**What is Go programming language, and what is its advantage?** Answer: Go is [syntactically](https://en.wikipedia.org/wiki/Syntax_(programming_languages)) similar to [C](https://en.wikipedia.org/wiki/C_(programming_language)), but with [memory safety](https://en.wikipedia.org/wiki/Memory_safety), [garbage collection](https://en.wikipedia.org/wiki/Garbage_collection_(computer_science)), [structural typing](https://en.wikipedia.org/wiki/Structural_type_system), and [CSP](https://en.wikipedia.org/wiki/Communicating_sequential_processes)-style [concurrency](https://en.wikipedia.org/wiki/Concurrency_(computer_science)).

[**CSP**](https://en.wikipedia.org/wiki/Communicating_sequential_processes)**-style** [**concurrency**](https://en.wikipedia.org/wiki/Concurrency_(computer_science)) -it’s like microservices architecture.

|  |  |
| --- | --- |
| **Implementation language** | [Assembly language](https://en.wikipedia.org/wiki/Assembly_language) and [C++](https://en.wikipedia.org/wiki/C%2B%2B) |

**List the top product that use Go language?** Answer: Ansible, Docker, packer.

**List out top companies those uses Go language.** Answer: **Google, docker,yourtube.**

**Go language Hello program?** package main import "fmt" func main() { fmt.Println("Hello, world!")

**What is need of variable in packer?** Case study: So far, we have written builders with hardcoded value, so only you can use that image, you are expected to global image, so anyone can use it.

Function add() { return 3+5 }

Fuction add(a,b) { return a+b }

For writing a global image, we use variable concept.

{

"variables": {

"aws\_access\_key": "",

"aws\_secret\_key": ""

},

"builders": [{

"type": "amazon-ebs",

"access\_key": "{{user `aws\_access\_key`}}",

"secret\_key": "{{user `aws\_secret\_key`}}",

// ...

}]

}

command line argument -var argument1 value1 -var argumnet2 value2 **Note**- We need to specify these details additionally when we are dealing with variable.