sqLabs
המכללה הגבוהה להייטק

The Go Programming Language: Basic Go (16 hours)

Overview

This course, introduces developers to Google's buzz generating, popular and intriguing Go programming language. Students will learn how to write code using Go, and learn about the Tour of Go and Go Playground. Learners will also discover Go's philosophy and motivation, advantages, shortcomings, and when and where it is most appropriate to use Go. It includes lectures and hands on practice and exercises.

Intended Audience

Developers and managers who are curious about GO and developers who are beginning work on a Go project.

Prerequisites

Experience with a programming language such as C/C++/Java or Python

Course Contents

- Introduction and History of GO
    - Why another programming language
- Tour of Go and the Go Playground
- Installing and setting up GO
    - Modules vs GoPath
    - Working with Modules
    - Go Libraries
- Basics Syntax
- Packages, variables and functions
- Flow Control Statements: for, if, else, switch, defer
    - Differences from other languages
- structs, slices and maps
    - arrays vs slices
    - slice internal representation
    - slice pitfalls
    - using maps
- Intermediate Features:
    - Methods and Interfaces
    - Closures
    - Go Interfaces internal representation
- Concurrency:
    - Go Routines and Channels
    - The power of Go Routines
    - Sharing Data By Communicating

- Introduction to Advanced GO (Day 3)
    - Formatting, comments and naming conventions
    - Switch, fallthrough and no ops
    - Redeclaration and Reassignment

- Range with Unicode
- Defer best practices
- New vs Make vs Constructors
- Arrays by pointer vs slice
- Implementation of append
- Global init functions
- Web serving int counter
- Using the blank identifier in importing
- Embedding: Interfaces, Structs vs Inheritance
- Channels use in server throttling