Create the Go Workspace

When you install Go, the installer sets a number of Go environment variables. For example, the directory (folder) location of the Go tools is stored in a **GOROOT** environment variable – by default, at **C:\Go** on a Windows PC, and at **/usr/local/go** on Linux and macOS.

The installer also sets a **GOPATH** environment variable for the location of your workspace. By default, this is a directory named "go" within your home directory. For example, on a Windows PC its path is **C:\Users*userName*\go**, on Linux systems its path is **/home/*userName*/go**, and on macOS it's at **/Users/*userName*/go** – but the installer doesn't actually create any directories.

To create the workspace, you can simply add a directory named "go" in your home directory. You must then add sub-directories named "bin", "pkg" and "src" within the workspace directory – all your Go programs can then be created inside the "src" directory.

It's useful to have a shortcut on your desktop that will open a command-line in this sub-directory to easily run your programs.

1 On a Windows PC, open a Command Prompt window, as described on page 11, or open a Terminal window

2 Enter the command **go env GOPATH** to see the current expected workspace location

```
C:\WINDOWS\system32\cmd.exe                              □  ×

C:\Users\mike_>go env GOPATH
C:\Users\mike_\go
```
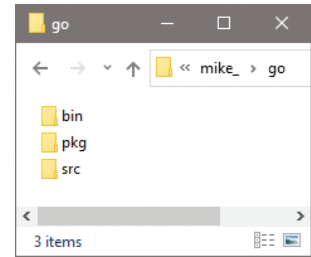
3 Next, issue a **mkdir** command to create the "go" workspace directory at the location specified by the **GOPATH** environment variable

```
C:\WINDOWS\system32\cmd.exe                              □  ×

C:\Users\mike_>mkdir go

C:\Users\mike_>_
```

Don't forget

The **go\src** folder is where you will save the programs you write. The **go\bin** and **go\pkg** will be used later to store executable files and package archives.

Beware

The GO111MODULE environment variable is set to ON by default (this was OFF by default in earlier versions of GO). The examples in this book cannot be executed as described until this is turned OFF. You should enter this command to correct the issue:
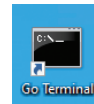**set GO111MODULE=off**

4 Now, issue further **mkdir** commands to create the "bin", "pkg" and "src" sub-directories in the workspace directory

```
C:\WINDOWS\system32\cmd.exe                    —    □    ×

C:\Users\mike_>mkdir go\bin

C:\Users\mike_>mkdir go\pkg

C:\Users\mike_>mkdir go\src

C:\Users\mike_>_
```
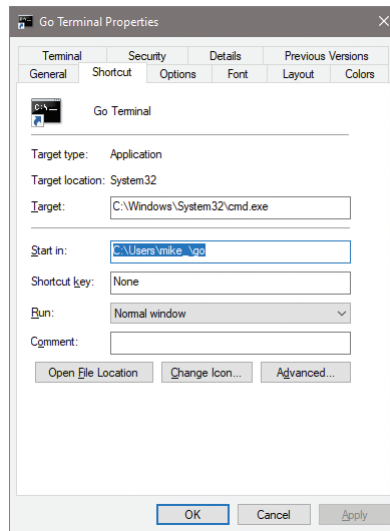
```
go                     —    □    ×

←  →  ∨  ↑  « mike_ › go

  bin
  pkg
  src

3 items
```

5 Right-click on a Windows desktop and select **New, Shortcut** to open a "Create Shortcut" dialog

6 Enter **cmd** as the location and click **Next,** then enter **Go Terminal** as the name and click **Finish** to create a shortcut icon on your desktop

Go Terminal

7 Right-click on the shortcut icon and select the **Properties** item, to open its "Properties" dialog

8 Choose the **Shortcut** tab, then enter the location of your workspace directory

9 Click **Apply**, **OK** to close the dialog, then double-click the shortcut icon to open a command-line in your "src" folder

```
Go Terminal Properties                            ×

  Terminal    Security      Details    Previous Versions
  General    Shortcut    Options    Font    Layout    Colors

        Go Terminal

  Target type:    Application
  Target location:  System32
  Target:        C:\Windows\System32\cmd.exe

  Start in:      C:\Users\mike_\go
  Shortcut key:   None
  Run:          Normal window                  ∨
  Comment:

  Open File Location   Change Icon...   Advanced...

                    OK      Cancel      Apply
```

```
Go Terminal                                —    □    ×

C:\Users\mike_\go\src>_
```

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