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[#Copy link](https://ida.interchain.io/tutorials/4-golang-intro/1-install.html#first-steps) **First Steps**

Golang (Go) is an open-source, statically typed, and compiled programming language introduced by Google and first released in 2012. It has a BSD-style license. Its Git repository is located at [https://go.googlesource.com/go (opens new window)↗](https://go.googlesource.com/go).

Start with the basics. In this section, you will install Go and learn some general things about it.

[#Copy link](https://ida.interchain.io/tutorials/4-golang-intro/1-install.html#install) Install

Installing Go depends on your machine. See the [Getting Started page (opens new window)↗](https://golang.org/doc/install) and follow the instructions to install Go.

[#Copy link](https://ida.interchain.io/tutorials/4-golang-intro/1-install.html#workflow) Workflow

Go has a different workflow from most other programming tools. You have all Go dependencies contained in the GOPATH. You can print it by typing $ go env GOPATH in your console. For more information about GOPATH, type $ go help gopath.

In particular, it may be useful to append the following to your profile, bashrc or equivalent:



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export PATH=$PATH:$(go env GOPATH)/bin

A version control system is helpful because you have only one workspace. You should use Git for this.

[#Copy link](https://ida.interchain.io/tutorials/4-golang-intro/1-install.html#hello-world) Hello, World!

Let's start with the ever-popular "Hello, World!" program. Let's see how it looks in Go:



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package main

import "fmt"

func main() {

fmt.Printf("Hello, World!\n")

}



[Test it online (opens new window)↗](https://go.dev/play/p/1u5bSZlh80h).



Function names determine visibility outside of packages. Printf's first character is upper case and this means it's visible outside of fmt– a.k.a public. Package names are always written in lower case, like fmt (short for "format").

Every Go program starts with the package declaration. Each package consists of one or more Go source files in a single directory. If the name of the package is main, Go creates an executable file.

After package declaration, import the package fmt. Note that the package name is the last element of the package's file path. For example, if you import the package "lib/math", then you use it as "math".

fmt implements input and output, and is part of Go's standard library. Later you are going to describe some of its functions in more detail.

Execution starts in the function called main().

This function simply calls the Go I/O function Printf() from the package fmt.

Now compile this program. Create the file hello.go in a folder of your choice. In a terminal:



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$ go mod init hello

$ go build

If all goes well, go builds the executable. Go only prints errors, so you should not see any output or another command prompt unless something goes wrong.

Now test your program:



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./hello



If you use go install instead of go build, Go installs the executable in $GOPATH/bin/.



**Further readings**

* [Go's Getting Started Page (opens new window)↗](https://golang.org/doc/install)
* [Understanding Golang Packages (opens new window)↗](https://thenewstack.io/understanding-golang-packages/)

synopsis

To summarize, this section has explored:

* How to install Golang (Go), an open-source, statically typed, and compiled programming language.
* The Go workflow, which differs from most other programming tools and is demonstrated here using the "Hello, World!" example program.

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