

iota

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About

- | `const` is like a variable, but unchanging
- | Common to make groups of constants
- | `iota` keyword can be used to automatically assign values

```
const (  
    Online = 0  
    Offline = 1  
    Maintenance = 2  
    Retired = 3  
)
```

```
const (  
    Online = iota  
    Offline  
    Maintenance  
    Retired  
)
```

iota

// Long-form:

```
const (  
    L0 = iota // 0  
    L1 = iota // 1  
    L2 = iota // 2  
    L3 = iota // 3  
    L4 = iota // 4  
)
```

// Short-form:

```
const (  
    s0 = iota // 0  
    s1        // 1  
    s2        // 2  
    s3        // 3  
    s4        // 4  
)
```

Skipping Values

// Skip a value

```
const (  
    s0 = iota // 0  
    -       // 1 (skip)  
    -       // 2 (skip)  
    s3       // 3  
    s4       // 4  
)
```

// Start at 3

```
const (  
    i3 = iota + 3 // 3 = iota + 3  
    i4           // 4  
    i5           // 5  
)
```


iota Enumeration Pattern

```
type Direction byte
```

```
const (  
    North Direction = iota  
    East  
    South  
    West  
)
```

```
north := North  
fmt.Println(north)  
// prints "North"
```

```
func (d Direction) String() string {  
    switch d {  
    case North:  
        return fmt.Sprintf("North")  
    case South:  
        return fmt.Sprintf("South")  
    case East:  
        return fmt.Sprintf("East")  
    case West:  
        return fmt.Sprintf("West")  
    default:  
        return "other direction"  
    }  
}
```

iota Enumeration Pattern

```
type Direction byte
```

```
const (  
    North Direction = iota  
    East  
    South  
    West  
)
```

```
func (d Direction) String() string {  
    return []string{"North", "East", "South", "West"}[d]  
}
```

```
north := North  
fmt.Println(north)  
// prints "North"
```

Recap

- | The **iota** keyword can be used to assign integers to constants
 - | Replicates C-style enums
 - | Values can be skipped by using an underscore (_)
 - | **iota** values can be expressions (**iota + 5**)
- | Use a receiver function to more easily work with constants and **iota**