**MCQs for Go Programming**

**What is the file extension for Go source files?**

A) .go

B) .golang

C) .g

D) .gox

**Which command is used to compile a Go program?**

A) go build

B) go run

C) go compile

D) go execute

**What is the correct syntax to declare a variable in Go?**

A) var x int

B) int x

C) x int

D) declare x int

**How do you initialize a variable x with the value 10 in Go?**

A) x = 10

B) int x = 10

C) var x = 10

D) x := 10

**Which control structure is used for executing a block of code repeatedly in Go?**

A) if statement

B) for loop

C) switch statement

D) while loop

**What will be the output of the following code?**

package main

import "fmt"

func main() {

for i := 0; i < 5; i++ {

fmt.Println(i)

}

}

A) 0 1 2 3 4

B) 1 2 3 4 5

C) 0 1 2 3

D) 1 2 3 4

**In Go, how do you define a function named add that takes two integers as parameters and returns their sum?**

A) func add(x, y int) int { return x + y }

B) function add(x, y int) { return x + y }

C) def add(x, y int) int { return x + y }

D) define add(x, y int) { return x + y }

**What is the correct syntax for declaring a slice in Go?**

A) slice x = []int{}

B) var x []int

C) slice x []int

D) x := []

**Which keyword is used to define a new type in Go?**

A) typedef

B) type

C) define

D) var

**What is the purpose of the defer keyword in Go?**

A) To immediately execute a function

B) To delay the execution of a function until the surrounding function returns

C) To handle errors gracefully

D) To declare a constant

**How do you access the first element of a slice named nums in Go?**

A) nums[0]

B) nums.first()

C) nums.get(0)

D) nums.first

**What is the purpose of the range keyword in Go?**

A) To define a loop counter

B) To iterate over elements in a slice, array, string, or map

C) To specify a range of values for a variable

D) To determine the length of a slice or array

**Which of the following is true about maps in Go?**

A) Maps are ordered collections of elements

B) Maps can have duplicate keys

C) Maps are not thread-safe

D) Maps cannot be used as keys in other maps

**What is the output of the following code?**

package main

import "fmt"

func main() {

defer fmt.Println("World")

fmt.Println("Hello")

}

A) Hello World

B) World Hello

C) World

D) Hello

**Which data structure is used for concurrent programming in Go?**

A) Threads

B) Goroutines

C) Processes

D) Mutexes

**How do you handle errors in Go?**

A) Using try-catch blocks

B) Using the panic keyword

C) Returning error values from functions

D) Ignoring errors

**Which of the following is NOT a valid way to declare a constant in Go?**

A) const PI = 3.14

B) const x = 5

C) const x int = 5

D) const ( x = 5 )

**In Go, how do you import packages from the standard library?**

A) Using the import keyword followed by the package name

B) Automatically imported by the compiler

C) Using the require keyword

D) Using the use keyword

**What is the purpose of the break statement in Go?**

A) To exit a loop or switch statement prematurely

B) To continue to the next iteration of a loop

C) To terminate the program

D) To print a message to the console

**Which command is used to run a Go program?**

A) go execute

B) go run

C) go start

D) go go