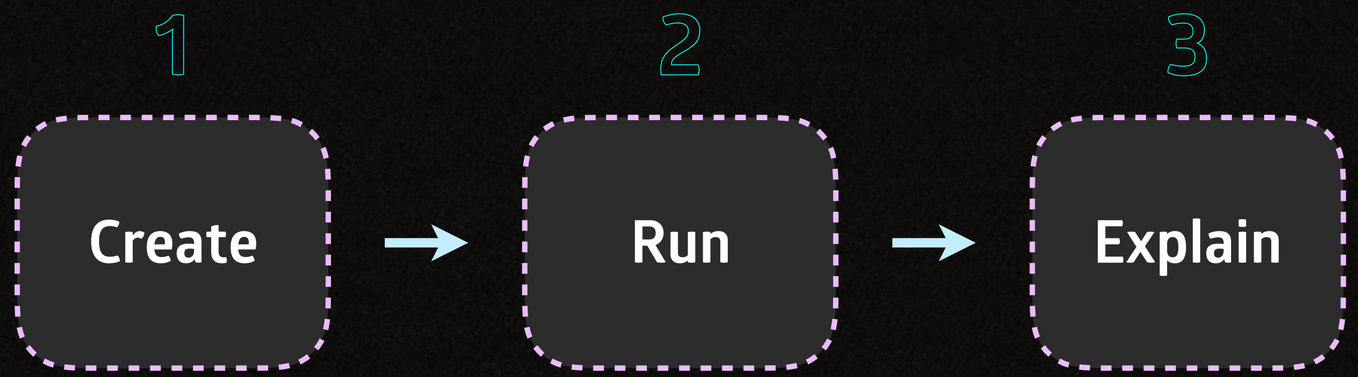
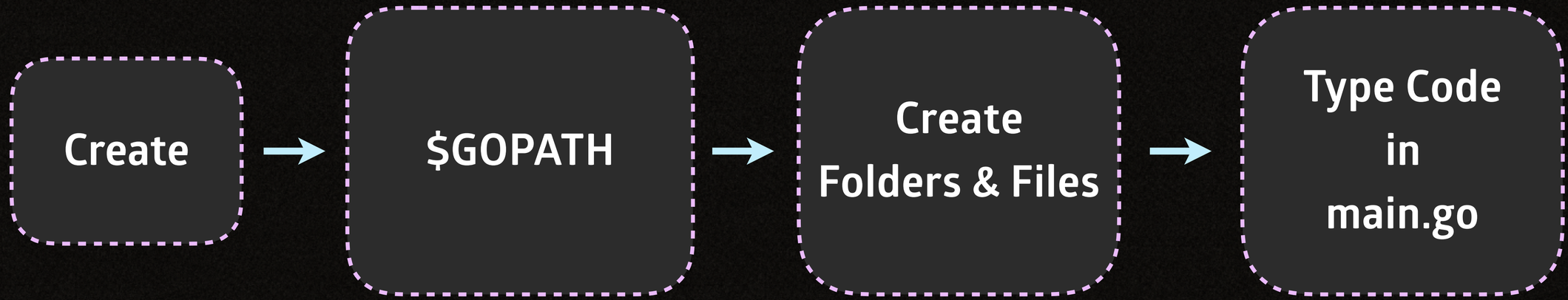
FIRST PROGRAM

You're going to learn how to create and run your first Go program



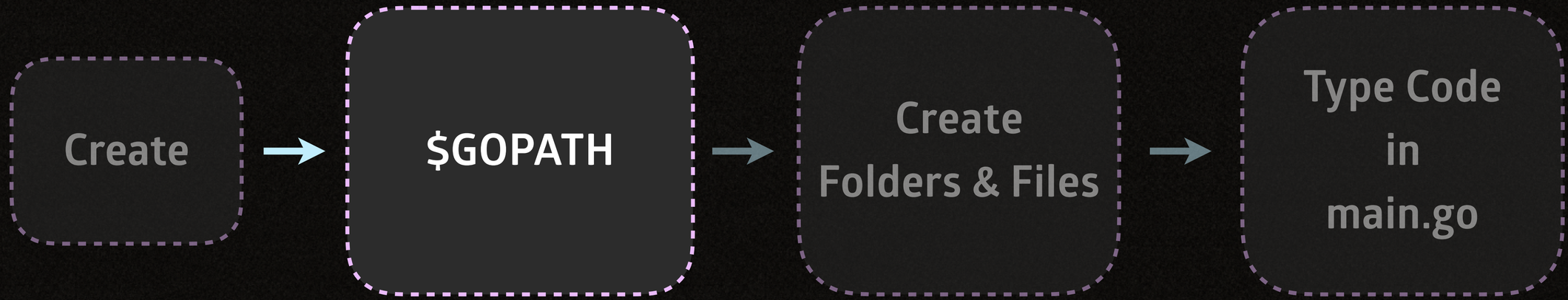
CREATE

In this first step, you're going to create your first Go program.



LEARN ABOUT $GOPATH

You're going to create folders for your program



$GOPATH

demonstration

$GOPATH

an environment variable

by default Go assumes that it's in your **Users folder**

do not set your *$GOPATH* variable

$GOPATH

workspace

Go **tools** find Go **source-code** files

by looking at $GOPATH

$GOPATH

physical folder

automatically **creates** a **physical folder** for *$GOPATH*

*under your **users** folder*
(its default location)

$GOPATH

src folder

contains source-code files

$GOPATH

src folder

Go source code file

an executable go program
needs its own directory

$GOPATH

src folder

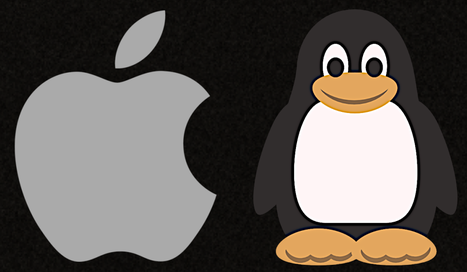
Go source code file

$GOPATH
- /src
  - /github.com
    - /youruser
      - /first
        - /main.go

GOPATH

Where is your $GOPATH? Let's find it!

$GOPATH



~/go

/Users/YourUsername/go

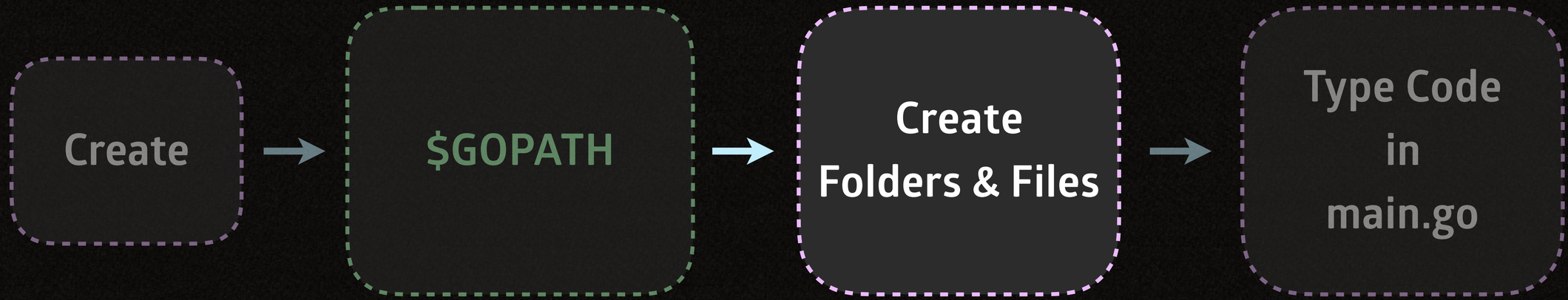
%userprofile%\go

c:\Users\YourUsername\go

/c/Users/YourUsername/go

CREATE FOLDERS & FILES

You're going to create folders and main.go



CREATE FOLDERS

Create these folders under your $GOPATH/src

1 learngo

2 first

If you've a **github** account:

$GOPATH/src/github.com/username/learngo/first

CREATE MAIN.GO

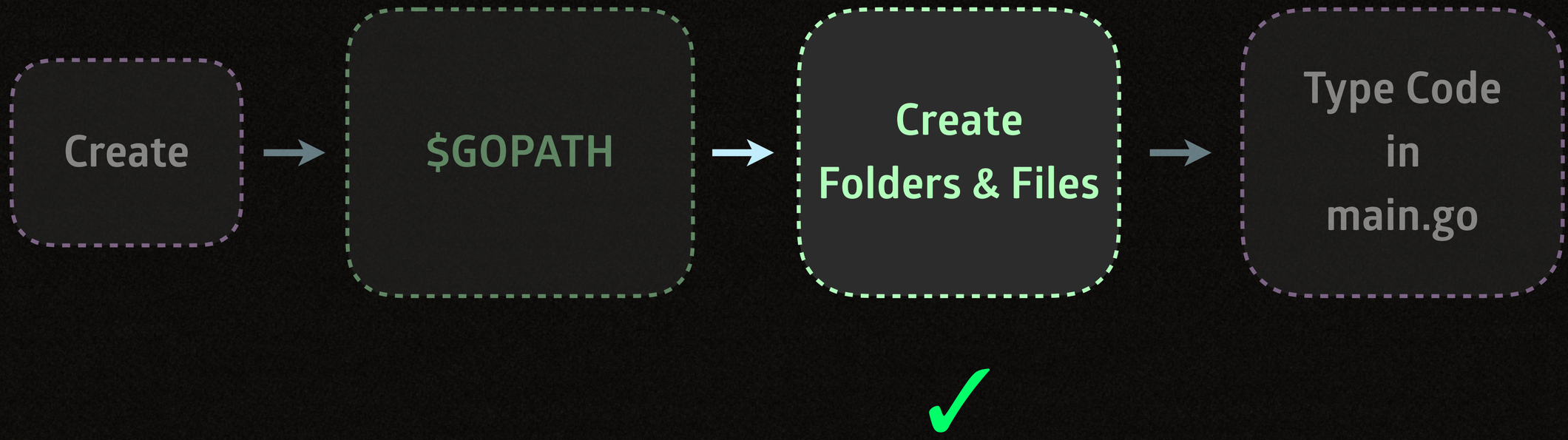
Create your first program file: "main.go"

under:

$GOPATH/src/github.com/username/learngo/first

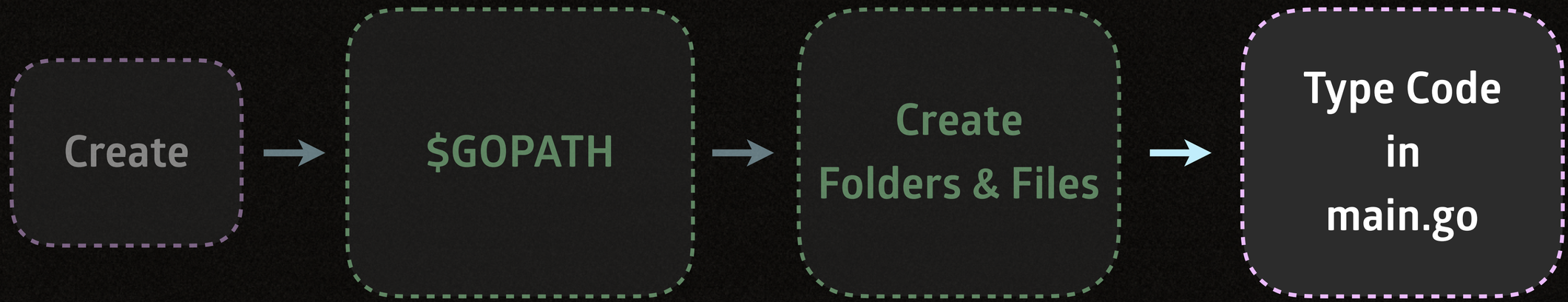
CREATE MAIN.GO

You've created your first Go file, congrats!



CODE

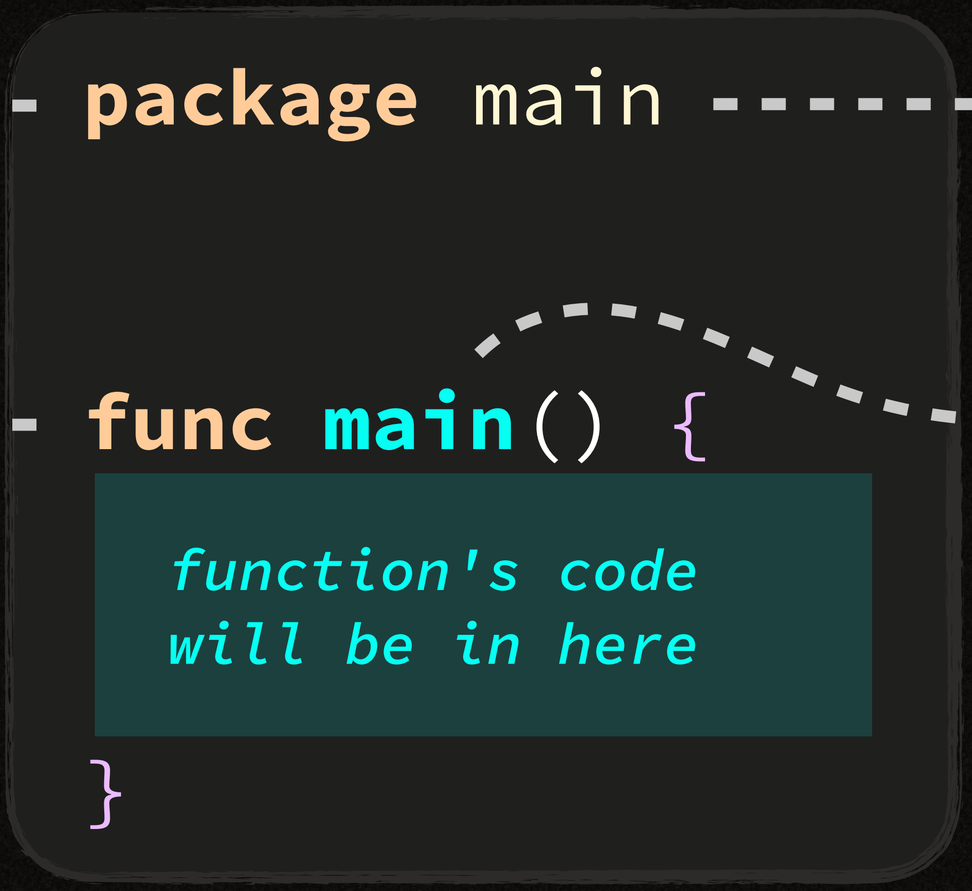
You're going to code your first Go program



CODE

Let's code your first Go program

main.go



package clause
this should be the first code

***name** of the package*
which this file belongs to

function
reusable and executable block of code

func main
a special func that tells Go where to start executing

CODE

I've removed the annotations from the code for clarity

main.go

```go
package main

func main() {
}
```

CODE

Let's print something to the console!

```go
package main
import "fmt"

func main() {
   fmt.Println("Hello Gopher!")
}
```

HOW TO CODE WITH ME

I'll always be providing the full source-code for the examples

sometimes,
i won't show these
common statements
in here

```go
package main
import "fmt"

func main() {
}
```

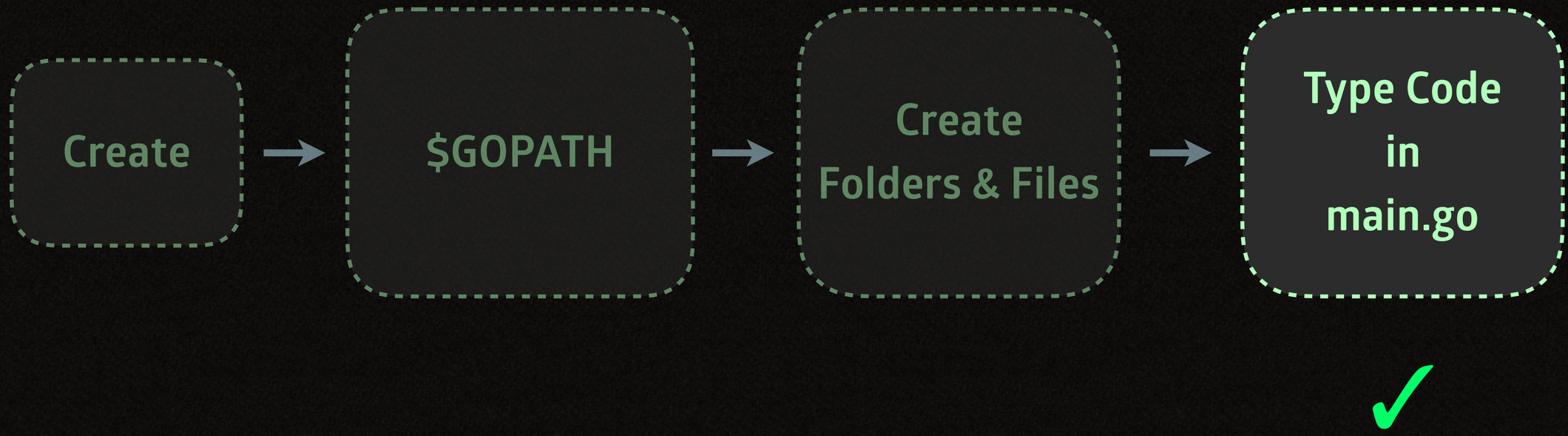
full source-code
will always be
available on
github
&
playground

github
https://github.com/inancgumus/learngo

playground
https://play.golang.org/

CREATE

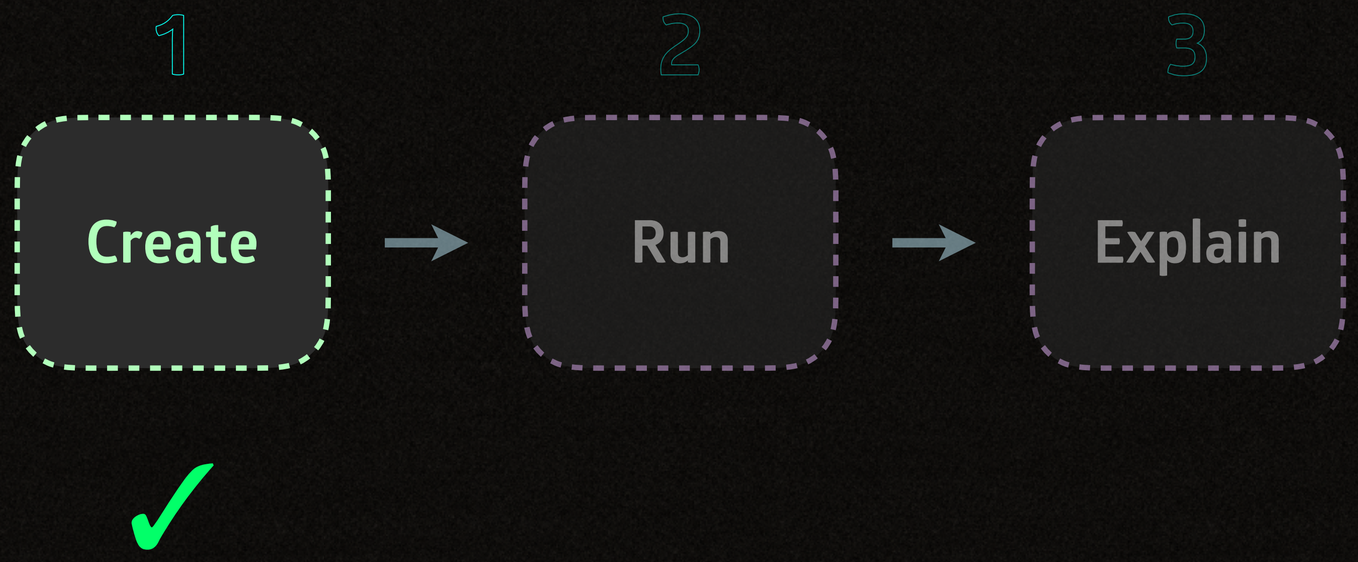
You've completed creating your first program, well done!



✓

FIRST PROGRAM

Congrats! You've learned how to create your first Go program.



RUN

You're going to run your first Go program.

GO BUILD

You're going to learn how to compile your Go program using `go build` tool.

go build

./first

first

COMPILE-TIME

vs

RUNTIME

SOURCE CODE

```
package main
import "fmt"

func main() {
   fmt.Println("hello!")
}
```

```
$ go build
```

Compiling

COMPILED CODE

```
MOVQ GS:0x8a0, CX
CMPQ 0x10(CX), SP
JBE 0x108e7c7
SUBQ $0x48, SP
MOVQ BP, 0x40(SP)
...
```

Source-Code is like a seed
(compiled or not)

RUNTIME

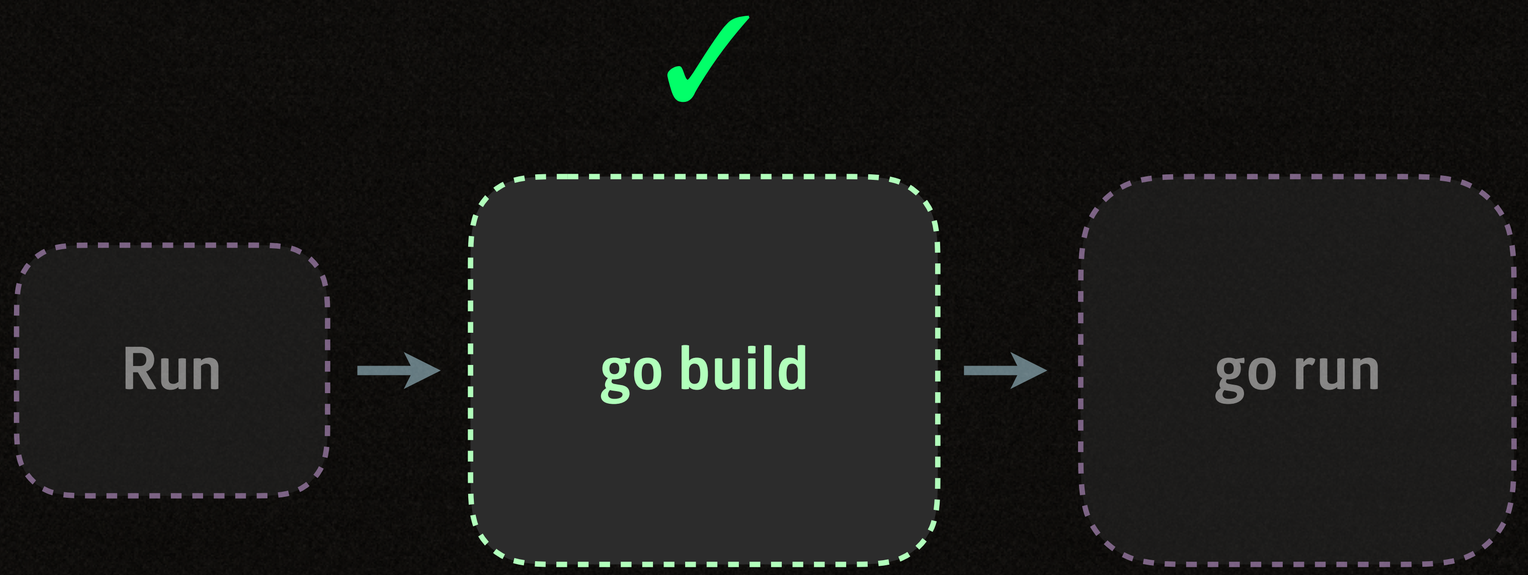
memory

cpu

```
$ ./first
hello!
```

GO BUILD

You've learned how to compile and run your first Go program using `go build` tool.



GO RUN

You're going to learn how to compile your Go program using `go run` tool.

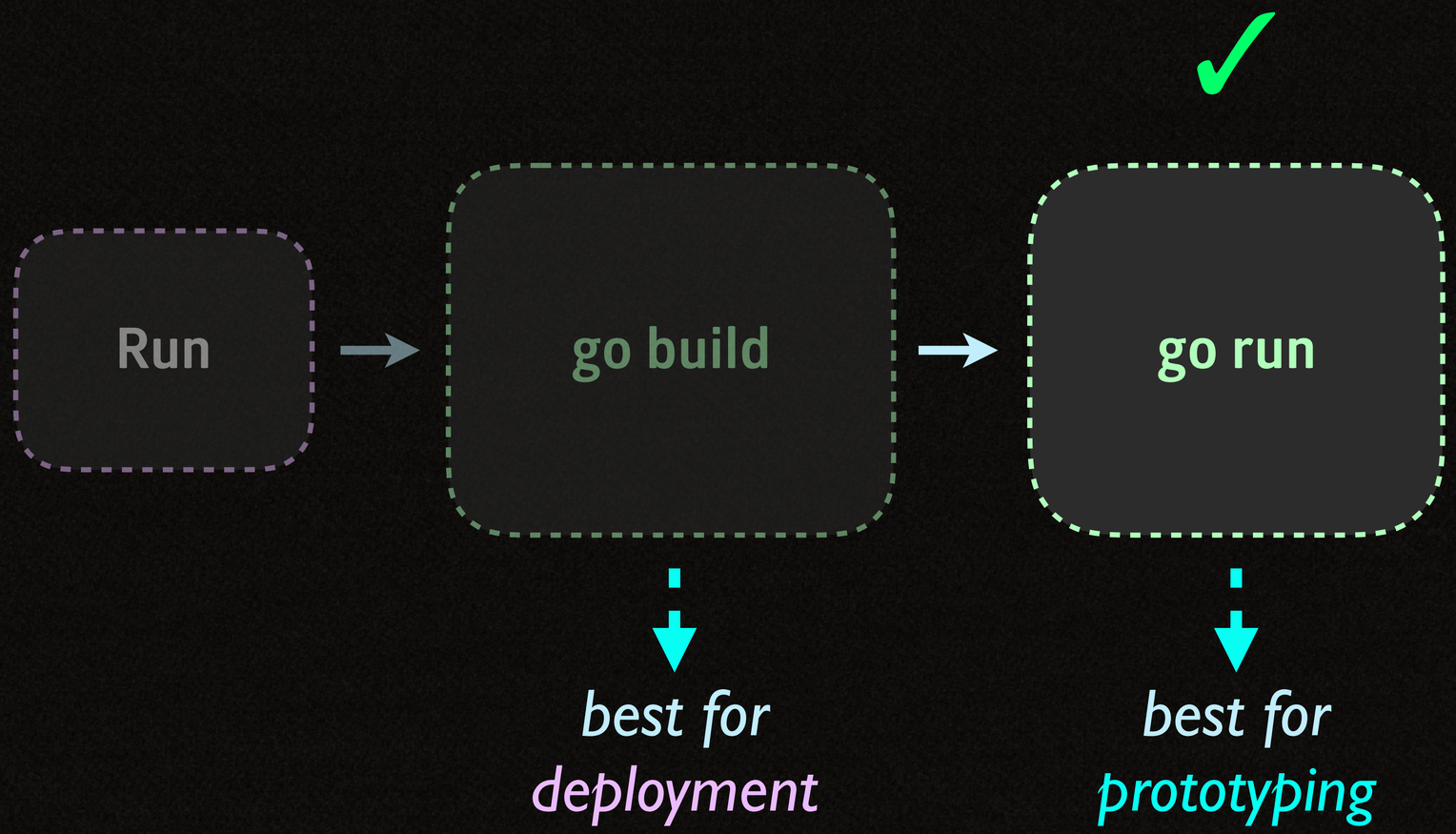

```
go run main.go
```

DEMO TIME!


$ go run main.go
Hello Gopher!
I love animations
And colors...
> Please embrace this

GO RUN

You're going to learn how to compile your Go program using `go run` tool.



FIRST PROGRAM

Congrats! You've learned how to compile and run your first program! That's a great achievement!