GOLANG

● Why should you Learn to Go Programming Language?

We are living in an era where technology continues to emerge at a breakneck speed. As 21st-century developers, it is crucial for us to learn new coding languages to keep pace with this rapid change as it increases our versatility, widens our competencies, and brightens our career prospects.

Go is a simple, fast, and concurrent programming language.

Go is a strong and **statically** typed programming language which essentially means each variable has a type that cannot be changed over time and must be defined at compile time. This would help us to capture errors easily at compilation time.

As **Go** is developed by **Google,** we are assured of a strong community supporting this language.

Google created the Go programming language, also known as Golang, to address some of the shortcomings and inefficiencies they were experiencing with existing languages and tools.

Why Google Created Go Language

1) Compile Time: Google has historically struggled with long compile times for its projects having large codebases. Go is designed for faster compilation without the need for dependency checking.

2) String processing: Google frequently processes and analyses large amounts of text data in the form of web pages, requiring **efficient manipulation of strings**. Go programming language has a comprehensive set of string functions. which also uses **garbage collection** to make working with strings more efficient compared to some other languages like C++.

3) Concurrency: Concurrency in Go refers to the ability of a program to execute multiple **tasks independently but not necessarily simultaneously**. It's about structuring your program in a way that allows different parts of it to run independently, making efficient use of available resources. While concurrency is about managing many tasks, parallelism is about executing tasks simultaneously. In Go, a **goroutine is a lightweight thread managed by the Go runtime.**

4) Learning curve: Go is a relatively simple language with a straightforward syntax and a small set of core features. This makes it easy for programmers to learn and use, even if they are new to programming.

GO = C + strings + garbage collection + concurrency