

# Introduction to Golang

Concepts of Programming Languages

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# Gopher



# Why Go?

- Go is the major language behind the Cloud Native Stack

[www.cncf.io/](https://www.cncf.io/) (<https://www.cncf.io/>)



- The most important components are written in Go: Docker, Kubernetes, etcd, Prometheus, Grafana, ...
- Go is Open Source and maintained by Google
- Go is a distributed, parallel language designed for systems programming at Google to solve the problems of C++ code.

# Hello World

```
// Copyright 2018 Johannes Weigend
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package main

import "fmt"

func main() {
    fmt.Printf("Hello %s", "Programming with Go \xE2\x98\xAF\n") // \xE2\x98\xAF -> ☹
    fmt.Printf("Hello %s", "Programming with Go ☺\n")
}
```

[Run](#)

# Palindrome

```
func IsPalindrome(word string) bool {  
    for pos := 0; pos < len(word)/2; pos++ {  
        if word[pos] != word[len(word)-pos-1] {  
            return false  
        }  
    }  
    return true  
}
```

```
func TestPalindrome1(t *testing.T) {  
    // Unicode Character do not work with a simple string implementation  
    if !IsPalindrome("") == true {  
        t.Error("isPalindrome('') should be true. But is false.")  
    }  
    if !IsPalindrome("o") == true {  
        t.Error("isPalindrome('o') should be true. But is false.")  
    }  
    if !IsPalindrome("oto") == true {  
        t.Error("isPalindrome('oto') should be true. But is false.")  
    }  
    if !IsPalindrome("ottos") == false {  
        t.Error("isPalindrome('ottos') should be false. But is true.")  
    }  
}
```

# Introduction to Golang

Rob Pike @ Google 2009 (60 Min)

[www.youtube.com/watch?v=rKnDgT73v8s](https://www.youtube.com/watch?v=rKnDgT73v8s) (<https://www.youtube.com/watch?v=rKnDgT73v8s>)



## Some Questions

- What makes Go different to other Languages?
- What makes Go similar to other Languages?
- Discuss your personal opinions in a group of three students! (20 Minutes)
- Present your result to the audience + discussion (30 Minutes)

## See also

[www.youtube.com/watch?v=XCsl89YtqCs](https://www.youtube.com/watch?v=XCsl89YtqCs) (<https://www.youtube.com/watch?v=XCsl89YtqCs>)

[golang.org/](https://golang.org/) (<https://golang.org/>)

[golang.org/doc/](https://golang.org/doc/) (<https://golang.org/doc/>)



# Thank you

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