

Golang Training

This course covers everything that is there in Go Programming. In this course, you will first learn about Variables, Data Types, Arithmetic operators, Constants, and Strings. After that, you will learn about Boolean types, the Printf function, and Logical Operators. Then you will learn about For Loops, Relational Operators, conditional statements like If and Switch. You will also get the idea about Arrays, Slice, and Maps. In addition to this, you will learn about Functions, Closures, and Recursion. After that, you will learn about Defer, Recover, Pointers, Structs, and Interfaces. Finally, you will get the idea of file operations followed by Casting, and the course will conclude with Creating a Web Server along with the introduction to Go Routines and Channels.

Learning Outcomes

After completing this course, you will be able to:

- Understand the fundamentals of Go programming language.
- Make your own Stand-alone command-line apps or scripts Network and Web servers
- Boost your hire ability through innovative and independent learning.
- Get a certificate on successful completion of the course.

Target Audience

The course can be taken by:

- **Students:** All students who are pursuing technical and professional courses related to computer science / Information Technology.
- **Teachers/Faculties:** All computer science teachers/faculties who want to acquire new skills.
- **Professionals:** All IT professionals, who want to want to acquire new skills or enhance their existing skills.

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Why learn Go Programming?

Go was introduced on November 10th, 2009 as a new system programming language with quick build times. Go's excellent tooling, elegant concurrency model and unique approach to object-orientation have captivated the attention of developers from compiled and scripting languages alike. Go provides you high performance like C/C++, super efficient concurrency handling like Java and fun to code like Python/Perl. By learning Golang, you will gain new perspectives when using other languages. For example, learning Go interfaces may give you a new appreciation for duck types in Python and Ruby. Go demand is increasing, in many markets and it will continue to grow in the future, therefore the demand for Go programmers will also increase, which clearly indicates good career prospects for this language.

Course Content

Overview:

- How to Install Go on Windows
- Go modules overview,
- Creating a go module,
- Adding a dependency,
- Upgrading dependencies.

Fundamentals:

- Introduction to packages
- Short declaration operator,
- The var keyword,
- Exploring type,
- The fmt package,
- Creating your own type,
- Identifiers, Keywords,
- Data Types, Variables ,
- Variables
- Operators.

Control Statements:

- Decision making (if, if-else, Nested-if, if-else-if)
- Loops
- Switch Statement.

Functions & Methods:

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- Variadic Functions
- Anonymous function
- Main and init function
- Defer Keyword, Methods.

Structure:

- Nested Structure,
- Anonymous Structure and Field.

Arrays:

- How to Copy an Array into Another Array
- How to pass an Array to a Function.

Slices:

- Composite Literal
- Sort a slice
- Trim a slice
- Split a slice.

Strings:

- Sort Strings,
- Trim Strings,
- Split a String.
- Compare n-strings.

Pointers:

- Pointers to a Function
- Pointers to a Struct
- Double Pointer

Concurrency:

- Select Statement
- Multiple Goroutines
- Channel
- Unidirectional

Project