**29-11-2023 Wednesday**

**GOLANG**

Go is a popular programming language.

Go is used to create computer programs.

The default value of a boolean data type is false.

**Go Arrays**

Arrays are used to store multiple values of the same type in a single variable, instead of declaring separate variables for each value.

1:10 means: assign 10 to array index 1 (second element).

If the capacity parameter is not defined, it will be equal to length.

The for loop is the only loop available in Go.

While arrays are used to store multiple values of the same data type into a single variable, structs are used to store multiple values of different data types into a single variable.

To access any member of a structure, use the dot operator (.) between the structure variable name and the structure member:

**Golang:**

Compiled language

Go tool can run directly without virtual machine.

Executables are different for os.

Similarity with lots of languages-c,java,pascal

Class-No ,struct-Yes

Go don’t have any type of overloading(method overloading, operator overloading, overriding)

No try catch

Lexer does a lot of work (no semicolon means it not showing error, lexer can takes place)

Go-case sensitive.

Variable type should be known in advance.

**Types:**

String, Boolean, Integer -unit8,unit64,int8,int64,uintptr, Floating-float32,float64,complex

**Advanced types:**

Array, slices, Maps, Structs, Pointers

%T for type

int-default-1

float-default-1

bool-default-false

string-default-nothing

:= is used only the method ,outside not possible. Use var instead of it.

package main

import "fmt"

const Logintoken int = 23223 //public

func main() {

    var ans bool

    fmt.Println(ans)

    fmt.Printf("variable is of type :%T\n", ans)

    //implicit type:

    var web = "ffvf"

    fmt.Println(web)

    //no var style

    noofusers := 3000

    fmt.Println(noofusers)

    //const

    fmt.Println(Logintoken)

    fmt.Printf("variable is of type :%T\n", Logintoken)

}

**user input**

package main

import (

    "bufio"

    "fmt"

    "os"

)

func main() {

    welcome := "welcome to user input"

    fmt.Println(welcome)

    reader := bufio.NewReader(os.Stdin)

    fmt.Println("enter the prize:")

    //comma ok // err ok

    input, err := reader.ReadString('\n')

    fmt.Println(input)

    fmt.Printf("type:%T\n", input)

    fmt.Print(err)

}

**Conversions**

package main

import (

    "bufio"

    "fmt"

    "os"

    "strconv"

    "strings"

)

func main() {

    reader := bufio.NewReader(os.Stdin)

    fmt.Println("Enter your rating between 1 to 5")

    input, err := reader.ReadString('\n')

    fmt.Println("thanks for rating: ", input)

    numrating, err := strconv.ParseFloat(strings.TrimSpace(input), 64)

    if err != nil {

        fmt.Println(err)

    } else {

        fmt.Println("Added 1 to your rating", numrating+1)

    }

}

**Time Handling**

package main

import (

    "fmt"

    "time"

)

func main() {

    presentTime := time.Now()

    fmt.Println(presentTime.Format("01-02-2006 15:04:05 Monday"))

    fmt.Println(presentTime)

    creatDate := time.Date(2023, time.November, 28, 16, 23, 0, 0, time.UTC)

    fmt.Println(creatDate.Format("01-02-2006 15:04:05 Monday"))

    fmt.Println(creatDate)

}

set goos=windows

set goarch=amd64

go build -o filename.exe