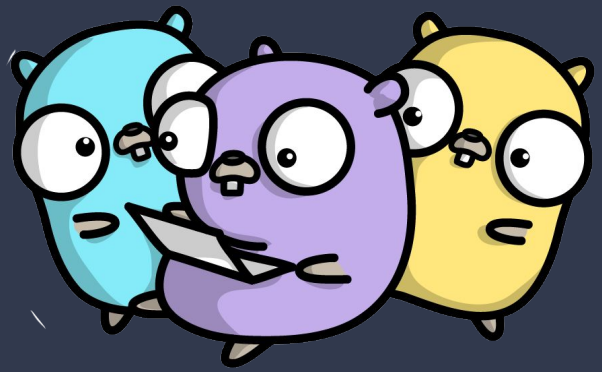


Intro to Golang

Catherin Cruz
github.com/twogg-git

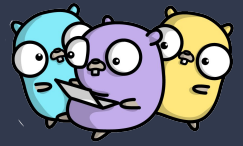
PionerasDev

Conceptos Básicos

Intro to Golang

- Lenguaje Imperativo
- Fuertemente tipado
- Sintaxis similar a C, menos ( ), no ;
- No es necesaria una máquina virtual
- No hay clases* pero sí estructuras con métodos
- Funciones pueden retornar varios parámetros
- Diseñado para concurrencia

Hello World

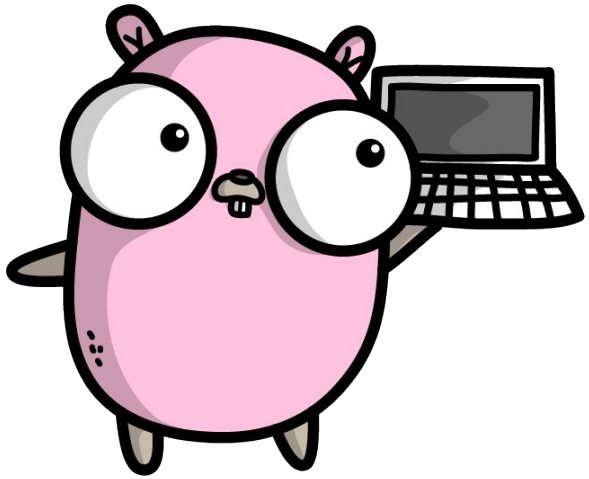


Intro to Golang

***File**: hello.go*

```
package main

import (
      "fmt"
      "time"
 )

func main() {
   fmt.Println("Hello Go")
   fmt.Println("La hora actual es ", time.Now())
}

$ go run hello.go
```

Declaración & Variables



var foo int (sin inicializar)

var foo int = 42 (con inicialización)

var foo, bar int = 42, 1302 (declaración múltiple)

var foo = 42 (tipo omitido se infiere)

foo := 42 (tipo omitido, sólo dentro de funciones)

const constant = "Esto es una constante"

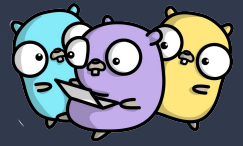
bool, string, int, float32

int8 int16 int32 int64

uint uint8 uint16 uint32 uint64 uintptr

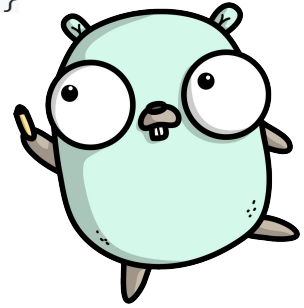
float64 complex64 complex128 byte (alias for uint8)

Funciones



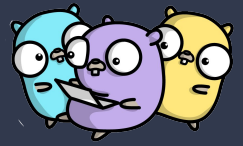
Intro to Golang

```
// función simple
func functionName() {}

// función con parámetros (nombre tipo)
func functionName(param1 string, param2 int) {}

// múltiples parámetros mismo tipo
func functionName(param1, param2 int) {}

// tipo del retorno inferido
func functionName() int {
    return 42
}
```



```
// retorno con múltiples valores
func returnMulti() (int, string) {
    return 42, "foobar"
}
var x, str = returnMulti()

// retorno múltiple inferido
func returnMulti2() (n int, s string) {
    n = 42
    s = "foobar"
    // retornará n y s
    return
}
var x, str = returnMulti2()
```

Funciones 2



Intro to Golang

```go
func main() {
	fmt.Println(adder(1, 2, 3))   // 6
	fmt.Println(adder(9, 9))      // 18
	nums := []int{10, 20, 30}
	fmt.Println(adder(nums...)) // 60
}

// Usando ... antes del tipo se puede indicar que se aceptan 0 o más parámetros del mismo tipo
func adder(args ...int) int {
	total := 0
	for _, v := range args { // Itera según tantos argumentos reciba
		total += v
	}
	return total
}
```

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PionerasDev

Paquetes

Declaración siempre al inicio de la archivo

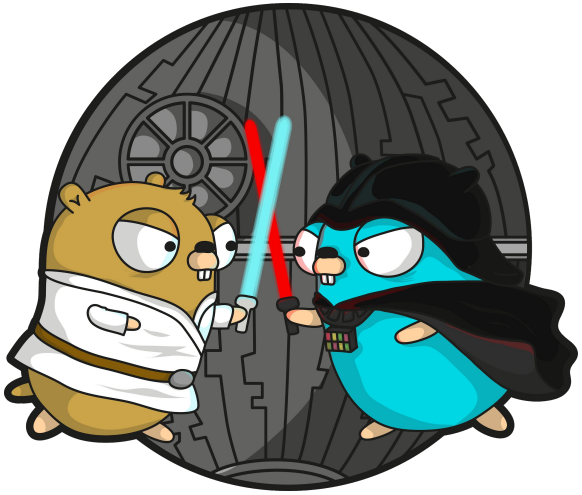
Ejecutables están en el paquete main

Importar con mayúsculas: público

Importar con minúsculas: privado

```
import (
        "fmt"
        "time"
        "http/net"
        "google.golang.org/grpc"
        "github.com/jtolds/gls"
        "github.com/smartystreets/assertions"
)
```

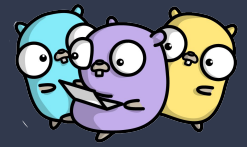
Estructuras: If



```
func main() {
	// Basic one
	if x > 0 {
		return x
	} else {
		return -x
	}

	if a := b + c; a < 42 {
		return a
	} else {
		return a - 42
	}
}
```

Estructuras: For



Intro to Golang

```
// Solo existe el for
for i := 1; i < 10; i++ {
}

for ; i < 10;  { // ejemplo similar a  while
}

for i < 10  { // se pueden omitir ; si es solo una condición
}

for { // se puede omitir la condición  mientras sea verdadero (true)
}
```

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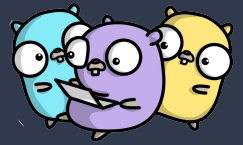
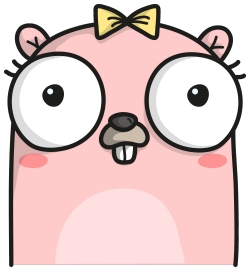
Estructuras: Switch



Intro to Golang

```
// switch statement
    switch operatingSystem {
    case "darwin":
        fmt.Println("Mac OS Hipster")
        // cierra el case automáticamente
    case "linux":
        fmt.Println("Linux Geek")
    default:
        // Windows, BSD, ...
        fmt.Println("Other")
    }
```

```
    // también se pueden hacer comparaciones
    number := 42
    switch {
        case number < 42:
            fmt.Println("Smaller")
        case number == 42:
            fmt.Println("Equal")
        case number > 42:
            fmt.Println("Greater")
    }
```



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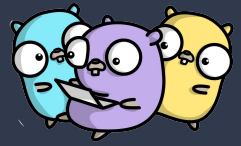
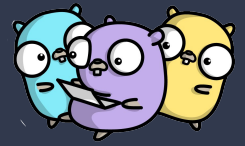
Estructuras: Arrays



```
var a [10]int // array tamaño 10 tipo enteros
a[3] = 42     // define elemento
i := a[3]     // leer el elemento

// declaración e inicialización
var a = [2]int{1, 2}
a := [2]int{1, 2} //tamaño definido
a := [...]int{1, 2} // elipsis -> Compilador define el tamaño
```

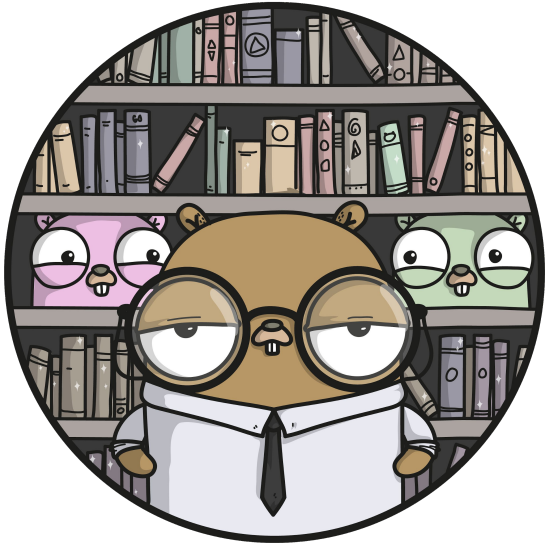
Estructuras: Slice



```
var a []int    // declaración similar al array, tamaño no especificado
var a = []int {1, 2, 3, 4}   // declaración con inicialización
a := []int{1, 2, 3, 4}    // versión corta
chars := []string{0:"a", 2:"c", 1: "b"}  // ["a", "b", "c"]

// creación con función make
a = make([]byte, 5, 5)     // primero tamaño, luego capacidad
a = make([]byte, 5)        // capacidad es opcional

// creación con base en array
x := [3]string{"Лайка", "Белка", "Стрелка"}
s := x[:] // a slice referencing the storage of x
```



Estructuras: Maps

```
var m map[string]int
m = make(map[string]int)
m["key"] = 42
fmt.Println(m["key"])

delete(m, "key")

elem, ok := m["key"] // evalúa si key está presente y la retorna

// map literal
var m = map[string]Vertex{
   "Bell Labs": {40.68433, -74.39967},
   "Google":    {37.42202, -122.08408},
}
```

Estructuras: Structs

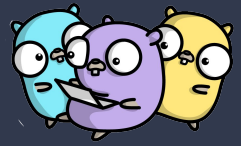
```go
package main

import (
    "fmt"
)

type Employee struct {
    firstName, lastName
string
    age, salary  int
}
```

```go
func main() {
    //creación de estructuras usando el nombre
    emp1 := Employee{
        firstName: "Sam",
        age:       25,
        salary:    500,
        lastName:  "Anderson",
    }
    // creación de estructuras sin usar nombres
    emp2 := Employee{"Thomas", "Paul", 29, 800}
    fmt.Println("Employee 1", emp1)
    fmt.Println("Employee 2", emp2)
}
```

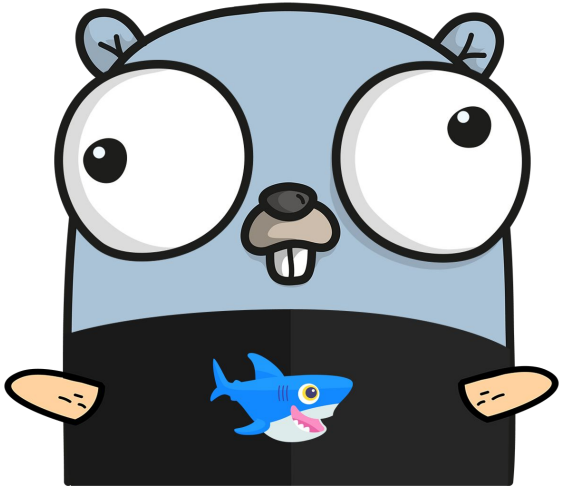
Docker



- ➔ Un único archivo de configuración
- ➔ Ejecución de contenedores en una solo instancia
- ➔ Agnóstico al contenido en ejecución
- ➔ Conexión directa a recursos de la máquina

http://training.play-with-docker.com/

http://labs.play-with-docker.com/



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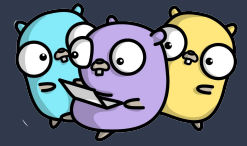
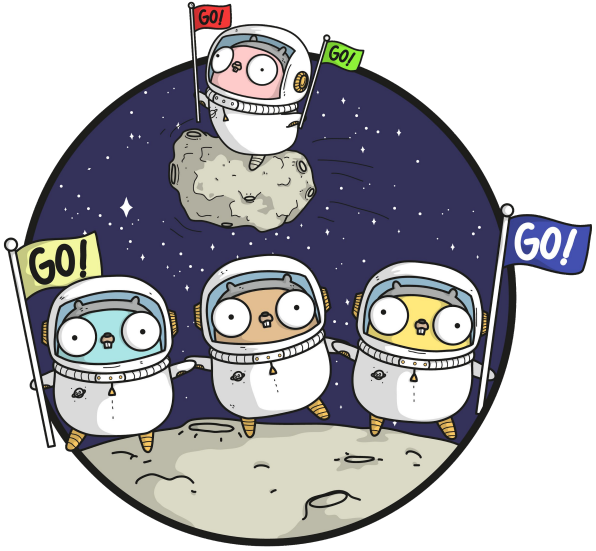
Go + Docker + Heroku



Intro to Golang



Servicios Rest

Templates y formularios

Despliegue gratuito en Heroku

https://github.com/twogg-git/go-circleci

https://go-circle.herokuapp.com/

PionerasDev

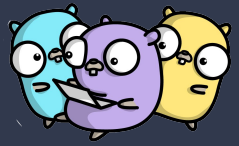
gopherize.me

https://gopherize.me/

https://github.com/matryer/gopherize.me

https://github.com/ashleymcnamara/

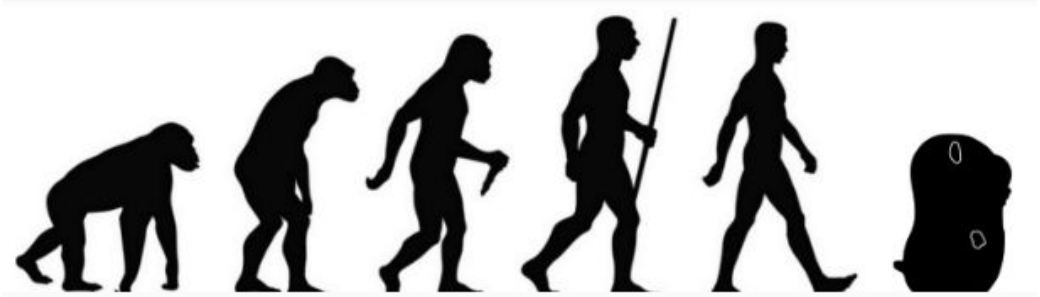
Just For Func



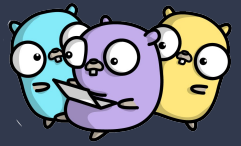
Intro to Golang

https://youtube.com/c/justforfunc

https://github.com/campoy/justforfunc



gohugo.io



Intro to Golang

Quick Start

Create a Hugo site using the beautiful Ananke theme.

> This quick start uses `macos` in the examples. For instructions about how to install Hugo on other operating systems, see install.
>
> You also need Git installed to run this tutorial.

Step 1: Install Hugo

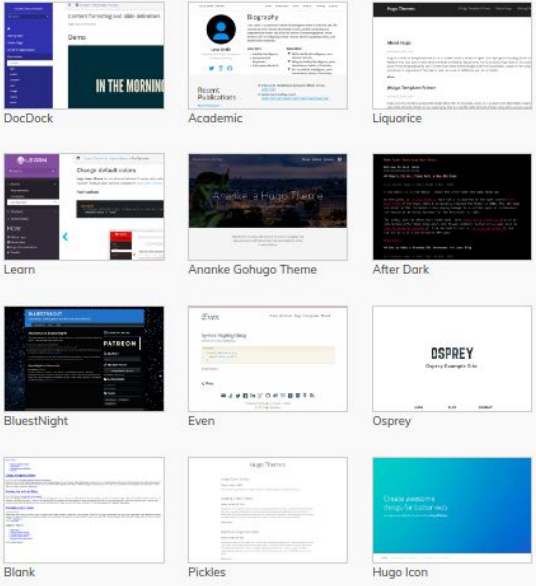
> `Homebrew`, a package manager for `macos`, can be installed from brew.sh. See install if you are running Windows etc.

```
brew install hugo
```

To verify your new install:

```
hugo version
```

Hugo Themes



Hugo Documentation

Hugo is the **world's fastest static website engine.** It's written in Go (aka Golang) and developed by bep, spf13 and friends. Below you will find some of the most common and helpful pages from our documentation.

Base Templates and Blocks

The base and block constructs allow you to define the outer shell of your master templates (i.e., the chrome of the page).

Read More »

Content Organization

Hugo assumes that the same structure that works to organize your source content is used to organize the rendered site.

Read More »

Hugo's Lookup Order

The lookup order is a prioritized list used by Hugo as it traverses your files looking for the appropriate corresponding file to render your content.

Read More »

Introduction to Hugo Templating

Hugo uses Go's `html/template` and `text/template` libraries as the basis for

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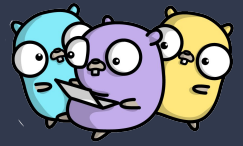
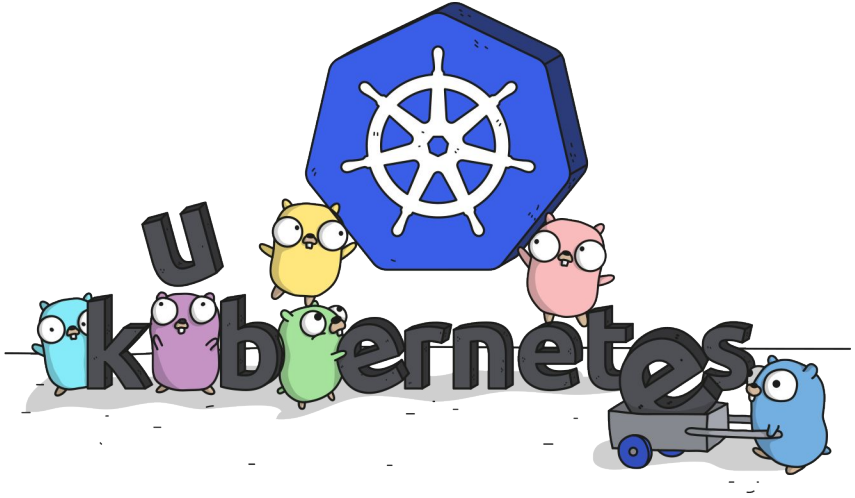
Kubernetes



Intro to Golang

- ➔ Conexión directa con los recursos
- ➔ Una configuración muchos ambientes
- ➔ Despliegue múltiple en paralelo!
- ➔ Control de todos los ambientes
- ➔ Escala de servicios en tiempo real



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monzo.com

Servicio bancario hecho en Go

Orientado a microservicios

Control de fallos y estado de los servicios

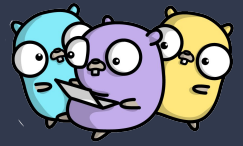
Integración y despliegue continuo

Matt Heath

https://speakerdeck.com/mattheath

https://www.youtube.com/watch?v=dVnMLtdJzn4

Referencias & Links



Intro to Golang

https://blog.golang.org/

https://golang.org/doc/effective_go.html#

https://gobyexample.com/

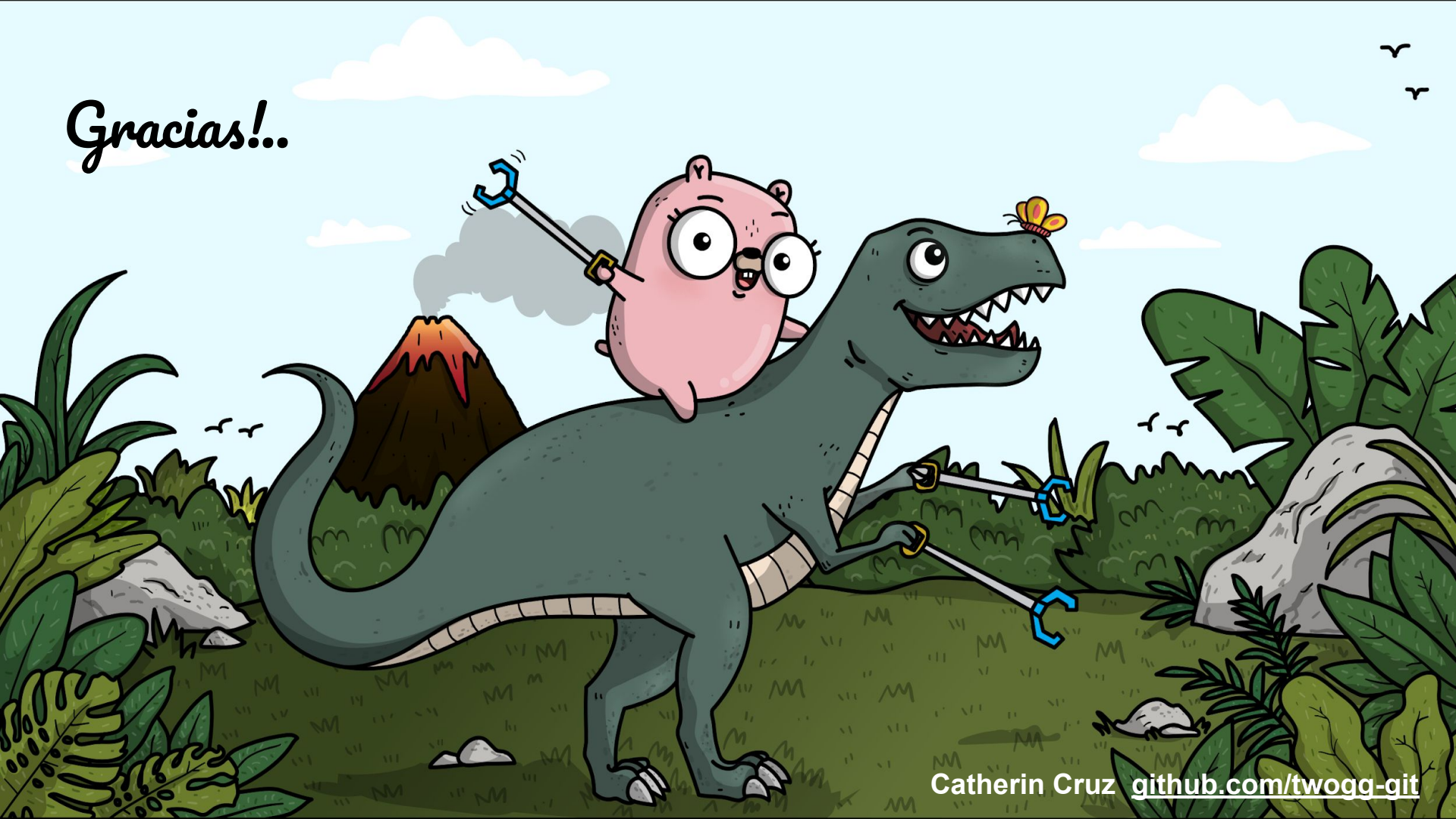
https://golangbot.com/learn-golang-series/

https://themes.gohugo.io/

https://gophers.slack.com

https://github.com/ashleymcnamara/gophers

Gracias!..



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