Compiling (go build) and Running Go Applications (go run)

go is a tool for managing Go source code.

1. go run: it compiles and runs the application. It doesn't produce an executable

- go run file.go compiles and immediately runs Go programs.

2. go build: it just compiles the application. It produces an executable

- go build file.go compiles a bunch of Go source files. It compiles packages and dependencies.
- If you run *go build* it will compile the files in the current directory and will produce an executable file with the name of the current working directory.
- go build -o app will produce an executable file called app

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Compiling for Windows: *GOOS=windows GOARCH=amd64 go build -o winapp.exe*

Compiling for Linux: *GOOS=linux GOARCH=amd64 go build -o linuxapp*

Compiling for Mac: *GOOS=darwin GOARCH=amd64 go build -o macapp*

3. go install

- Both go install and go build will compile the package in the current directory.
- If the package is main, go build will place the resulting executable in the current directory and go install will move the executable to **GOPATH/bin**
- When running go install you use paths relative to **GOPATH/src**