

# GOPATH and Code Organization

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- Go requires you to organize your code in a specific way.
- **Go programmers typically keep all their Go code in a single workspace.**
- A **workspace** is nothing more than a directory in your file system whose path is stored in the environment variable called **GOPATH**.
- On Windows , it's in **%USERPROFILE%\go** (For Example: c:\Users\ad\go)
- On Mac & Linux, it's in: **~/go** (For Example: /home/john/go)
- You can print out the values of the environment variables by running the **go env** command.

# Go Workspace (GOPATH)

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The workspace directory (GOPATH) contains the following 3 subdirectories at its root:

- **src**: contains the source files for your own or other downloaded packages.
- **pkg**: contains go package objects a.k.a. package archives. These are non-executable files or shared libraries ending in `.a`
- **bin**: contains compiled and executable Go programs. When you run `go install` on a program directory, Go will put the executable file under this folder

All examples in this course will be in `GOPATH\src\master_go_programming`  
(`C:\Users\ad\go\src\master_go_programming`)

# Go Packages

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- A **package** is a project directory containing `.go` files with the **same package statement** at the beginning. A package contains many source files each ending in `.go` extension and belonging to a single directory.

There are 2 types of packages:

- **executable packages** that generate executable files which can be run. The name of an executable package is predefined and is called **main**.
- **non-executable packages** (libraries or dependencies) that are used by other packages and can have any name. They can not be executed, only imported.