Course Go

Go Meetup Brno
22 October 2024

About me

- Pocket Gopher at ModernTV
- Student, Tutor & Lecturer at FI MUNI
- https://standa.dev (https://standa.dev)

Survey

Course Go

Talk goals

- Give insight and overview
- Spread awareness
- Provide oportunity to:
  - Reuse
  - Get inspired
  - Collaborate
- Will **not** be giving the course now

A short background story

- Starting out with Go
- RedHatOfficial/GoCourse (https://github.com/RedHatOfficial/GoCourse)
  - Autumn 2023
  - Half-semester course
- Feedback
  - Limited hands-on work

Course Go

- Evolved from the Red Hat course
- Designed and scheduled for academia
  - Self-taught
- Open-source (CC BY-SA 4.0 (https://creativecommons.org/licenses/by-sa/4.0/deed.en))
  - course-go.dev (https://course-go.dev) / github.com/course-go (https://github.com/course-go)
- Materials:
  - lectures (https://github.com/course-go/lectures)
  - exercises (https://github.com/course-go/exercises)
  - homework (https://github.com/course-go/homework)
  - and others...
- Currently running at FI MUNI

Go present

- Presentation tool used for lectures
  - Custom markdown format
    - Collaboration
- Often used by the members of the Go team
- Runnable snippets

Go packages: golang/x/tools/present (https://pkg.go.dev/golang.org/x/tools/present)

Example

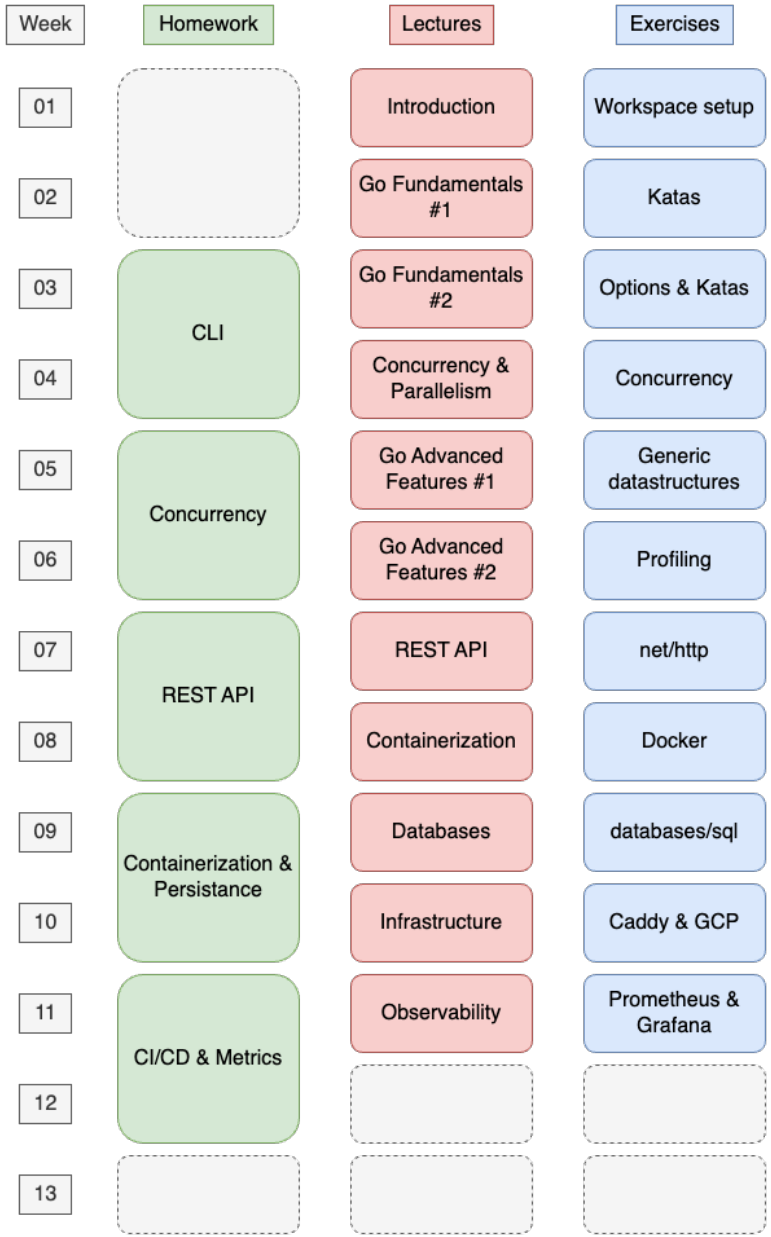
```
package main

import "fmt"

func main() {
    slice := []string{"one", "two", "three", "four"}

    for index := range slice {
        fmt.Println(index)
    }

    fmt.Println()

    for index, item := range slice {
        fmt.Println(index, item)
    }

    fmt.Println()

    for _, item := range slice {
        fmt.Println(item)
    }
}
```

Run

Currently covered topics

- Language history, comparisons and motivation
- Language fundamentals
  - All keywords, concurrency mechanisms etc.
- Advanced topics
  - Testing, benchmarks, optimizations etc.
- Application development
  - REST APIs, database technologies, containerization etc.
- Infrastructure, CI/CD & Observability
  - Infrastructure provisioning basics
  - Telemetry (Metrics, Logs, Traces)

Lectures available at lectures.course-go.dev (https://lectures.course-go.dev)


Week
Homework
Lectures
Exercises
01
02
03
04
05
06
07
08
09
10
11
12
13
CLI
Concurrency
REST API
Containerization & Persistance
CI/CD & Metrics
Introduction
Go Fundamentals #1
Go Fundamentals #2
Concurrency & Parallelism
Go Advanced Features #1
Go Advanced Features #2
REST API
Containerization
Databases
Infrastructure
Observability
Workspace setup
Katas
Options & Katas
Concurrency
Generic datastructures
Profiling
net/http
Docker
databases/sql
Caddy & GCP
Prometheus & Grafana

Future goals

- Possibly additional lectures
  - GraphQL
  - gRPC
  - Auth
  - EDC
- Expand homework and exercise collections
- Polish and maintain existing materials
  - New versions

Interested?

Q & A

Thank you

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