

# GO

Programming Language

# INTRODUCTION

- Go (Golang) is a programming language that was developed by Google in 2007 and then introduced to the public in 2009
- It was developed with the vision of high performance and fast development
- Fast and comes with a powerful standard library
- Open source programming language that makes it easy to build simple, reliable, and efficient software
- Google's goal was to create a language loosely based on the syntax of C that would eliminate the “extraneous garbage” of languages such as C++

# FOUNDERS OF GO

- Robert Griesemer
- Rob Pike
- Ken Thompson

# WHY GO WAS INVENTED?

- Designed to help simplify and solve Google's problems
- Google has millions of lines of code in their software
- Thousands of engineers work on their code
- All of the software runs on a countless number of machines

# WHY LEARN GO?

- **Eliminates slowness**
- **Secure and easy to maintain**
- **Good hardware interaction**
- **Focuses on the speed of production**
- **Designed for people who write, read, debug and maintain large software systems**

# WHO IS USING GO TODAY?

# WHAT TO EXPECT IN GO

- **Compiled**
- **Garbage-collection**
- **Own runtime**
- **Simple syntax and great standard library**
- **Cross-platform**
- **Closures**
- **Object orientated (without inheritance)**
- **Statically typed**
- **Concurrent**
- **Value pointers**

# WHAT TO NOT EXPECT IN GO

- **Exception handling**
- **Inheritance**
- **Generics**
- **Assert**
- **Method overload**



# BASIC STRUCTURE OF GO PROGRAMS

- Package declaration
- Import packages
- Variables
- Statements and Expressions
- Functions
- Comments

# DRAWBACKS OF GO

- A young language, is still being developed
- Absence of manual memory management
- Too simple
- Error handling isn't perfect
- Runtime safety is not that good
- Difficult community