

# GOLANG ESSENTIALS

## Hello World

```
package main

import "fmt"

func main() {
    fmt.Println("Hello, World!")
}
```

## Variables

Variables in Go are declared using the `var` keyword.

```
var x int = 10
var y = 20 // Type is inferred
z := 30     // Short variable declaration
```

In production code, it's common to use short variable declarations (`:=`) for local variables.

## Functions

Functions are defined using the `func` keyword.

```
func add(a int, b int) int {
    return a + b
}
```

You can call the function like this:

```
result := add(5, 10)
fmt.Println(result) // Output: 15
```

**Good practice:** Always handle errors returned by functions.

```
file, err := os.Open("file.txt")
if err != nil {
    log.Fatal(err)
}
defer file.Close()
```

The above code demonstrates error handling when opening a file.