GO LANG
ASSIGNMENT - 1

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Q1. You're developing an online store application in GoLang. As part of the application, you need to keep track of various product details such as name, price, and quantity in stock. Design a set of variables and assign values to represent a specific product in the inventory. Ensure you use appropriate data types for each variable to accurately capture the information.

CODE :

```
//2347244

package main

import "fmt"

//creating struct-for-product
type product struct {
   id    int
   name  string
   brand string
   price float32
}

func main() {
   //Defining-
   var products []product
   var opt bool = true
   var id int = 100
   var name, s string
   var brand string
   var price float32
   fmt.Println("\t\tProduct Inventory")
   for opt {
       fmt.Print("\nEnter the product name : ")
       fmt.Scan(&name)
       fmt.Print("\nEnter the product brand : ")
       fmt.Scan(&brand)
       fmt.Print("\nEnter the product price : ")
       fmt.Scan(&price)
       products = append(products, addProduct(id, name, brand, price))
```

```
        id++
        fmt.Print("\nDo you want to add more?(y/n): ")
        fmt.Scan(&s)
        if s != "y" {
            opt = false
        }
    }
    display(products)
}

func addProduct(id int, name string, brand string, price float32) product {
    var item product
    item.id = id
    item.name = name
    item.brand = brand
    item.price = price
    return item
}
func display(products []product) {
    for enum, item := range products { //for _, item := range
        fmt.Printf("\n========Product-%d==============\n", enum+1)
        fmt.Println("\t\tID :", item.id)
        fmt.Println("\t\tName :", item.name)
        fmt.Println("\t\tBrand :", item.brand)
        fmt.Printf("\t\tPrice : %.2f", item.price)
    }
}
```

OUTPUT :

```
                Product Inventory

 Enter the product name : Camera

 Enter the product brand : Sony

 Enter the product price : 899

 Do you want to add more?(y/n): y

 Enter the product name : Laptop

 Enter the product brand : Omen

 Enter the product price : 999

 Do you want to add more?(y/n): n

 ========Product-1==============
                ID : 100
                Name : Camera
                Brand : Sony
                Price : 899.00
 ========Product-2==============
                ID : 101
                Name : Laptop
                Brand : Omen
                Price : 999.00%
 gppavitharani@Its-Paviii ASS1 %
```

Q2. You're tasked with building a student information system in GoLang for a school. Each student record needs to store details such as student ID, name, age and grade. Define variables to store the information of a single student and assign values accordingly. Pay attention to selecting appropriate data types to represent each piece of information.

CODE :

```
//2347244
package main

import "fmt"

type student struct {
   id    int
   name  string
   age   int
   grade string
}

func main() {
   var students []student
   var id int
   var name, s string
   var age int
   var grade string
   var opt bool = true
   for opt {
       fmt.Print("\n Enter student ID :")
       fmt.Scan(&id)
       fmt.Print("\n Enter student name :")
       fmt.Scan(&name)
       fmt.Print("\n Enter student age :")
       fmt.Scan(&age)
       fmt.Print("\n Enter student grade :")
       fmt.Scan(&grade)
       students = append(students, addDetails(id, name, age, grade))
       fmt.Print("\n Do you want to add more?(y/n) : ")
       fmt.Scan(&s)
       if s != "y" {
           opt = false
       }
   }
}
func addDetails(id int, name string, age int, grade string) student {
```

```
    var item student
    item.id = id
    item.name = name
    item.age = age
    item.grade = grade
    return item
}
```

OUTPUT :

```
gppavitharani@Its-Paviii ASS1 % go run student.go
 Enter student ID : 11
 Enter student name : Pavi
 Enter student age : 15
 Enter student grade : A
 Do you want to add more?(y/n) : y
 Enter student ID : 12
 Enter student name : Nimmy
 Enter student age : 17
 Enter student grade : B
 Do you want to add more?(y/n) : N
gppavitharani@Its-Paviii ASS1 %
```

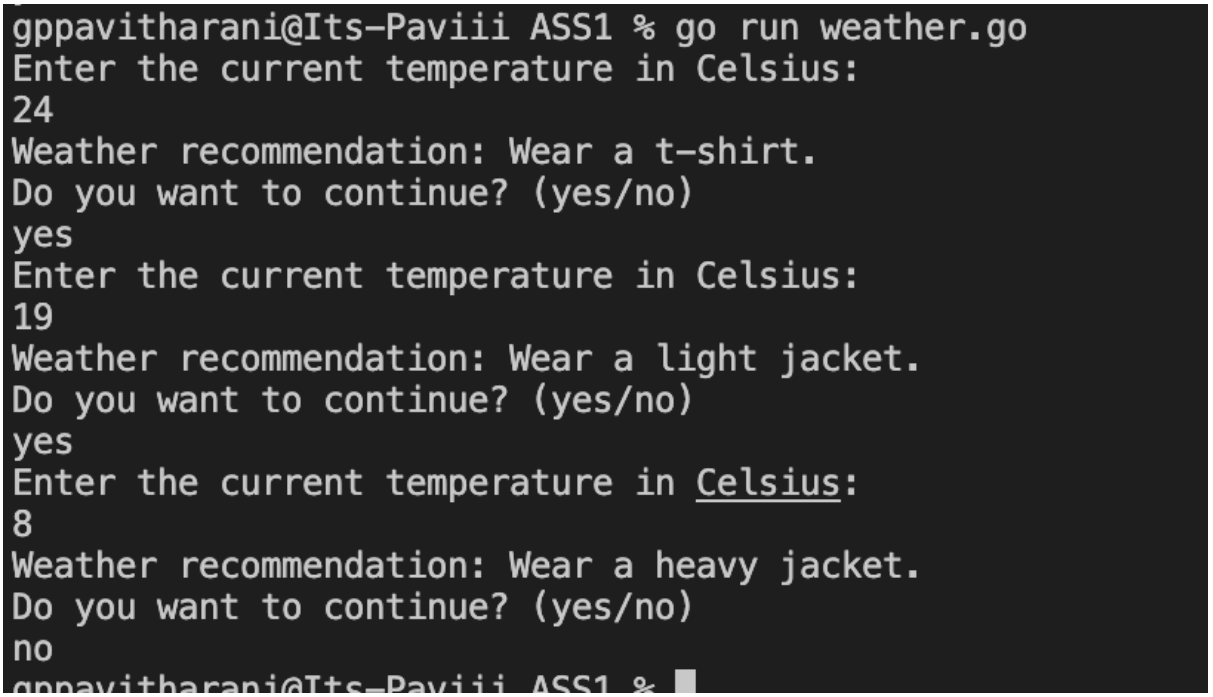
Q3. Imagine you are developing a simple weather application in Go that takes user
input for the current temperature in Celsius and provides a weather recommendation based on the following conditions:
If the temperature is below 10 degrees Celsius, recommend wearing a heavy jacket.
If the temperature is between 10 and 20 degrees Celsius (inclusive), recommend
wearing a light jacket.
If the temperature is above 20 degrees Celsius, recommend wearing a t-shirt.
Write a Go program that takes the user input for the current temperature, processes it using variables and control flow structures, and prints the appropriate weather recommendation.
Your program should include the following:
Declaration of a variable to store the temperature.

Input statement to get the temperature from the user.
Conditional statements to determine the appropriate weather recommendation based on the temperature.
Output statement to display the weather recommendation.

CODE :

```go
package main

import (
    "fmt"
)

func main() {
    // Declare a variable to store the temperature
    var temperature float64

    // Input statement to get the temperature from the user
    fmt.Println("Enter the current temperature in Celsius:")
    fmt.Scanln(&temperature)

    // Conditional statements to determine the appropriate weather recommendation
    var recommendation string

    if temperature < 10 {
        recommendation = "Wear a heavy jacket."
    } else if temperature >= 10 && temperature <= 20 {
        recommendation = "Wear a light jacket."
    } else {
        recommendation = "Wear a t-shirt."
    }

    // Output statement to display the weather recommendation
    fmt.Println("Weather recommendation:", recommendation)
}
```

OUTPUT :


gppavitharani@Its-Paviii ASS1 % go run weather.go
Enter the current temperature in Celsius:
24
Weather recommendation: Wear a t-shirt.
Do you want to continue? (yes/no)
yes
Enter the current temperature in Celsius:
19
Weather recommendation: Wear a light jacket.
Do you want to continue? (yes/no)
yes
Enter the current temperature in Celsius:
8
Weather recommendation: Wear a heavy jacket.
Do you want to continue? (yes/no)
no