**Introduction:**

package main

import "fmt"

type websiteinfo struct{

name string

url string

ageinyear int

}

func main() {

type youtube struct{

websiteinfo

ytFirstVideo string

ytlongestvideo string

}

type amazon struct{

websiteinfo

departments string

can\_sell bool

}

youtube\_var := youtube{websiteinfo{"Youtube", "www.youtube.com", 14}, "me at the zoo", "571 hours, 1 minute and 41 seconds"}

amazon\_var := amazon{websiteinfo{"Amazon", "www.amazon.com", 25}, "Automotive, computers, electronics etc", true}

fmt.Println(youtube\_var, amazon\_var)

fmt.Println("youtube first video:", youtube\_var.ytFirstVideo)

fmt.Println("youtube url:", youtube\_var.websiteinfo.url)

fmt.Println("youtube url:", youtube\_var.url)

fmt.Println("can we sell on amazon:", amazon\_var.can\_sell)

fmt.Println("Amazon url:", amazon\_var.websiteinfo.url)

fmt.Println("Amazon url:", amazon\_var.url)

}

func (webinfo websiteinfo) basicInfo(){

fmt.Println("Name of website:", webinfo.name)

fmt.Println("Url of website:", webinfo.url)

fmt.Println("How old is this website:", webinfo.ageinyear)

}

youtube\_var.websiteinfo.basicInfo()

amazon\_var.basicInfo()

func (yt youtube) youtubeInfo(){

fmt.Println("Name of website:", yt.name)

fmt.Println("Url of website:", yt.websiteinfo.url)

fmt.Println("How old is this website:", yt.ageinyear)

fmt.Println("First video on youtube:", yt.ytFirstVideo)

fmt.Println("Longest video on youtube:", yt.ytlongestvideo)

}

youutbe\_var. youtubeInfo()

func (azn amazon) amazonInfo(){

azn.basicInfo()

fmt.Println("Departments of amazon:", azn.departments)

fmt.Println("Can we sell on amazon:", azn.can\_sell)

}

amazon\_var.amazonInfo()

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type youtube struct{

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departments string

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}

func (webinfo websiteinfo) basicInfo(){

fmt.Println("Name of website:", webinfo.name)

fmt.Println("Url of website:", webinfo.url)

fmt.Println("How old is this website:", webinfo.ageinyear)

}

func (yt youtube) youtubeInfo(){

fmt.Println("Name of website:", yt.name)

fmt.Println("Url of website:", yt.websiteinfo.url)

fmt.Println("How old is this website:", yt.ageinyear)

fmt.Println("First video on youtube:", yt.ytFirstVideo)

fmt.Println("Longest video on youtube:", yt.ytlongestvideo)

}

func (azn amazon) amazonInfo(){

azn.basicInfo()

fmt.Println("Departments of amazon:", azn.departments)

fmt.Println("Can we sell on amazon:", azn.can\_sell)

}

func main() {

youtube\_var := youtube{websiteinfo{"Youtube", "www.youtube.com", 14}, "me at the zoo", "571 hours, 1 minute and 41 seconds"}

amazon\_var := amazon{websiteinfo{"Amazon", "www.amazon.com", 25}, "Automotive, computers, electronics etc", true}

fmt.Println(youtube\_var, amazon\_var)

fmt.Println("youtube first video:", youtube\_var.ytFirstVideo)

fmt.Println("youtube url:", youtube\_var.websiteinfo.url)

fmt.Println("youtube url:", youtube\_var.url)

fmt.Println("can we sell on amazon:", amazon\_var.can\_sell)

fmt.Println("Amazon url:", amazon\_var.websiteinfo.url)

fmt.Println("Amazon url:", amazon\_var.url)

youtube\_var. websiteinfo.basicInfo()

amazon\_var.basicInfo()

youtube\_var.youtubeInfo()

amazon\_var.amazonInfo()

}

**Embedded poiners:**

package main

import "fmt"

type websiteinfo struct {

name string

url string

ageinyear int

}

type youtube struct {

\* websiteinfo // Pointer embedding

ytFirstVideo string

ytlongestvideo string

}

func (webinfo \*websiteinfo) BasicInfo() {

fmt.Println("Name of website:", webinfo.name)

fmt.Println("Url of website:", webinfo.url)

fmt.Println("How old is this website:", webinfo.ageinyear)

}

func main() {

webinfo := &websiteinfo{"YouTube", "www.youtube.com", 14}

youtube\_var := youtube{

websiteinfo: webinfo, // Pointer embedding

ytFirstVideo: "Me at the zoo",

ytlongestvideo: "571 hours, 1 minute and 41 seconds",

}

// Passing the pointer to basicInfo

youtube\_var.BasicInfo()

}

**Embedding slice of structs:**

package main

import "fmt"

type websiteinfo struct {

name string

url string

ageinyear int

}

type websitelist struct {

websites []websiteinfo // Embedding a slice of structs

}

// Function to modify a specific website by index

func (wl \*websitelist) updateWebsiteAge(index int, newAge int) {

if index >= 0 && index < len(wl.websites) {

wl.websites[index].ageinyear = newAge

} else {

fmt.Println("Index out of range")

}

}

func main() {

websiteData := []websiteinfo{

{"YouTube", "www.youtube.com", 14},

{"Google", "www.google.com", 25},

{"Facebook", "www.facebook.com", 20},

}

websiteList := websitelist{

websites: websiteData,

}

fmt.Println("Before Update:")

for i, website := range websiteList.websites {

fmt.Printf("Index %d - Name: %s, URL: %s, Age: %d\n", i, website.name, website.url, website.ageinyear)

}

websiteList.updateWebsiteAge(0, 15)

fmt.Println("\nAfter Update:")

for i, website := range websiteList.websites {

fmt.Printf("Index %d - Name: %s, URL: %s, Age: %d\n", i, website.name, website.url, website.ageinyear)

}

}