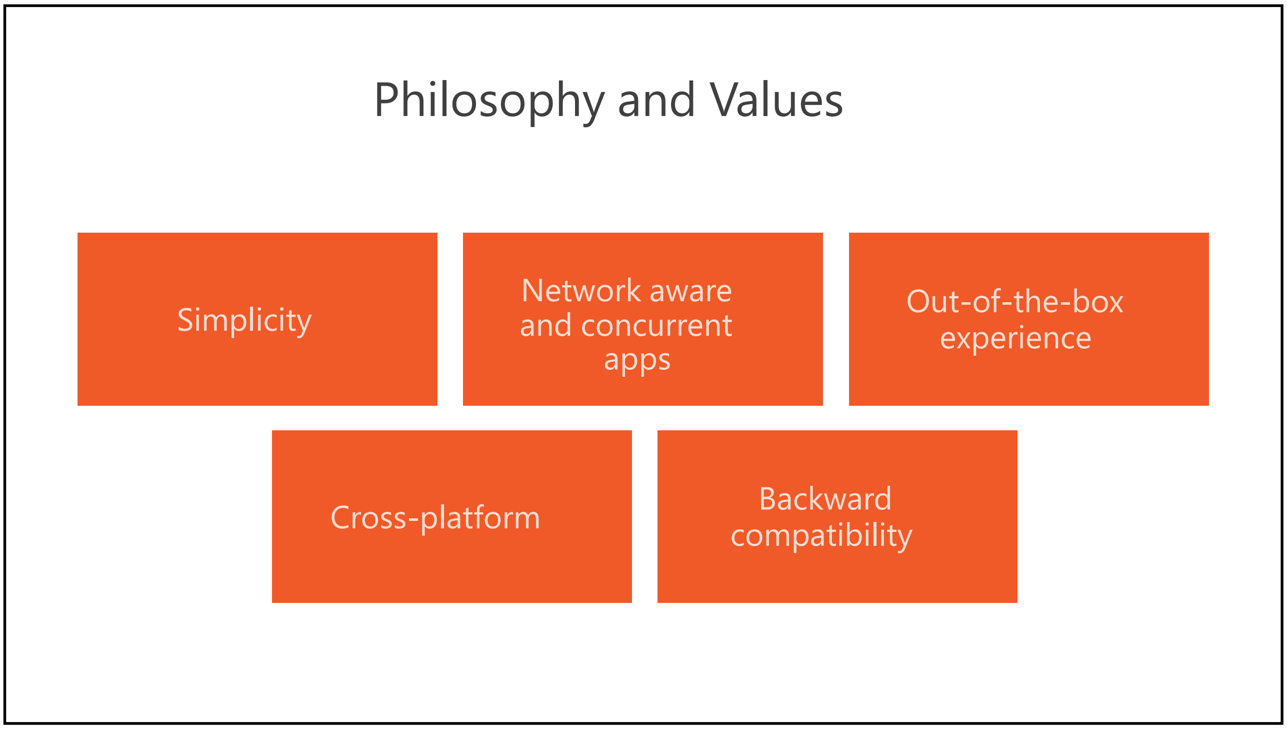
How Can Go Help You?

PHILOSOPHY AND USE-CASES

Overview

Philosophy and values

Primary use-cases



Philosophy and Values

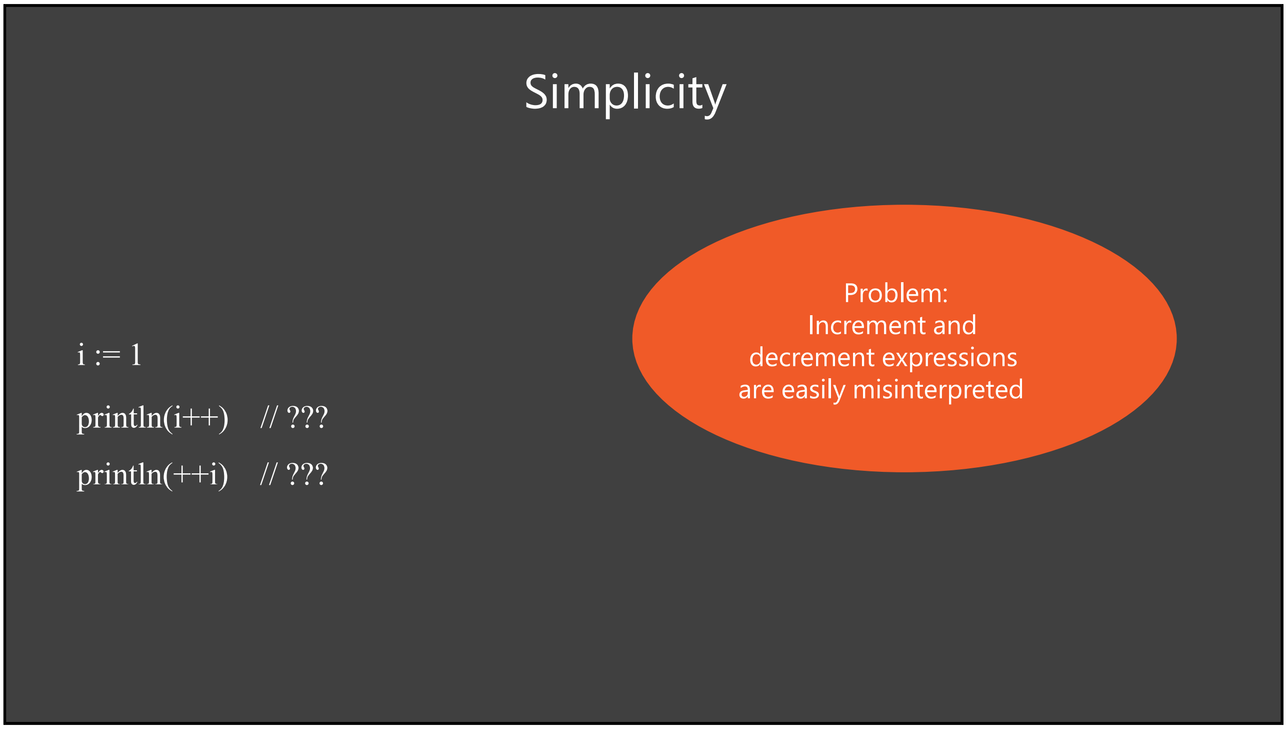
Simplicity

Network aware and concurrent apps

Out-of-the-box experience

Cross-platform

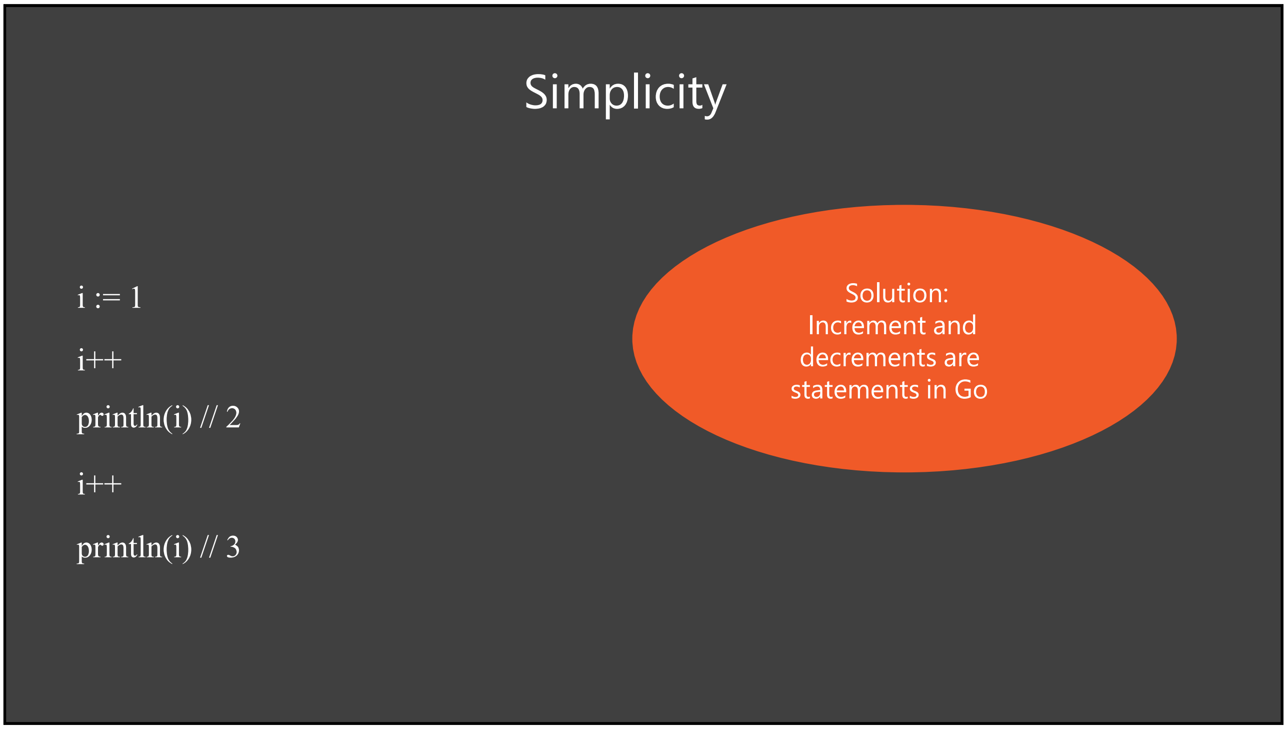
Backward compatibility



Simplicity

```
i := 1
println(i++)    // ???
println(++i)    // ???
```

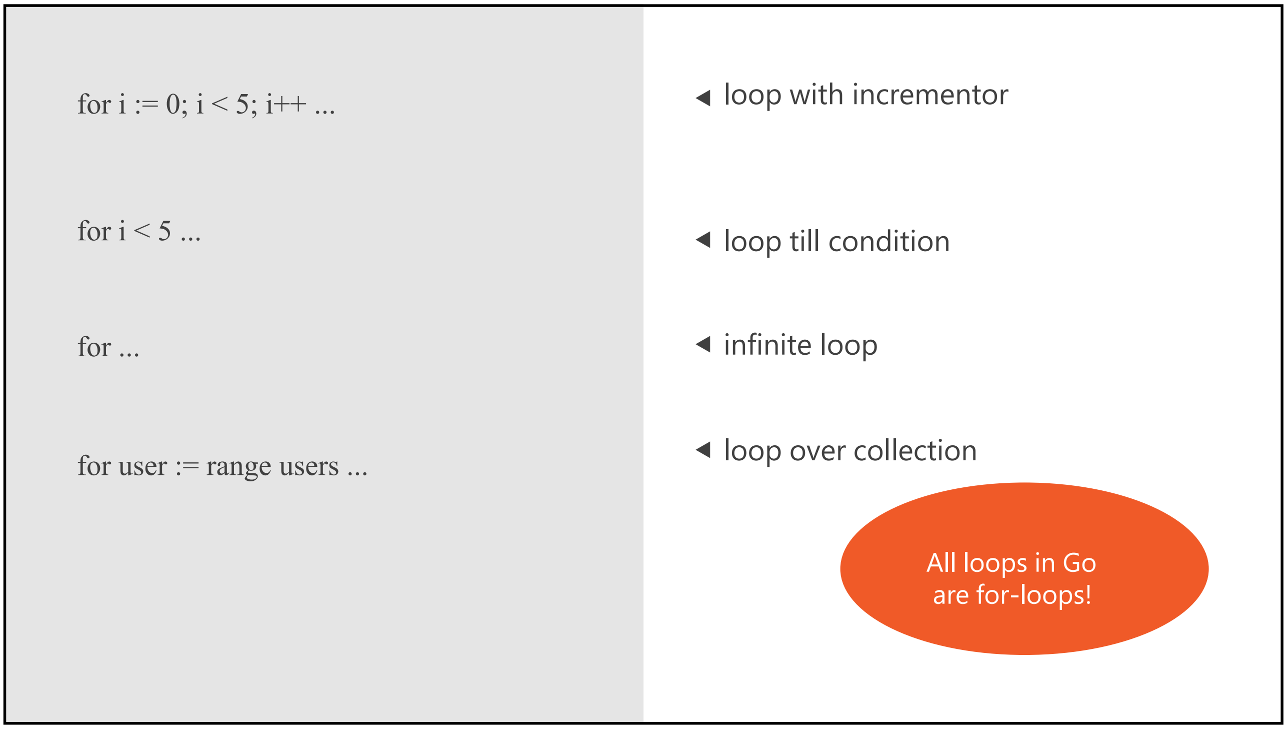
Problem:
Increment and decrement expressions are easily misinterpreted



Simplicity

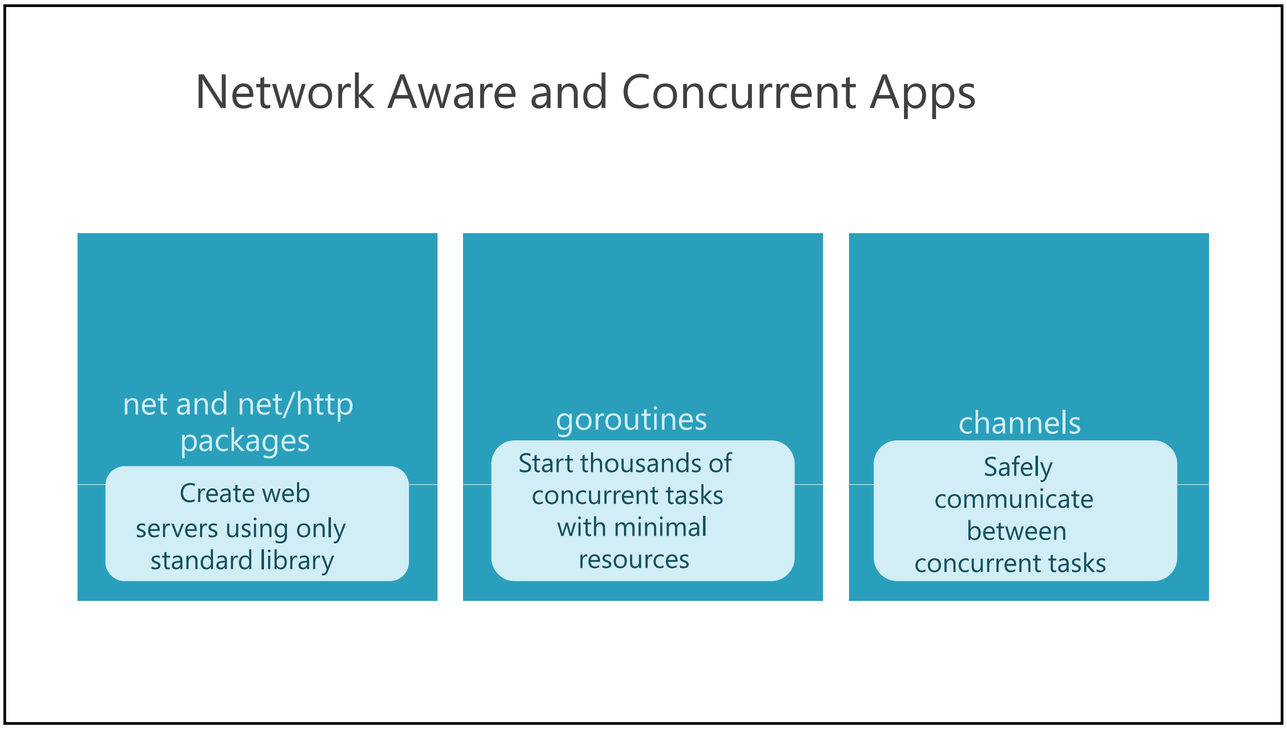
```
i := 1
i++
println(i) // 2
i++
println(i) // 3
```

Solution:
Increment and
decrements are
statements in Go



`for i := 0; i < 5; i++ ...`	◂ loop with incrementor
`for i < 5 ...`	◂ loop till condition
`for ...`	◂ infinite loop
`for user := range users ...`	◂ loop over collection

All loops in Go
are for-loops!



Network Aware and Concurrent Apps

net and net/http packages

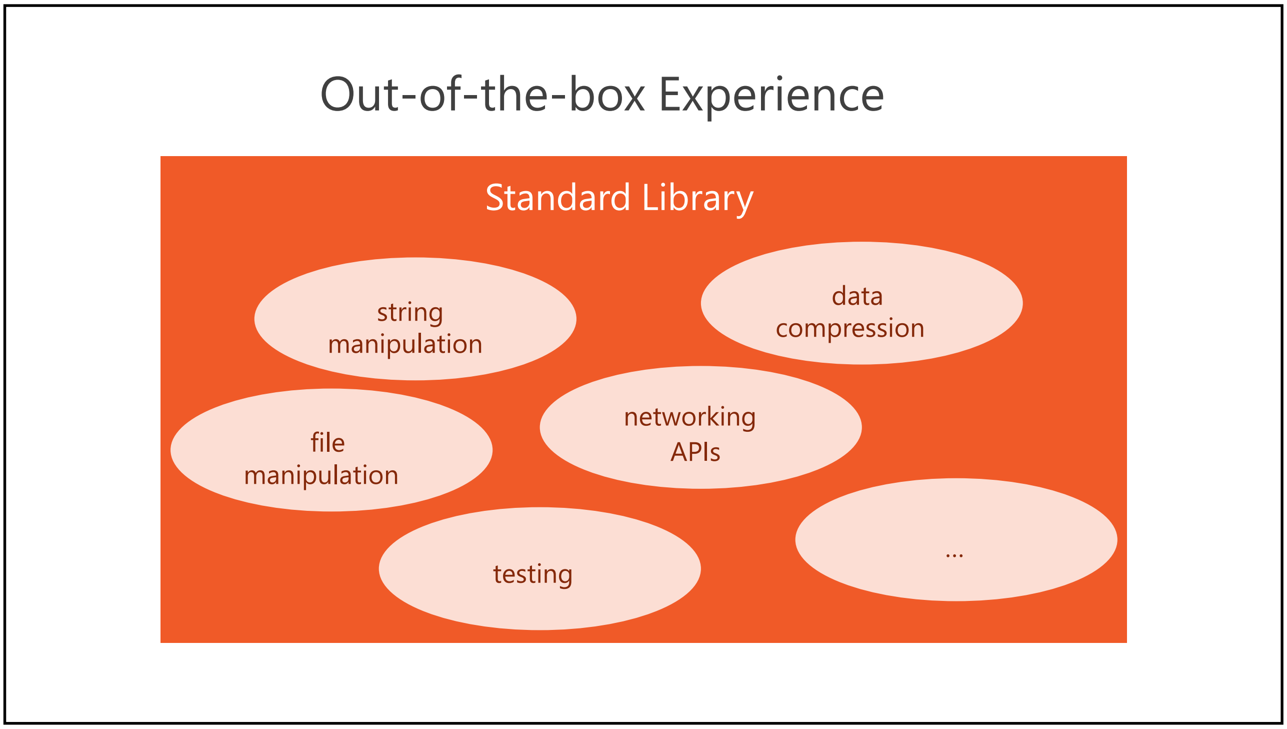
Create web servers using only standard library

goroutines

Start thousands of concurrent tasks with minimal resources

channels

Safely communicate between concurrent tasks



Out-of-the-box Experience

Standard Library

string manipulation

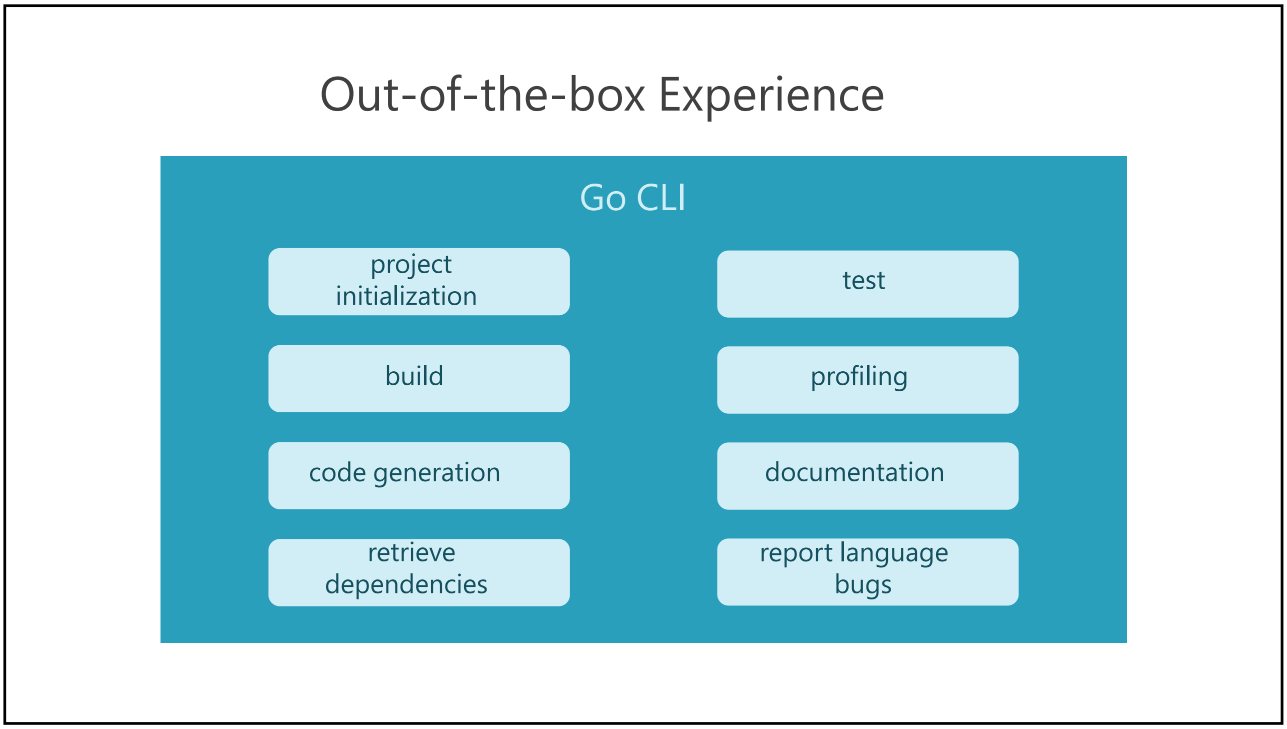
data compression

file manipulation

networking APIs

testing

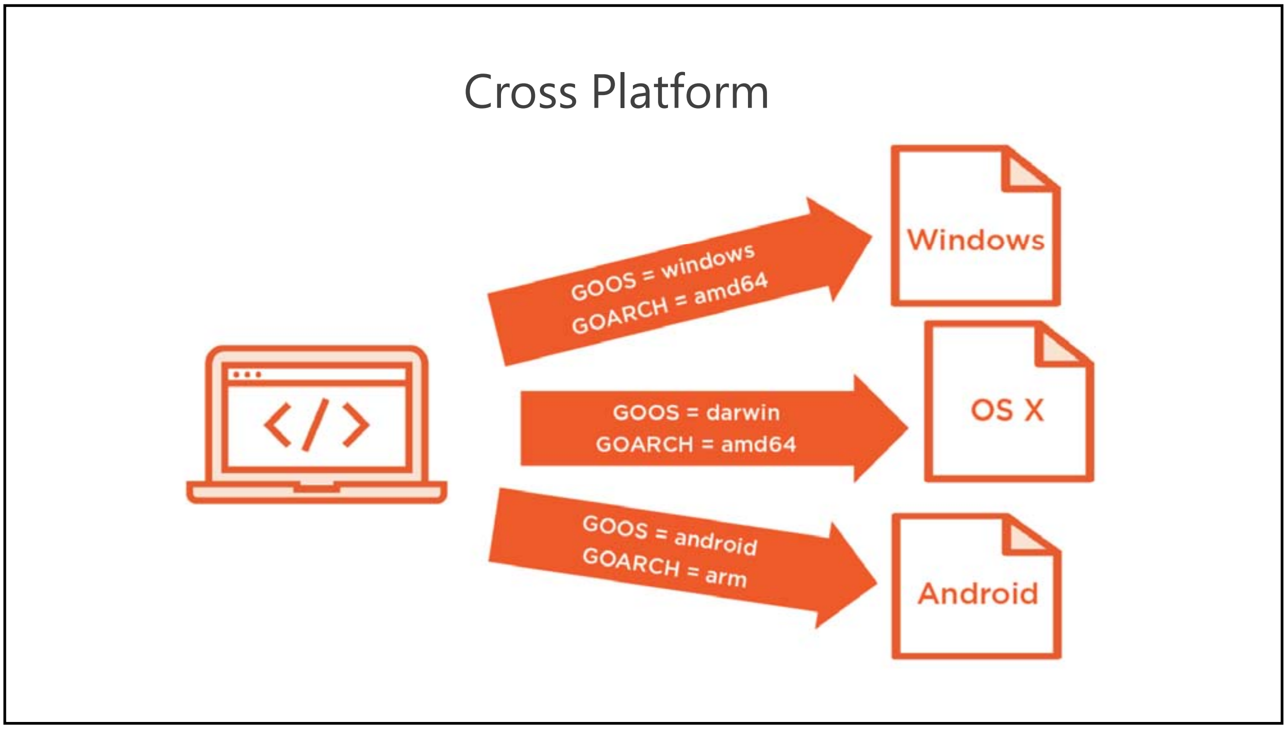
…



Out-of-the-box Experience

Go CLI

- project initialization
- test
- build
- profiling
- code generation
- documentation
- retrieve dependencies
- report language bugs



Cross Platform

GOOS = windows
GOARCH = amd64

Windows

GOOS = darwin
GOARCH = amd64

OS X

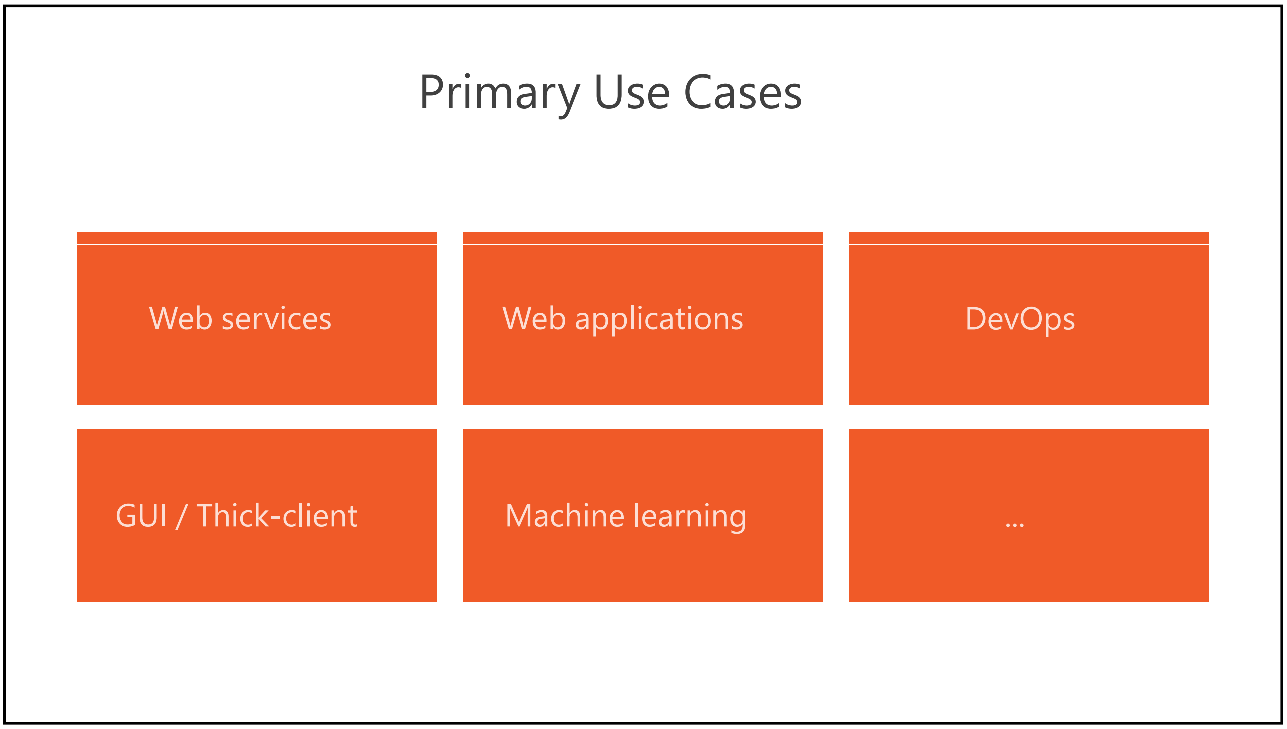
GOOS = android
GOARCH = arm

Android

Backward Compatibility

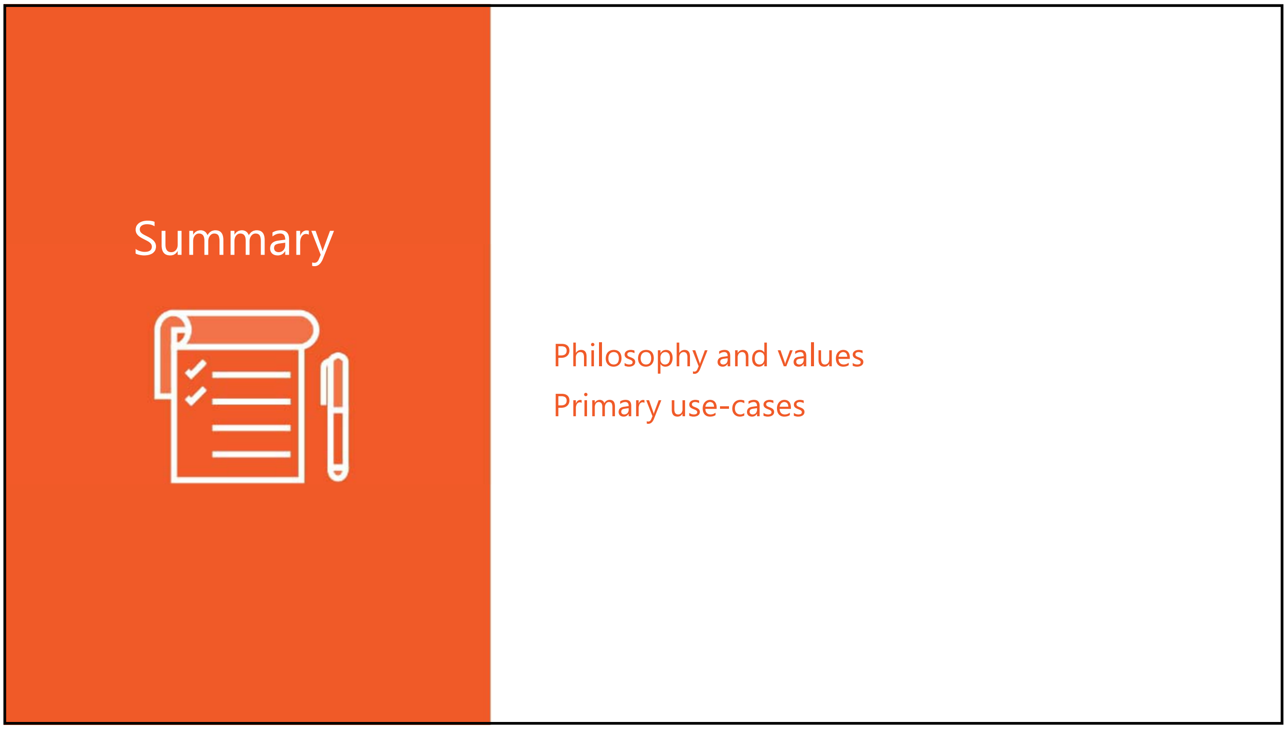
> “It is intended that programs written to the Go 1 specification will continue to compile and run correctly, unchanged, over the lifetime of that specification.”

https://golang.org/doc/go1compat



Primary Use Cases

Web services	Web applications	DevOps
GUI / Thick-client	Machine learning	…



Summary

Philosophy and values

Primary use-cases