

How to Go

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Playground

golang.org (<https://golang.org>)

```
1 // You can edit this code!
2 // Click here and start typing.
3 package main
4
5 import "fmt"
6
7 func main() {
8     fmt.Println("Hello, 世界")
9 }
```

Run

\$GOPATH

```
$GOPATH not set. For more details see: go help gopath
```

Go 1.8 Release Notes <https://golang.org/doc/go1.8#gopath>

The GOPATH environment variable now has a default value if it is unset. It defaults to \$HOME/go on Unix and %USERPROFILE%/go on Windows.

I like to use it for all projects, not only Go:

```
export GOPATH="$HOME/code"
```

\$GOPATH

This is your workspace for Go source code, packages and binaries:

```
$GOPATH/  
  bin/           # add $GOPATH/bin to your $PATH  
    delve  
    gcp  
    massren  
    present  
  pkg/  
    linux_amd64/  
      git.trivago.trv/sop/cauliflower/gcp/  
      ...  
  src/  
    git.trivago.trv/sop/cauliflower/...  
    github.com/derekparker/delve/  
    github.com/laurent22/massren/...  
    golang.org/x/tools/...
```

Cauliflower

```
$GOPATH/src/git.trivago.trv/sop/cauliflower/
```

```
|— cmd
|   |— gcp                # package main: binary "gcp"
|       |— create.go
|       |— main.go
|
|— gcp                    # package "git.trivago.trv/sop/cauliflower/gcp"
|   |— resource.go
|   |— resource_test.go
|   |— service.go
|
|— vendor                 # vendored dependencies take precedence over $GOPATH/src (!)
|   |— cloud.google.com/...
|   |— github.com/...
|   |— golang.org/...
|
|— CHANGELOG.md
|— README.md
|
|— Gopkg.toml             # dependencies (managed with dep)
|— Gopkg.lock             # locked revisions of the dependencies
|
|— Makefile
```

Makefile

```
.PHONY: clean deps build install test
.DEFAULT_GOAL := build

SOURCE := git.trivago.trv/sop/cauliflower/cmd/gcp

clean:
    rm -rf ./vendor

deps:
    dep ensure

build: deps
    go build ./...

install: deps
    go install ./...

test: deps
    go test --race ./...
    GOARCH=386 go test ./...
```

A Quirk

```
1 package main
2
3 import "fmt"
4
5 type cat interface{}
6
7 type concreteCat struct{}
8
9 func getCat() cat {
10     var c1 *concreteCat
11     // ... forget to assign res
12     fmt.Println("c1 == nil:", c1 == nil)
13     return c1
14 }
15
16 func main() {
17     c2 := getCat()
18     fmt.Println("c2 == nil:", c2 == nil)
19 }
```

[Run](#)

A tour of Go: [Interface values](https://tour.golang.org/methods/11) (https://tour.golang.org/methods/11)

It's not a bug, it's a feature

```
1 package main
2
3 import "fmt"
4
5 func main() {
6     names := []string{
7         "Java",
8         "Python",
9         "Go"
10    }
11
12    for i, n := range names {
13        fmt.Println(i, n)
14    }
15 }
```

Run

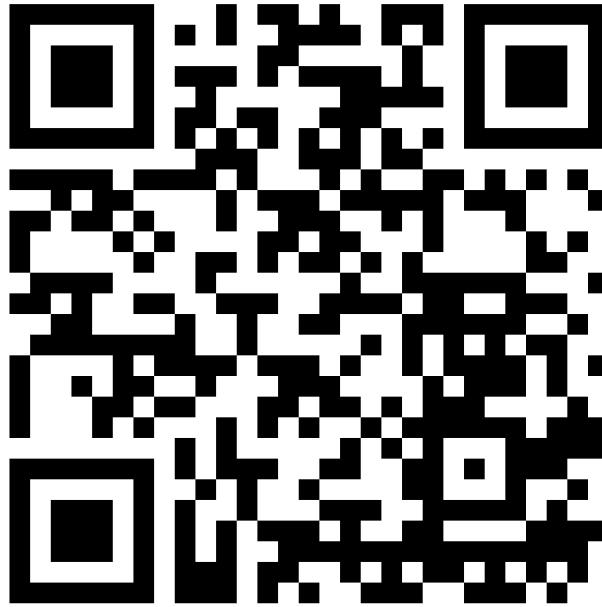
Summary

- When searching for Go related topics online, use the keyword "golang"
- Add \$GOPATH/bin to your \$PATH
- Put your executables/commands (package main) in the folder "cmd"
- Maintain a README.md and [keep a changelog](http://keepachangelog.com/en/1.0.0/)
- Manage your Go dependencies with [dep](https://github.com/golang/dep)
- Set up a [Makefile](https://sahilm.com/makefiles-for-golang/)

More ...

- [Effektive Go](https://golang.org/doc/effective_go.html) and [Go Code Review Comments](https://github.com/golang/go/wiki/CodeReviewComments)
- [JustForFunc](https://www.youtube.com/channel/UC_BzFbxG2za3bp5NRRRXjSw) by Francesc Campoy
- [Talks](https://www.youtube.com/results?search_query=Rob+Pike) by Rob Pike

Slides



github.com/mrkanister/slides (<https://github.com/mrkanister/slides>)

Thank you

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