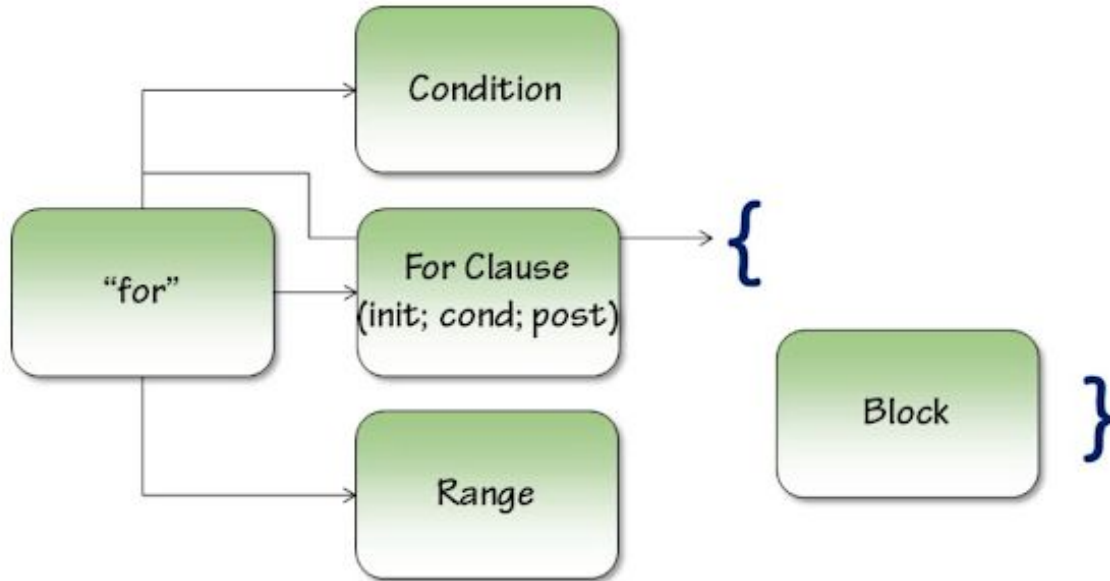


Loop and Conditions

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Only One Loop



Three Component loop

```
sum := 0
for i := 1; i < 5; i++ {
    sum += i
}
fmt.Println(sum) // 10 (1+2+3+4)
```



While Loop

```
n := 1
for n < 5 {
    n *= 2
}
fmt.Println(n) // 8 (1*2*2*2)
```



Infinite loop

```
sum := 0
for {
    sum++ // repeated forever
}
fmt.Println(sum) // never reached
```



For-each range loop

```
strings := []string{"hello", "world"}  
for i, s := range strings {  
    fmt.Println(i, s)  
}
```



Exit a loop

```
sum := 0
for i := 1; i < 5; i++ {
    if i%2 != 0 { // skip odd numbers
        continue
    }
    if i%2 != 1 {
        break
    }
    sum += i
}
fmt.Println(sum) // 6 (2+4)
```



If Statement

```
if(condition) {  
    // Code to be executed if the condition is true.  
}
```



If Statement

```
package main  
import "fmt"  
  
func main() {  
    var x = 25  
    if(x % 5 == 0) {  
        fmt.Printf("%d is a multiple of 5\n", x)  
    }  
}
```



Logical Operators

Operator	Description
&&	Logical AND
	Logical OR
!	Logical NOT



If -Else Statement

```
if condition {  
    // code to be executed if the condition is true  
} else {  
    // code to be executed if the condition is false  
}
```



If-Else Statement

```
package main

import "fmt"

func main() {
    var age = 18
    if age >= 18 {
        fmt.Println("You Can Get Licence!")
    } else {
        fmt.Println("You Can not Get Licence!")
    }
}
```



If-Else Chain

```
package main

import "fmt"

func main() {
    var BMI = 21.0
    if BMI < 18.5 {
        fmt.Println("You are underweight");
    } else if BMI >= 18.5 && BMI < 25.0 {
        fmt.Println("Your weight is normal");
    } else if BMI >= 25.0 && BMI < 30.0 {
        fmt.Println("You're overweight")
    } else {
        fmt.Println("You're obese")
    }
}
```



If with a short statement

```
if n := 10; n%2 == 0 {  
    fmt.Printf("%d is even\n", n)  
}
```



Switch Statement

```
func main() {  
    var dayOfWeek = 6  
    switch dayOfWeek {  
        case 1: fmt.Println("Monday")  
        case 2: fmt.Println("Tuesday")  
        case 3: fmt.Println("Wednesday")  
        case 4: fmt.Println("Thursday")  
        case 5: fmt.Println("Friday")  
        case 6: fmt.Println("Saturday")  
        case 7: fmt.Println("Sunday")  
    }  
    default: fmt.Println("Invalid day")  
}  
}
```



Combine Multiple Switch Cases

```
func main() {  
    switch dayOfWeek := 5; dayOfWeek {  
        case 1, 2, 3, 4, 5:  
            fmt.Println("Weekday")  
        case 6, 7:  
            fmt.Println("Weekend")  
        default:  
            fmt.Println("Invalid Day")  
        }  
    }
```



Switch With No Expression

```
func main() {  
    var BMI = 21.0  
    switch {  
        case BMI < 18.5:  
            fmt.Println("You're underweight")  
        case BMI >= 18.5 && BMI < 25.0:  
            fmt.Println("Your weight is normal")  
        case BMI >= 25.0 && BMI < 30.0:  
            fmt.Println("You're overweight")  
        default:  
            fmt.Println("You're obese")  
    }  
}
```

