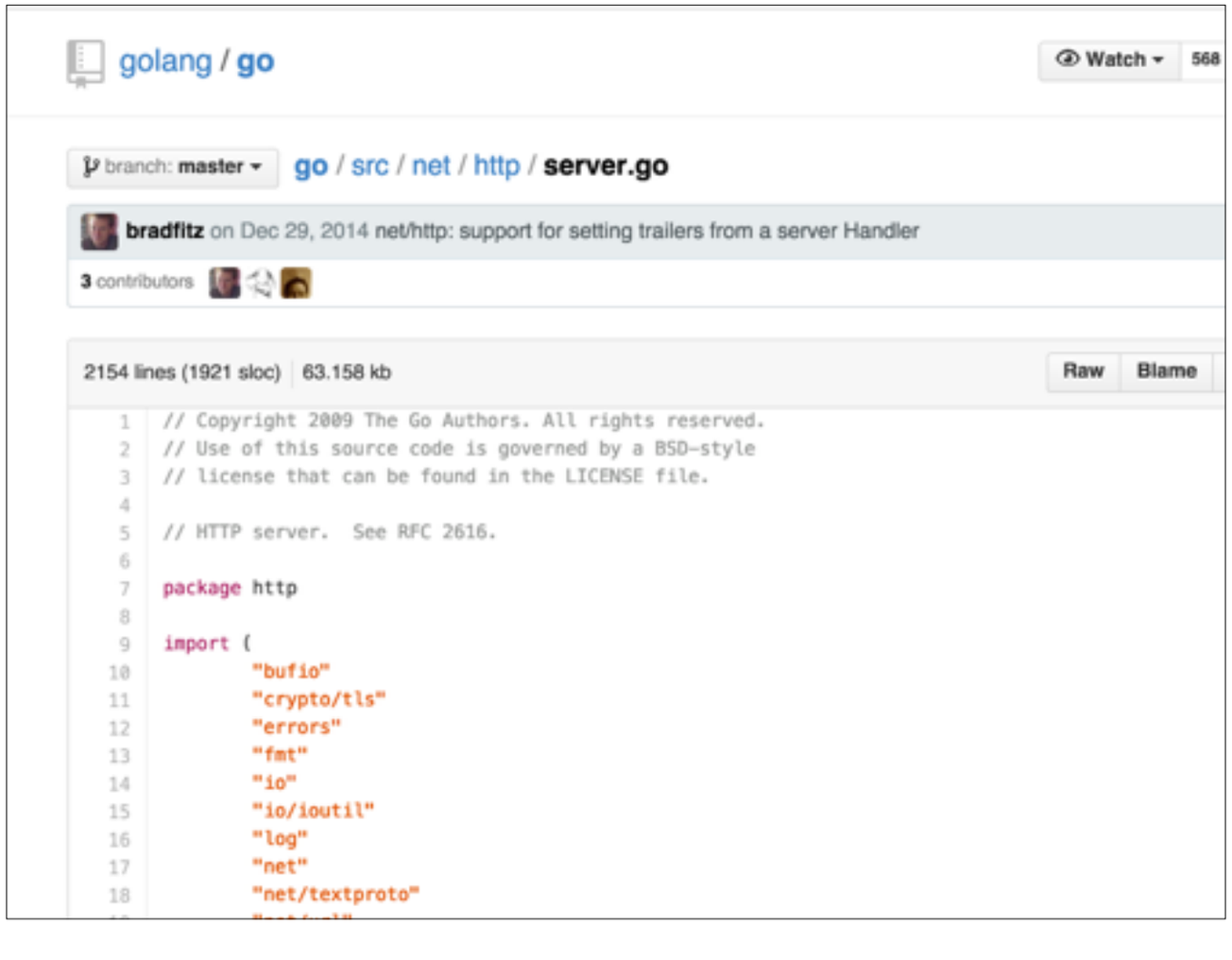




Effective Go was a great way for me to learn what Go idioms were.



Read the source. This will help you get into the minds of the authors.

https://talks.golang.org/2013/bestpractices.slide#1

Prismatic ReCSS Postman Samyamatech Clojure CloudFoundry Golang MentoringSites

Twelve Go Best Practices

Francesc Campoy Flores
Gopher at Google

Learning Go

- Learn the vocabulary
- Forget old idioms
- Go's object orientation is different than Ruby's
- Composition over inheritance
- Try using functions/structs instead of "objects"
- Create your own types
- Embrace the interface
- Study Go's concurrency model
- Have fun and make lots of mistakes!

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Many others…

just Google it.

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Questions from Twitter

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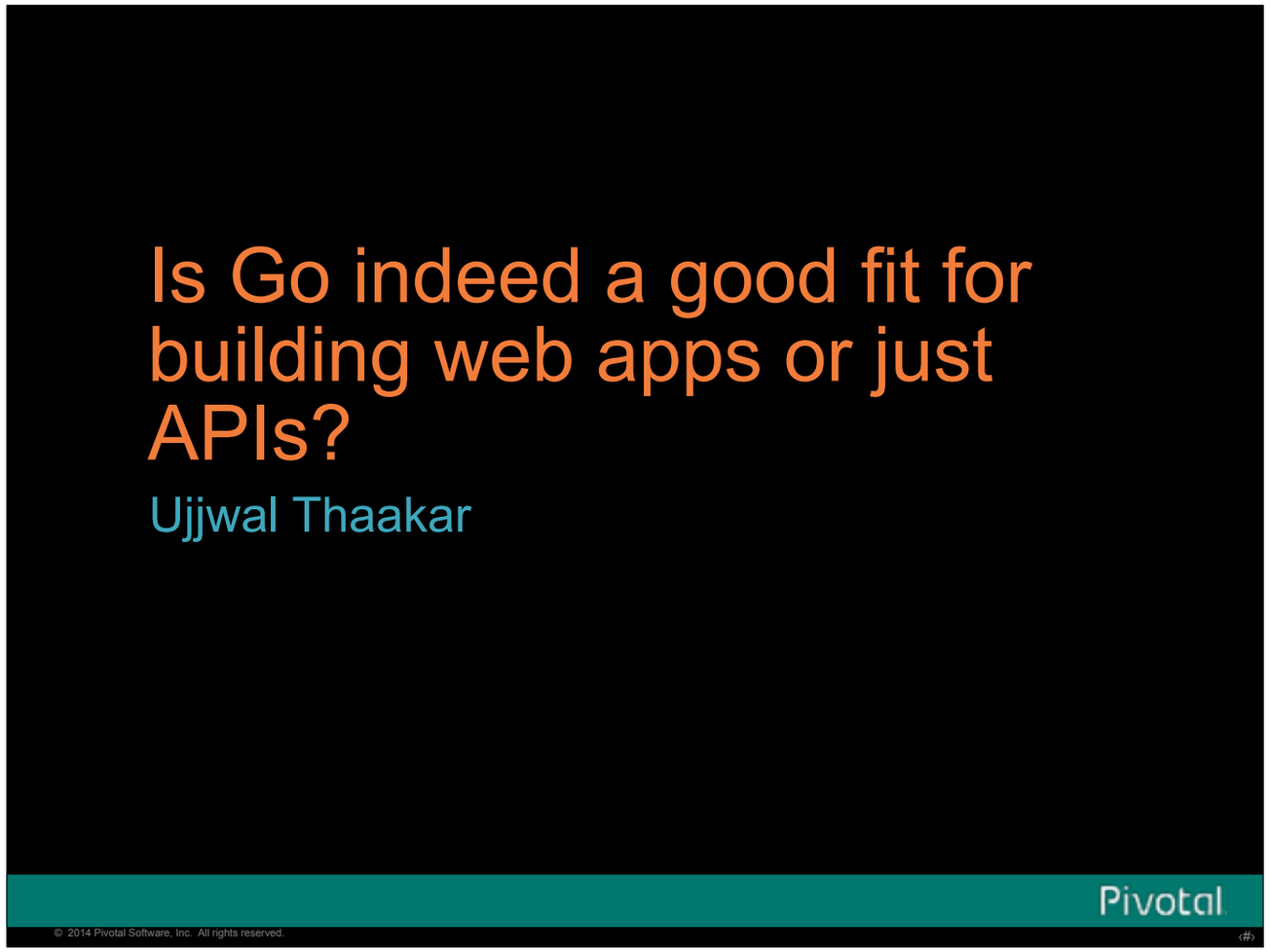

I’m not a fan of writing web sites in Go. Ruby/Rails is better on the server side.

Great for writing API’s consumed by JS client.

Just because you can doesn’t mean you shouldn’t.

Is performance the only factor in a cost benefit analysis?

Ujjwal Thaakar

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Performance of Go is head and shoulders above Ruby/Python.

Depending on who you talk to, not as good as Java.

Lightweight type system is a big plus as well.

Dhan'yavāda

Other questions?

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