

go env -w setting=value

Update Go environment settings globally

Examples  
go env GOPATH

Inspect the Go toolchain environment settings  
go env [<setting>]

Get help on Go commands and topics  
go help  
go help <command|topic>  
Verify the version of the Go toolchain  
go version

## Essential commands

Example  
go env -w GOPATH=/Users/christoph/.go

Note: environment variables override these global environment settings, for example:  
export GOPATH=/Users/chris/temp/go

Install 3rd-party packages  
go get <path-to-remote-repo> ↪  
@version  
Example  
go get appliedgo.net/what@latest

Note: go get only works if the current directory is inside a Go module.

Build an executable with the race detector enabled  
go build -race <...>

Examples  
go build  
go build main.go

Build a package or executable  
go build [<file.go>... | <dir>]

Build packages or executables  
go run .  
go run main.go

Examples  
Compile and run Go files immediately (removes the executable after running)  
go run [<files.go>... | <dir>]

Compile and install an executable from local or remote code  
go install [<build flags>] ↪  
[<packages>@<version>]

Examples  
GOOS=darwin GOARCH=amd64 go build  
GOOS=linux GOARCH=arm64 go build

Cross-compile to a different operating system and/or CPU architecture  
GOOS=darwin GOARCH=amd64 go build

Note: the race detector can identify data race conditions in concurrent code. Side effect: it slows down the executable.

## Run tests

Run unit tests  
go test [.|./... ] [-run ↪  
<regexp>] [-cover]

Examples  
Run all tests in the current dir  
go test .  
Run all tests in the current dir's test files whose names contain "Router"  
go test . -run Router

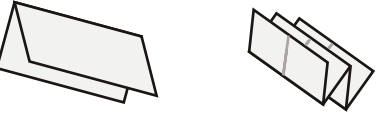
Note: -cover reports test coverage.

Run benchmarks  
go test -bench . [-run none]

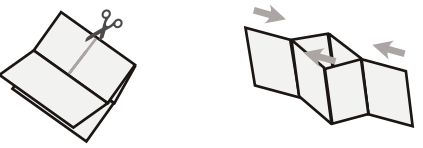
Note: to avoid running unit tests besides the benchmark, add -run none. The string none should not match any existing test func name.

## How to fold the mini-zine

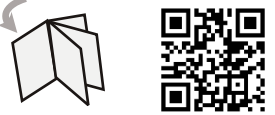
Fold along the long edge once. Unfold again. Fold twice along the short edge.



Cut the paper from the short fold halfway through.



Fold along the long edge again, push the ends towards the center, and fold the pages into a booklet.



Happy coding!



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# THE GO TOOLS CRIB SHEET

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And at [appliedgo.net](https://appliedgo.net), I blog about a mixed assortment of Go topics.  
Cheers, Christoph

