Slip 1

Q1)Write a Program in go language to print Student name, roll no, division and college name.

package main

import "fmt"

func main(){

s\_name,r\_no,div,clg\_name := "ANCHAL",6474,"BCA","SM.JOSHI COLLEGE"

fmt.Println("Student name is:",s\_name)

fmt.Println("Student Rollno is:",r\_no)

fmt.Println("Student Division is:",div)

fmt.Println("Student College Name is:",clg\_name)

}

Q2) Write a program in go language to create structure student. Write a method show () whose receiver is a pointer of struct student.

package main

import "fmt"

type student struct

{

sname string

sroll int

sper float64

}

func (s student) show(){

fmt.Println("student Name:",s.sname)

fmt.Println("stufdent Rollno:",s.sroll)

fmt.Println("student percentage:",s.sper)

}

func main(){

stud:=student{}

stud.getdata()

stud.show()

}

func (s \* student) getdata(){

fmt.Scan(&s.sname)

fmt.Scan(&s.sroll)

fmt.Scan(&s.sper)

}

Iot

Q1Write a Python program to blink LED.

import RPi.GPIO as GPIO # Import Raspberry Pi GPIO library

import time # Import time module

GPIO.setwarnings(False) # Ignore warning for now

GPIO.setmode(GPIO.BCM)

#assign numbering for the GPIO using BCM

#GPIO.setmode(GPIO.BOARD)

#assingn number for the GPIO using Board

cnt = 0

Blink\_Time = 1 # change LED status every 1 seconds

RED\_LED = 14

GPIO.setup(RED\_LED, GPIO.OUT)

while True:

if cnt == 0 :

GPIO.output(RED\_LED, False)

cnt = 1

else:

GPIO.output(RED\_LED, True)

cnt = 0

time.sleep(Blink\_Time)

GPIO.cleanup()

Slip2

Q1Write a Program in go language to print whether number is even or odd. [5 Marks]

package main

import "fmt"

func main(){

fmt.Print("Enter number : ")

var n int

fmt.Scanln(&n)

if(n%2==0){

fmt.Println(n,"is Even number")

}else{

fmt.Println(n,"is Odd number")

}

}

Q2) Write a program in go language to create structure student. Write a method show () whose receiver is a pointer of struct student.

package main

import "fmt"

type student struct

{

sname string

sroll int

sper float64

}

func (s student) show(){

fmt.Println("student Name:",s.sname)

fmt.Println("stufdent Rollno:",s.sroll)

fmt.Println("student percentage:",s.sper)

}

func main(){

stud:=student{}

stud.getdata()

stud.show()

}

func (s \* student) getdata(){

fmt.Scan(&s.sname)

fmt.Scan(&s.sroll)

fmt.Scan(&s.sper)

}

Q1)Write Python Program to toggle two LED’s.

import RPi.GPIO as GPIO # Import Raspberry Pi GPIO library from time import sleep

GPIO.setwarnings(False)

GPIO.setmode(GPIO.BOARD)

RED\_LED = 14

GREEN\_LED = 15

GPIO.setup(RED\_LED, GPIO.OUT, initial=GPIO.LOW)

GPIO.setup(GREEN\_LED, GPIO.OUT, initial=GPIO.LOW)

while True: # Run forever

GPIO.output(RED\_LED, True) # Turn ON

GPIO.output(GREEN\_LED, False) # Turn OFF

sleep(1) # Sleep for 1 second

GPIO.output(RED\_LED, False) # Turn OFF

GPIO.output(GREEN\_LED, True) # Turn ON

sleep(1) # Sleep for 1 second

slip 3

q1) Write a Program in go Language to print address of a variable.

package main

import "fmt"

func main(){

a := 10

fmt.Println("address of a variable is :%x" ,&a)

}

Q2) Write a Program in go language to illustrate pointer to pointer concept.

package main

import "fmt"

func main() {

var V int = 100

var pt1 \*int = &V

var pt2 \*\*int = &pt1

fmt.Println("The Value of Variable V is = ", V)

fmt.Println("Address of variable V is = ", &V)

fmt.Println("The Value of pt1 is = ", pt1)

fmt.Println("Address of pt1 is = ", &pt1)

fmt.Println("The value of pt2 is = ", pt2)

fmt.Println("Value at the address of pt2 is or \*pt2 = ", \*pt2)

fmt.Println("\*(Value at the address of pt2 is) or \*\*pt2 = ", \*\*pt2)

}

Q1Write a Python program to blink LED.

import RPi.GPIO as GPIO # Import Raspberry Pi GPIO library

import time # Import time module

GPIO.setwarnings(False) # Ignore warning for now

GPIO.setmode(GPIO.BCM)

#assign numbering for the GPIO using BCM

#GPIO.setmode(GPIO.BOARD)

#assingn number for the GPIO using Board

cnt = 0

Blink\_Time = 1 # change LED status every 1 seconds

RED\_LED = 14

GPIO.setup(RED\_LED, GPIO.OUT)

while True:

if cnt == 0 :

GPIO.output(RED\_LED, False)

cnt = 1

else:

GPIO.output(RED\_LED, True)

cnt = 0

time.sleep(Blink\_Time)

GPIO.cleanup()

Slip4

Q1) Write a Program in go language to swap the number without temporary variable.

package main

import "fmt"

func main(){

var a,b int

fmt.Print("Enter the value of a : ")

fmt.Scanln(&a)

fmt.Print("Enter the value of b: ")

fmt.Scanln(&b)

a = a+b

b = a-b

a = a-b

fmt.Println("value of a :",a)

fmt.Println("value of b :",b)

}

Q2 Write a Program in go language to print Fibonacci series of n terms.package main

import "fmt"

func main(){

var a,b,n,c int

a=0

b=1

c=a+b

fmt.Println("enter the number of terms")

fmt.Scanln(&n)

fmt.Println("fibonacci series are ",a,b )

for i:=0;i<=n;i++{

fmt.Println(c)

a=b;

b=c;

c=a+b;

}

}

Q1)Write Python Program to toggle two LED’s.

import RPi.GPIO as GPIO # Import Raspberry Pi GPIO library from time import sleep

GPIO.setwarnings(False)

GPIO.setmode(GPIO.BOARD)

RED\_LED = 14

GREEN\_LED = 15

GPIO.setup(RED\_LED, GPIO.OUT, initial=GPIO.LOW)

GPIO.setup(GREEN\_LED, GPIO.OUT, initial=GPIO.LOW)

while True: # Run forever

GPIO.output(RED\_LED, True) # Turn ON

GPIO.output(GREEN\_LED, False) # Turn OFF

sleep(1) # Sleep for 1 second

GPIO.output(RED\_LED, False) # Turn OFF

GPIO.output(GREEN\_LED, True) # Turn ON

sleep(1) # Sleep for 1 second

slip 5

Q1) Write a Program in go language to print whether number is even or odd. [5 Marks]

Q1Write a Program in go language to print whether number is even or odd. [5 Marks]

package main

import "fmt"

func main(){

fmt.Print("Enter number : ")

var n int

fmt.Scanln(&n)

if(n%2==0){

fmt.Println(n,"is Even number")

}else{

fmt.Println(n,"is Odd number")

}

}

Q2) Write a Program in go language to explain new function.

package main

import "fmt"

func one(xPtr \*int){

\*xPtr = 1

}

func main(){

xPtr:= new(int)

one(xPtr)

fmt.Println(\*xPtr)

}

Q1Write a Python program to blink LED.

import RPi.GPIO as GPIO # Import Raspberry Pi GPIO library

import time # Import time module

GPIO.setwarnings(False) # Ignore warning for now

GPIO.setmode(GPIO.BCM)

#assign numbering for the GPIO using BCM

#GPIO.setmode(GPIO.BOARD)

#assingn number for the GPIO using Board

cnt = 0

Blink\_Time = 1 # change LED status every 1 seconds

RED\_LED = 14

GPIO.setup(RED\_LED, GPIO.OUT)

while True:

if cnt == 0 :

GPIO.output(RED\_LED, False)

cnt = 1

else:

GPIO.output(RED\_LED, True)

cnt = 0

time.sleep(Blink\_Time)

GPIO.cleanup()

Slip 6

WAP in go language to find the largest and smallest number in an array.

package main

import "fmt"

func main(){

var a[50] int

var size int

var big int

var small int

fmt.Printf("\nEnter the size of the array: ")

fmt.Scan(&size)

fmt.Printf("\n\nEnter the elements of the array: \n\n")

for i := 0; i < size; i++{

fmt.Scan(&a[i])

big = a[0] }

for i := 1; i < size; i++{

if(big < a[i]){

big = a[i]

}

}

fmt.Printf("\n\nThe largest element is: %d", big)

small = a[0]

for i := 1; i < size; i++{

if(small>a[i]){

small = a[i]

}

}

fmt.Printf("\n\nThe smallest element is: %d", small)

}

Q2)Write a Program in go language to create and print multidimensional Slice.

// Golang program to illustrate

// the multi-dimensional slice

package main

import "fmt"

func main() {

s1 := [][]string{

[]string{"C Programming", "FYBCA"},

[]string{"C++ Programming", "SYBCA"},

[]string{"GO Programming", "TYBCA"},

}

fmt.Println("Slice 1 : ", s1)

fmt.Println("MultiDimensional Slice s1:")

for i := 0; i < len(s1); i++ {

fmt.Println(s1[i])

}

fmt.Println("Slice s1 Like Matrix:")

n := len(s1)

m := len(s1[0])

for i := 0; i < n; i++ {

for j := 0; j < m; j++ {

fmt.Print(s1[i][j] + " ")

}

fmt.Print("\n")

}

}

Q1)Write Python Program to toggle two LED’s.

import RPi.GPIO as GPIO # Import Raspberry Pi GPIO library from time import sleep

GPIO.setwarnings(False)

GPIO.setmode(GPIO.BOARD)

RED\_LED = 14

GREEN\_LED = 15

GPIO.setup(RED\_LED, GPIO.OUT, initial=GPIO.LOW)

GPIO.setup(GREEN\_LED, GPIO.OUT, initial=GPIO.LOW)

while True: # Run forever

GPIO.output(RED\_LED, True) # Turn ON

GPIO.output(GREEN\_LED, False) # Turn OFF

sleep(1) # Sleep for 1 second

GPIO.output(RED\_LED, False) # Turn OFF

GPIO.output(GREEN\_LED, True) # Turn ON

sleep(1) # Sleep for 1 second

slip 7

Q1) Write a Program in go language to swap the number without temporary variable. [5 Marks]

package main

import "fmt"

func main(){

var a,b int

fmt.Print("Enter the value of a : ")

fmt.Scanln(&a)

fmt.Print("Enter the value of b: ")

fmt.Scanln(&b)

a = a+b

b = a-b

a = a-b

fmt.Println("value of a :",a)

fmt.Println("value of b :",b)

}

Q2) Write a Program in go language to accept the book details such as BookID, Title, Author, Price. Read and display the details of n number of books.

package main

import "fmt"

type Books struct{

id int

title string

author string

price float64

}

func main(){

var a[20] Books

var n int

fmt.Println("\nEnter the Total Number of books: ")

fmt.Scan(&n)

for i:=0;i<n;i++{

fmt.Println("\nEnter the Book id: ")

fmt.Scan(&a[i].id)

fmt.Println("\nEnter the Book title: ")

fmt.Scan(&a[i].title)

fmt.Println("\nEnter the Book author: ")

fmt.Scan(&a[i].author)

fmt.Println("\nEnter the Book price: ")

fmt.Scan(&a[i].price)

}

fmt.Println("\n\*\*\*\*\*\*\*Book Details\*\*\*\*\*\*")

for i:=0;i<n;i++{

fmt.Println("\nBook Id: ",a[i].id)

fmt.Println("\nBook Title: ",a[i].title)

fmt.Println("\nBook Author: ",a[i].author)

fmt.Println("\nBook Price: ",a[i].price)

}

}

Q1Write a Python program to blink LED.

import RPi.GPIO as GPIO # Import Raspberry Pi GPIO library

import time # Import time module

GPIO.setwarnings(False) # Ignore warning for now

GPIO.setmode(GPIO.BCM)

#assign numbering for the GPIO using BCM

#GPIO.setmode(GPIO.BOARD)

#assingn number for the GPIO using Board

cnt = 0

Blink\_Time = 1 # change LED status every 1 seconds

RED\_LED = 14

GPIO.setup(RED\_LED, GPIO.OUT)

while True:

if cnt == 0 :

GPIO.output(RED\_LED, False)

cnt = 1

else:

GPIO.output(RED\_LED, True)

cnt = 0

time.sleep(Blink\_Time)

GPIO.cleanup()

Slip 8

Q1) Write a Program in go to print table of given number. [5 Marks]

package main

import "fmt"

func main(){

var n int

fmt.Println("Enter the number for printing its table")

fmt.Scan(&n)

for i := 1; i <= 10; i++ {

fmt.Println(n,"x",i, "=",n\*i)

}

}

Q2) Write a Program in go language to concatenate two strings using pointers. [15 Marks]

package main

import (

"fmt"

"strings"

)

func main() {

s := []string{"This", "is", "a", "string."}

v := strings.Join(s, " ")

fmt.Println(v) // This is a string.

}

Q3) Write a Python program to blink LED.

import RPi.GPIO as GPIO # Import Raspberry Pi GPIO library

import time # Import time module

GPIO.setwarnings(False) # Ignore warning for now

GPIO.setmode(GPIO.BCM)

#assign numbering for the GPIO using BCM

#GPIO.setmode(GPIO.BOARD)

#assingn number for the GPIO using Board

cnt = 0

Blink\_Time = 1 # change LED status every 1 seconds

RED\_LED = 14

GPIO.setup(RED\_LED, GPIO.OUT)

while True:

if cnt == 0 :

GPIO.output(RED\_LED, False)

cnt = 1

else:

GPIO.output(RED\_LED, True)

cnt = 0

time.sleep(Blink\_Time)

GPIO.cleanup()

Slip9

Q1) Write a Program in go language to print Student name, rollno, division and college name. [5 Marks]

package main

import "fmt"

func main(){

s\_name,r\_no,div,clg\_name := "ANCHAL",6474,"BCA","SM.JOSHI COLLEGE"

fmt.Println("Student name is:",s\_name)

fmt.Println("Student Rollno is:",r\_no)

fmt.Println("Student Division is:",div)

fmt.Println("Student College Name is:",clg\_name)

}

Q2) Write a Program in go language to accept n student details like roll\_no, stud\_name, mark1,mark2, mark3. Calculate the total and average of marks using structure.

package main

import "fmt"

type Student struct{

srno int

m1,m2,m3 int

sname string

}

func main(){

var s[4] Student

var n int

var total float64

var avg float64

fmt.Println("enter the number of students")

fmt.Scan(&n)

for i:=0;i<n;i++{

fmt.Println("Enter the rollno of student")

fmt.Scan(&s[i].srno)

fmt.Println("Enter the name of student")

fmt.Scan(&s[i].sname)

fmt.Println("Enter the marks of 3 subjects")

fmt.Scan(&s[i].m1,&s[i].m2,&s[i].m3)

}

for i:=0;i<n;i++{

fmt.Println("\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_STUDENT INFORMATION\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_")

fmt.Println("Rollno",s[i].srno)

fmt.Println("Name",s[i].sname)

fmt.Println("Marks of 3 subjects",&s[i].m1,&s[i].m2,&s[i].m3)

total=float64(s[i].m1+s[i].m2+s[i].m3)

avg=float64(total/3.0)

fmt.Println("Total marks",total)

fmt.Println("Average is",avg)

}

}

Q1)Write Python Program to toggle two LED’s.

import RPi.GPIO as GPIO # Import Raspberry Pi GPIO library from time import sleep

GPIO.setwarnings(False)

GPIO.setmode(GPIO.BOARD)

RED\_LED = 14

GREEN\_LED = 15

GPIO.setup(RED\_LED, GPIO.OUT, initial=GPIO.LOW)

GPIO.setup(GREEN\_LED, GPIO.OUT, initial=GPIO.LOW)

while True: # Run forever

GPIO.output(RED\_LED, True) # Turn ON

GPIO.output(GREEN\_LED, False) # Turn OFF

sleep(1) # Sleep for 1 second

GPIO.output(RED\_LED, False) # Turn OFF

GPIO.output(GREEN\_LED, True) # Turn ON

sleep(1) # Sleep for 1 second

slip 10

Q1) Write a Program in go language to swap the number without temporary variable. [5 Marks

package main

import "fmt"

func main(){

var a,b int

fmt.Print("Enter the value of a : ")

fmt.Scanln(&a)

fmt.Print("Enter the value of b: ")

fmt.Scanln(&b)

a = a+b

b = a-b

a = a-b

fmt.Println("value of a :",a)

fmt.Println("value of b :",b)

}

Q2) Write a Program in go language to sort array elements in ascending order. [15 Marks]

package main

import "fmt"

func main(){

var temp,s,j int

fmt.Println("enter the size of array")

fmt.Scan(&s)

a:= make([]int,s)

fmt.Println("enter the values of array")

for i:=0;i< s;i++{

fmt.Scan(&a[i])

}

for i := 0;i<s;i++{

for j:=i+1;j< s;j++{

if(a[i] > a[j]){

temp =a[i];

a[i]=a[j];

a[j]=temp;

}

}

}

fmt.Println("Array after sorting in ascending order")

for j =0;j< s;j++{

fmt.Println(a[j])

}

}

Q3) Write a Python program to blink LED.

import RPi.GPIO as GPIO # Import Raspberry Pi GPIO library

import time # Import time module

GPIO.setwarnings(False) # Ignore warning for now

GPIO.setmode(GPIO.BCM)

#assign numbering for the GPIO using BCM

#GPIO.setmode(GPIO.BOARD)

#assingn number for the GPIO using Board

cnt = 0

Blink\_Time = 1 # change LED status every 1 seconds

RED\_LED = 14

GPIO.setup(RED\_LED, GPIO.OUT)

while True:

if cnt == 0 :

GPIO.output(RED\_LED, False)

cnt = 1

else:

GPIO.output(RED\_LED, True)

cnt = 0

time.sleep(Blink\_Time)

GPIO.cleanup()

Slip 11

Q1) Write a Program in go for PASCAL Triangle. [5 Marks

package main

import "fmt"

func main(){

var rows int

var temp int = 1

fmt.Print("Enter number of rows : ")

fmt.Scan(&rows)

for i := 0; i < rows; i++ {

for j := 1; j <= rows-i ; j++ {

fmt.Print(" ")

}

for k := 0; k <= i; k++ {

if (k==0 || i==0) {

temp = 1

}else{

temp = temp\*(i-k+1)/k

}

fmt.Printf(" %d",temp)

}

fmt.Println("")

}

}

Q2) Write a Program in go language to accept n records of employee information (eno,ename,salary) and display record of employees having maximum salary. [15 Marks]

package main

import "fmt"

type employee struct{

eno int

esal float64

ename string

}

func main(){

var e1[10] employee

var n,k int

var max float64

fmt.Println("enter the number of employess")

fmt.Scan(&n)

for i:=0;i< n;i++{

fmt.Println("enter employee id")

fmt.Scan(&e1[i].eno)

fmt.Println("enter employe name")

fmt.Scan(&e1[i].ename)

fmt.Println("enter employee salary")

fmt.Scan(&e1[i].esal)

}

max=e1[0].esal

for i:=0;i<n;i++{

if(e1[i].esal>max){

max=e1[i].esal

k=i

}

}

fmt.Println("employee having maximum salary")

fmt.Println("employee no:" ,e1[k].eno)

fmt.Println("employee name:" ,e1[k].ename)

fmt.Println("employee salary:",e1[k].esal)

}

Q3) Write Python Program to toggle two LED’s.

repeat

Slip 12

Q1) Write a program in go language to print multiplication of two numbers using method. [5 Marks]

Q2) Write a program in go language to create structure student. Write a method show () whose receiver is a pointer of struct student. [15 Marks]

package main

import "fmt"

type student struct

{

sname string

sroll int

sper float64

}

func (s student) show(){

fmt.Println("student Name:",s.sname)

fmt.Println("stufdent Rollno:",s.sroll)

fmt.Println("student percentage:",s.sper)

}

func main(){

stud:=student{}

stud.getdata()

stud.show()

}

func (s \* student) getdata(){

fmt.Scan(&s.sname)

fmt.Scan(&s.sroll)

fmt.Scan(&s.sper)

}

Q3) Write a Python program to blink LED.

Repeat

Slip13

Q1) Write a program in go language to check whether entered number is EVEN or ODD. [5 Marks]

Repeat

Q2) Write a Program in go language to accept n student details like roll\_no, stud\_name, mark1,mark2, mark3. Calculate the total and average of marks using structure.

Repeat

Toggle

Repeat

Slip14

Q1) Write a Program in go language to print Fibonacci series of n terms. [5 Marks]

Repeat

Or Q2) Write a program in go language to demonstrate working embedded interfaces. [15 Marks]

// Go program to illustrate the concept

// of the embedding interfaces

package main

import "fmt"

// Interface 1

type AuthorDetails interface {

details()

}

// Interface 2

type AuthorArticles interface {

articles()

}

// Interface 3

// Interface 3 embedded with

// interface 1 and 2

type FinalDetails interface {

AuthorDetails

AuthorArticles

}

// Structure

type author struct {

a\_name string

branch string

college string

year int

salary int

particles int

tarticles int

}

// Implementing method of

// the interface 1

func (a author) details() {

fmt.Printf("Author Name: %s", a.a\_name)

fmt.Printf("\nBranch: %s and passing year: %d",

a.branch, a.year)

fmt.Printf("\nCollege Name: %s", a.college)

fmt.Printf("\nSalary: %d", a.salary)

fmt.Printf("\nPublished articles: %d", a.particles)

}

// Implementing method

// of the interface 2

func (a author) articles() {

pendingarticles := a.tarticles - a.particles

fmt.Printf("\nPending articles: %d", pendingarticles)

}

// Main value

func main() {

// Assigning values

// to the structure

values := author{

a\_name: "Mickey",

branch: "Computer science",

college: "XYZ",

year: 2012,

salary: 50000,

particles: 209,

tarticles: 309,

}

// Accessing the methods of

// the interface 1 and 2

// Using FinalDetails interface

var f FinalDetails = values

f.details()

f.articles()

}

Q3) Write a Python program to blink LED. [10 Marks]

Repeat

Slip 15

Q1) Write a Program in go language to check Number for Prime Number.

package main

import "fmt"

func main(){

var a int

fmt.Println("enter the number")

fmt.Scan(&a)

if (a % 2 == 0){

fmt.Println("even number")

}else{

fmt.Println(" not even number")

}

}

Q2) Write a program in go language to demonstrate working embedded interfaces. [15 Marks]

// Go program to illustrate the concept

// of the embedding interfaces

package main

import "fmt"

// Interface 1

type AuthorDetails interface {

details()

}

// Interface 2

type AuthorArticles interface {

articles()

}

// Interface 3

// Interface 3 embedded with

// interface 1 and 2

type FinalDetails interface {

AuthorDetails

AuthorArticles

}

// Structure

type author struct {

a\_name string

branch string

college string

year int

salary int

particles int

tarticles int

}

// Implementing method of

// the interface 1

func (a author) details() {

fmt.Printf("Author Name: %s", a.a\_name)

fmt.Printf("\nBranch: %s and passing year: %d",

a.branch, a.year)

fmt.Printf("\nCollege Name: %s", a.college)

fmt.Printf("\nSalary: %d", a.salary)

fmt.Printf("\nPublished articles: %d", a.particles)

}

// Implementing method

// of the interface 2

func (a author) articles() {

pendingarticles := a.tarticles - a.particles

fmt.Printf("\nPending articles: %d", pendingarticles)

}

// Main value

func main() {

// Assigning values

// to the structure

values := author{

a\_name: "Mickey",

branch: "Computer science",

college: "XYZ",

year: 2012,

salary: 50000,

particles: 209,

tarticles: 309,

}

// Accessing the methods of

// the interface 1 and 2

// Using FinalDetails interface

var f FinalDetails = values

f.details()

f.articles()

}

Q3) Write a Python program to toggle two LED. [10 Marks

repeat

Slip 16

Q1) Write a Program in go language to print Fibonacci series of n terms. [5 Marks]

Repeat

Q2) Write a program in go language to create an interface and display its values with the help of type assertion. [15 Marks]

package main

import "fmt"

func main(){

var v interface{} = 20045

var v1 int = v.(int)

fmt.Println(v1)

v2,test := v.(string)

if test {

fmt.Println("String value Found")

fmt.Println(v2)

}else{

fmt.Println("String value not Found")

}

}

Or Q2) Write a program in go language to demonstrate working type switch in interface. [15 Marks]

package main

import "fmt"

func main(){

var v interface{} = "Anchal"

switch n :=v.(type){

case int:fmt.Println("Integer", n)

case float32:fmt.Println("float", n)

case string:fmt.Println("string", n)

default:fmt.Println("unknown")

}

}

Q3) Write a Python program to blink LED. [10 Marks]

Repeat

Slip 17

Q1) Write a Program in go language to find factorial of given Number. [5 Marks]

repeat

Q2) Write a program in go language to create an interface and display its values with the help of type assertion. [15 Marks]

package main

import "fmt"

func main(){

var v interface{} = 20045

var v1 int = v.(int)

fmt.Println(v1)

v2,test := v.(string)

if test {

fmt.Println("String value Found")

fmt.Println(v2)

}else{

fmt.Println("String value not Found")

}

}

Q3) Write a Python program to toggle two LED. [10 Marks]

repeat

Slip 18

Q1) Write a program in go language to print multiplication of two numbers using method [5 Marks]

package main

import "fmt"

type data int

func(d1 data) mult (d2 data) data{

return d1\*d2

}

func main(){

v1:=data(10)

v2:= data(20)

res:=v1.mult(v2)

fmt.Println("MULTIPLICATION:" ,res)

}

Q2) Write a program in go language to create structure author. Write a method show () whose receiver is struct author. [15 Marks] package main

import "fmt"

type author struct

{

name string

branch string

practical int

salary int

}

func (a author) show(){

fmt.Println("author Name:",a.name)

fmt.Println("branch name:",a.branch)

fmt.Println("practical name:",a.practical)

fmt.Println("salary:",a.salary)

}

func main(){

res:=author{

name: "Anchal",

branch: "CSE",

practical: 209,

salary: 34560,

}

res.show()

}

Q3) Write a Python program to blink LED. [10 Marks]

Repeat

Slip 19

Q1) Write a Program in go to print table of given number. . [5 Marks]

package main

import "fmt"

func main(){

var n int

fmt.Println("Enter the number for printing its table")

fmt.Scan(&n)

for i := 1; i <= 10; i++ {

fmt.Println(n,"x",i, "=",n\*i)

}

}

Q2) Write a Program in go language to accept n records of Student information (sroll,sname,percentage) and display record of Student having maximum Percentage.

package main

import "fmt"

type stud struct{

sno int

sper float64

sname string

}

func main(){

var s1[10] stud

var n,k int

var max float64

fmt.Println("enter the number of student")

fmt.Scan(&n)

for i:=0;i< n;i++{

fmt.Println("enter student id")

fmt.Scan(&s1[i].sno)

fmt.Println("enter student name")

fmt.Scan(&s1[i].sname)

fmt.Println("enter student percentage")

fmt.Scan(&s1[i].sper)

}

max=s1[0].sper

for i:=0;i<n;i++{

if(s1[i].sper>max){

max=s1[i].sper

k=i

}

}

fmt.Println("student having maximum percentage")

fmt.Println("Student no:" ,s1[k].sno)

fmt.Println("Student name:" ,s1[k].sname)

fmt.Println("Student percentage:",s1[k].sper)

}

Q3) Write a Python program to blink LED. [10 Marks]

repeat

Slip 20

Q1) Write a Program in go language for print following pattern. ( \*\*\* \*\* \*) [5 Marks]

package main

import "fmt"

func main(){

var r int

fmt.Println("enter the number the rows")

fmt.Scan(&r)

for i:=r ;i>=1;i--{

for j:=i;j>=1;j--{

fmt.Print("\*")

}

fmt.Println("")

}

}

Q2) Write a Program in go language to accept n records of employee information (eno,ename,salary) and display record of employees having maximum salary. [15 Marks]

Repeat

Or Q2) Write a program in go language to create an interface and display its values with the help of type assertion. [15 Marks]

repeat

Q3) Write a Python program to toggle two LED.

repeat

Slip 21

Q1) Write a program in go language to check whether entered number is EVEN or ODD. [5 Marks]

repeat

Q2) Write a Program in go language to accept n student details like roll\_no, stud\_name, mark1,mark2, mark3. Calculate the total and average of marks using structure. [15 Marks

Repeat

Q3) Write Python Program to blink LED’s. [10 Marks]

Repeat

Slip 22 Q1) Write a program in go language to check whether entered number is Positive or Negative [5 Marks]

package main

import "fmt"

func main(){

var a int

fmt.Println("enter the value of a")

fmt.Scan(&a)

if(a > 0){

fmt.Println("value of a is positive")

}else if(a < 0){

fmt.Println("value of a is negative")

}else{

fmt.Println("value of a is zero")

}

}

Or Q2) Write a program in go language to create an interface shape that includes area and perimeter. Implements these methods in circle and rectangle type. [15 Marks]

Q3) Write Python Program to toggle two LED’s. [10 Marks]

Repeat

slip 23

Q1) Write a Program in go Language to print address of a variable. [5 Marks]

Repeat

Or Q2) Write a program in go language to create an interface and display its values with the help of type assertion. [15 Marks]

Repeat

Q3) Write a Python program to blink LED. [10 Marks

Repeat

Slip 24

Q1) Write a Program in go language to check Number for Prime Number. [5 Marks]

Repeat

Q2) Write a program in go language to create an interface and display its values with the help of type assertion. [15 Marks]

Repeat

Q3) Write a Python program to blink LED. [10 Marks]

Repeat

Slip 25

Q1) Write a Program in go language to swap the number without temporary variable. [5 Marks]

Repeat

Q2) Write a Program in go language to accept user choice and print answer of using arithmetical operators.

package main

import "fmt"

func main(){

var a,b,n int

fmt.Println("enter the number a and b:")

fmt.Scan(&a,&b)

fmt.Print("\n 1.ADDITION:\n2.SUBSTRACTION:\n3.MULTIPLOCATION:\n4.DIVISION \n5.EXIT:\n")

fmt.Print("ENTER YOUR CHOICE:")

fmt.Scan(&n)

switch n{

case 1:

fmt.Print("ADDITION:",a+b)

break;

case 2:

fmt.Print("SUBSTRACTION:",a-b)

break;

case 3:

fmt.Print("MULTIPLICATION:",a\*b)

break;

case 4:

fmt.Print("DIVISION:",a/b)

break;

default: break;

}

}

Q3) Write Python Program to blink LED’s. [10 Marks]

Repeat

Slip 26 Q1) Write a Program in go for PASCAL Triangle. [5 Marks]

Repeat

Q2) Write a Program in go language to accept n records of employee information (eno,ename,salary) and display record of employees having maximum salary. [15 Marks]

Repeat

Q3) Write Python Program to toggle two LED’s. [10 Marks]

Repeat

SLIP 27

Q1) Write a Program to print Following Pattern. (0 00 000) [5 Marks]

package main

import "fmt"

func main(){

var r int

fmt.Println("enter the number the rows")

fmt.Scan(&r)

for i:=1 ;i<=r;i++{

for j:=1;j<=i;j++{

fmt.Print("0")

}

fmt.Println("")

}

}

Q2) Write a Program in go language to demonstrate working of slices (like append, remove, copy etc.) [15 Marks] Or

Q2) WAP to create student struct with student name and marks and sort it based on student marks. [15 Marks]

Q3) Write Python Program to blink LED’s. [10 Marks

Slip 28

Q1) Write a Program in go to print multiplication table of given number. . [5 Marks]

repeat

Q2) Write a Program in go language to accept n records of Student information (sroll,sname,percentage) and display record of Student having maximum Percentage. [15 Marks]

repeat

Q3) Write a Python program to blink LED. [10 Marks]

repeat

29 Q1) Write a Program in go to print matrix. [5 Marks]

package main

import (

"fmt"

)

func main() {

var row, col int

var mat [10][10]int

fmt.Print("Enter no of rows: ")

fmt.Scanln(&row)

fmt.Print("Enter no of column: ")

fmt.Scanln(&col)

fmt.Println("\nEnter matrix elements: ")

for i := 0; i < row; i++ {

for j := 0; j < col; j++ {

fmt.Scanf("%d ", &mat[i][j])

}

}

fmt.Println("\nMatrix is: \n")

for i := 0; i < row; i++ {

for j := 0; j < col; j++ {

fmt.Printf("%d ", mat[i][j])

}

fmt.Println("\n")

}

}

Q2) Write a Program in go language to accept n records of BOOK information (book\_id,book\_name,book\_cost) and display record of Book having maximum cost. [15 Marks

package main

import "fmt"

type Books struct{

id int

title string

author string

price float64

}

func main(){

var a[20] Books

var n,k int

var max float64

/\*var a int

var b string

var c string

var d float64\*/

fmt.Println("\nEnter the Total Number of books: ")

fmt.Scan(&n)

for i:=0;i<n;i++{

fmt.Println("\nEnter the Book id: ")

fmt.Scan(&a[i].id)

fmt.Println("\nEnter the Book title: ")

fmt.Scan(&a[i].title)

fmt.Println("\nEnter the Book author: ")

fmt.Scan(&a[i].author)

fmt.Println("\nEnter the Book price: ")

fmt.Scan(&a[i].price)

}

max=a[0].price

for i:=0;i<n;i++{

if(a[i].price>max){

max=a[i].price

k=i

}

}

fmt.Println("\n\*\*\*\*\*\*\* Highest Book Details\*\*\*\*\*\*")

fmt.Println("\nBook Id: ",a[k].id)

fmt.Println("\nBook Title: ",a[k].title)

fmt.Println("\nBook Author: ",a[k].author)

fmt.Println("\nBook Price: ",a[k].price)

}

Q3) Write a Python program to toggle two LED. [10 Marks]

repeat

30 Q1) Write a Program in go to print Value and Address of Float Variable .

package main

import "fmt"

func main(){

var a float64 = 12.7

fmt.Println("valu of a ",a)

fmt.Println("address of a variable is :" ,&a)

}

Or Q2) Write a Program in go language to accept n records of Student information (sroll,sname,percentage) and display record of Student having maximum Percentage

repeat

Q3) Write a Python program to blink LED. [10 Marks]

repeat