



Golang

GO PROGRAMMING LANGUAGE



Programming & development

Course Curriculum

Basic – 45 Hours



GO PROGRAMMING LANGUAGE

MODULE 1 : GO PROGRAMMING - OVERVIEW

- Features of Go Programming
- Features Excluded Intentionally
- Go Programs
- Compiling and Executing Go Programs

MODULE 2: GO PROGRAMMING – ENVIRONMENT SETUP

- Try it Option Online
- Local Environment Setup
- Text Editor
- The Go Compiler
- Download Go Archive
- Installation on UNIX/Linux/Mac OS X, and FreeBSD
- Installation on Windows
- Verifying the Installation

MODULE 3: GO PROGRAMMING – PROGRAM STRUCTURE

- Hello World Example
- Executing a Go Program

MODULE 4: GO PROGRAMMING – BASIC SYNTAX

- Tokens in Go
- Line Separator
- Comments
- Identifiers
- Keywords
- Whitespace in Go



MODULE 5: GO PROGRAMMING – DATA TYPES

- Integer Types
- Floating Types
- Other Numeric Types

MODULE 6: GO PROGRAMMING – VARIABLES

- Variable Definition in Go
- Static Type Declaration in Go
- Dynamic Type Declaration / Type Inference in Go
- Mixed Variable Declaration in Go
- The lvalues and the rvalues in Go

MODULE 7: GO PROGRAMMING – CONSTANTS

- Integer Literals
- Floating-point Literals
- Escape Sequence
- String Literals in Go
- The const Keyword



MODULE 8: GO PROGRAMMING – OPERATORS

- Arithmetic Operators
- Relational Operators
- Logical Operators
- Bitwise Operators
- Assignment Operators
- Miscellaneous Operators
- Operators Precedence in Go

MODULE 9: GO PROGRAMMING – DECISION MAKING

- The if Statement
- The if...else Statement
- Nested if Statement
- The Switch Statement



- The Select Statement
- The if...else if...else Statement

MODULE 10: GO PROGRAMMING – LOOPS

- for Loop
- Nested for Loops
- Loop Control Statements
- The continue Statement
- The goto Statement
- The Infinite Loop

MODULE 11: GO PROGRAMMING – FUNCTIONS

- Defining a Function
- Calling a Function
- Returning Multiple Values from Function
- Function Arguments
- Call by Value
- Call by Reference
- Function Usage
- Function Closures
- Method



MODULE 12: GO PROGRAMMING – SCOPE RULES

- Local Variables
- Global Variables
- Formal Parameters
- Initializing Local and Global Variables

MODULE 13: GO PROGRAMMING – STRINGS

- Creating Strings
- String Length
- Concatenating Strings

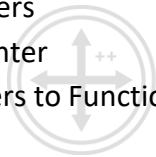


MODULE 14: GO PROGRAMMING – ARRAYS

- Declaring Arrays
- Initializing Arrays
- Accessing Array Elements
- Go Arrays in Detail
- Multidimensional Arrays in Go
- Two-Dimensional Arrays
- Initializing Two-Dimensional Arrays
- Accessing Two-Dimensional Array Elements
- Passing Arrays to Functions

MODULE 15: GO PROGRAMMING – POINTERS

- What Are Pointers?
- How to Use Pointers?
- Nil Pointers in Go
- Go Pointers in Detail
- Go – Array of Pointers
- Go – Pointer to Pointer
- Go – Passing Pointers to Functions



MODULE 16: GO PROGRAMMING – STRUCTURES

- Defining a Structure
- Accessing Structure Members
- Structures as Function Arguments
- Pointers to Structures

MODULE 17: GO PROGRAMMING – SLICES

- Defining a slice
- len() and cap() functions
- Nil slice
- Subslicing
- append() and copy() Functions



MODULE 18: GO PROGRAMMING – RANGE

- Defining a Range

MODULE 19: GO PROGRAMMING – MAPS

- Defining a Map
- delete() Function

MODULE 20: GO PROGRAMMING – RECURSION

- Examples of Recursion in Go

MODULE 21: GO PROGRAMMING – ERROR HANDLING

- New() function

MODULE 22: GO PROGRAMMING – TYPE CASTING

MODULE 23: GO PROGRAMMING – INTERFACES

