

The `error` is coming...

The first impressions about Golang by a Ruby user.

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before...

Go has a mascot: "gopher"



Studying

Progress



Ruby
Completed: 2 Problems
Reviewed: 2 Iterations



Go
Completed: 8 Problems

Exercises

Current

	Language	Exercise	Iterations	Latest Iteration ▼	Comments
<input type="checkbox"/>	Go	Triangle	1	2016-05-12	1
<input type="checkbox"/>	Go	Bob	1	2016-05-12	1
<input type="checkbox"/>	Ruby	Hamming	3	2016-05-04	3
<input type="checkbox"/>	Ruby	Hello World	1	2016-05-03	1
<input type="checkbox"/>	Go	Raindrops	1	2016-05-02	0
<input type="checkbox"/>	Go	Hamming	2	2016-05-02	1
<input type="checkbox"/>	Go	Clock	1	2016-04-29	1
<input type="checkbox"/>	Go	Gigasecond	1	2016-04-29	1
<input type="checkbox"/>	Go	Leap	1	2016-04-29	1
<input type="checkbox"/>	Go	Hello World	1	2016-04-29	1

Studying

[exercism](http://exercism.io/) (<http://exercism.io/>)

[tour go](https://tour.golang.org/welcome/1) (<https://tour.golang.org/welcome/1>)

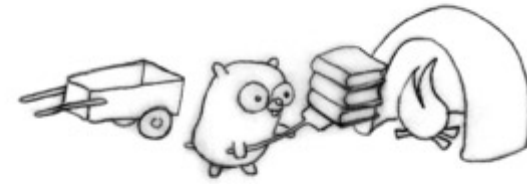
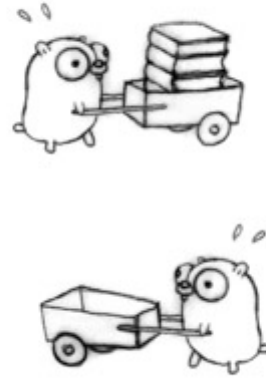
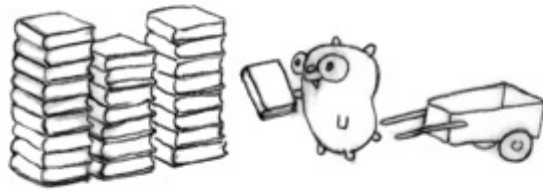
[go by example](https://gobyexample.com) (<https://gobyexample.com>)

[udemy](https://www.udemy.com/courses/search/?q=golang&src=ukw&lang=en) (<https://www.udemy.com/courses/search/?q=golang&src=ukw&lang=en>)

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- Dependencies
- Debug
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Organizing the environment



Organizing the environment

The first 'strangeness'

- \$GOROOT
- \$GOPATH

```
8 # Configuration for go variables
9 export GOROOT=/usr/local/go
10 export GOPATH=$HOME/el/go
11 export PATH=$PATH:$GOROOT/bin:$GOPATH/bin
```

~/.bashrc

```
[armandoalves] ~ $ ll $GOPATH/bin
total 136168
-rwxr-xr-x 1 armandoalves staff 2.2M Jan  9 15:10 asfmt
-rwxr-xr-x 1 armandoalves staff 5.0M Jan  9 15:10 errcheck
-rwxr-xr-x 1 armandoalves staff 9.6M Jan  9 15:08 gocode
-rwxr-xr-x 1 armandoalves staff 5.4M Jan  9 15:10 godef
-rwxr-xr-x 1 armandoalves staff 4.5M Jan  9 15:09 goimports
-rwxr-xr-x 1 armandoalves staff 5.1M Jan  9 15:10 golint
-rwxr-xr-x 1 armandoalves staff 6.4M Jan  9 15:09 gometalinter
-rwxr-xr-x 1 armandoalves staff 5.4M Jan  9 15:10 gorename
-rwxr-xr-x 1 armandoalves staff 2.7M Jan  9 15:10 gotags
-rwxr-xr-x 1 armandoalves staff 7.8M Jan  9 15:09 guru
-rwxr-xr-x 1 armandoalves staff 3.1M Jan  9 15:10 motion
-rwxr-xr-x 1 armandoalves staff 9.3M Feb  8 12:00 present
[armandoalves] ~ $
```

```
[armandoalves] ~ $ ll $GOROOT/bin
total 54552
-rwxr-xr-x 1 root wheel 9.4M Dec  1 19:17 go
-rwxr-xr-x 1 root wheel 14M Dec  1 19:21 godoc
-rwxr-xr-x 1 root wheel 2.8M Dec  1 19:16 gofmt
[armandoalves] ~ $
```

\$GOPATH/bin and \$GOROOT/bin

Organizing the environment

- \$GOPATH/
 - /bin
 - /pkg
 - /src



New `words`

Go has only 25 reserved keywords:

Keywords

The following keywords are reserved and may not be used as identifiers.

break	default	func	interface	select
case	defer	go	map	struct
chan	else	goto	package	switch
const	fallthrough	if	range	type
continue	for	import	return	var

- package
- interface <3
- pointer <3
- struct
- errors

Dependencies

- Packages

```
1 package main
2
3 import (
4     "github.com/EmpregoLigado/auth-svc/conf"
5     "github.com/EmpregoLigado/auth-svc/handlers"
6     "github.com/EmpregoLigado/auth-svc/models"
7     "gopkg.in/gin-gonic/gin.v1"
8     "log"
9 )
```

```
11 func main() {
12     db, err := models.NewDB(conf.DATABASE_URL) // using imported packages
```

> *upper and lowercase*

Debug ?

- REPL ?
- console ?

```
u := new(models.User)
log.Println(">>>>>>", db.First(&u, "email = ?", "invalid").Error)
```

```
[armandoalves] auth-svc (aa-login)$ go run main.go
>>>>>> record not found
```

Debug

- REPL
- console

```
gore> u := models.User{}
models.User{
  ID:      0,
  CreatedAt: 1-01-01 00:00:00 UTC,
  UpdatedAt: 1-01-01 00:00:00 UTC,
  FirstName: "",
  LastName: "",
  Bio:      "",
}
gore> u := models.User{FirstName: "Mark", LastName: "Bates"}
models.User{
  ID:      0,
  CreatedAt: 1-01-01 00:00:00 UTC,
  UpdatedAt: 1-01-01 00:00:00 UTC,
  FirstName: "Mark",
  LastName: "Bates",
  Bio:      "",
}
gore> models.DB.Create(&u)
[POP] 2016/12/18 17:52:28 INSERT INTO users (bio, created_at, first_name, last_name, updated_at) VALUES (:bio, :created_at, :first_name, :last_name, :updated_at) returning id
nil
gore> _
```

Testing

Package native

```
1 package models
2
3 import (
4     "reflect"
5     "testing"
6 )
```

Testing

Interfaces to the rescue

```
1 package models
2
3 type Repo interface {
4     CreateUser(*User) error
5     FindUserByEmail(*User, string) error
6 }
7
```

```
16 func (f DbMock) CreateUser(u *User) error {
17     u.ValidateUser()
18
19     if f.WithErrors {
20         return errors.New("Testing a callback with error")
21     } else {
22         return nil
23     }
24 }
25
26 func (f DbMock) FindUserByEmail(u *User, email string) error {
27     if f.WithErrors {
28         return errors.New("Testing a callback with error")
29     } else {
30         u.EncryptedPassword = fakeUser.EncryptedPassword
31         return nil
32     }
33 }
```

Thank you

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go run ...