GOLANG: A GENERAL-PURPOSE PROGRAMMING LANGUAGE MADE FOR THE FUTURE

Student Development Program

Webinar on



Department of Computer Science had organized a half-day hands-on-Webinar on **"Golang: A General-Purpose Programming Language Made for the Future"** for the students & Faculty of CS&E department.



About GO

The Go programming language (also known as Golang) is Google's general-purpose programming language engineered for the multi-core reality of today's computers. Go is a statically typed, compiled language like C++ that boasts the user friendliness of dynamically typed, interpreted languages like Python. Concurrent, garbage-collected, and designed for scale, Go is a programming language made for building large-scale, complex software. Go removes many of the obstacles like safety, speed, and ease of programming which are normally with conventional programming languages

To give you some real world examples of how Go is being used in the world today, here are some examples of tools and software that use Go:

Kubernetes: the Google-backed container management platform.

ItsAbot, the build-your-own digital assistant framework.

CloudFlare, a content delivery network, DDoS mitigation, and internet security service.

Basecamp, the popular project management suite.

Dropbox, the cloud storage and file sharing app.

Malwarebytes, the antivirus software.

Topics Covered in Webinar:

Section 1 - Getting Started

- Go Runtime and Compilations
- Keywords and Identifiers
- Constants and Variables
- Operators and Expressions
- Local Assignments
- Booleans, Numerics, Characters
- Pointers and Addresses
- Strings

Section 2 - Constructs

- if-else and switch
- for Statements
- Counter-controlled Iterations
- Condition-controlled Iterations
- Range Loops
- Using break and continue

Section 3 - Functions

Section 4 - Working with Data

- Array Literals
- Multidimensional Arrays
- Array Parameters
- Slices and Slice Parameters
- Multidimensional Slices
- Reslicing
- Maps and Map Parameters
- Map Slices
- Structures and Structure Parameters
- Structure Tags and Fields
- Embedded Structures
- Recursive Structures

Section 5 - Goroutines and Channels

- Concurrency vs. Parallelism
- Goroutine Functions and Lambdas
- Wait Groups
- Channels