

**LAPORAN PRAKTIKUM**  
**Algoritma Pemrograman**

**MODUL 12**

**While-loop**



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**PROGRAM STUDI S1 INFORMATIKA**  
**FAKULTAS INFORMATIKA**  
**TELKOM UNIVERSITY PURWOKERTO**  
**2025**

## 1. Guided 1

### Source Code

```
package main

import (
    "fmt"
)

func main() {
    var n int
    fmt.Scan(&n)
    for n > 1 {
        fmt.Print(n, " x ")
        n--
    }
    fmt.Print(1)
}
```

Screenshoot program

GoCode > Modul-12 > Guided-1.go > ...

```
1 package main
2
3 import (
4     "fmt"
5 )
6
7 func main() {
8     var n int
9     fmt.Scan(&n)
10    for n > 1 {
11        fmt.Println(n, "x")
12        n--
13    }
14    fmt.Println(1)
15 }
16
```

PROBLEMS 35 OUTPUT DEBUG CONSOLE TERMINAL TEST

PS C:\Code> go run "c:\Code\GoCode\Modul-12\Guided-1.go"
12

12 x 11 x 10 x 9 x 8 x 7 x 6 x 5 x 4 x 3 x 2 x 1

PS C:\Code> go run "c:\Code\GoCode\Modul-12\Guided-1.go"
5

5 x 4 x 3 x 2 x 1

PS C:\Code> go run "c:\Code\GoCode\Modul-12\Guided-1.go"
0

1

PS C:\Code> go run "c:\Code\GoCode\Modul-12\Guided-1.go"
1

1

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File Edit View H1 ...

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### **Deskripsi program**

**This program uses for like a while and while n is greater than 1 print n with x then n – 1 loop until n is no longer greater than 1 then print 1**

### **2. Guided 2**

#### **Source Code**

```
package main

import "fmt"

func main() {
    var token string
    fmt.Scan(&token)
    for token != "12345abcde" {
        fmt.Scan(&token)
    }
    fmt.Println("Congratulations you have successfully logged in")
}
```

#### **Screenshot program**

GoCode > Modul-12 > `Guided-2.go` > ...

```

2
3 import "fmt"
4
5 func main() {
6     var token string
7     fmt.Scan(&token)
8     if token != "12345abcde" {
9         fmt.Scan(&token)
10    }
11    fmt.Println("Congratulations you have successfully logged in")
12 }
13

```

PROBLEMS 35 OUTPUT DEBUG CONSOLE TERMINAL TEST RESULTS PORTS

```

PS C:\Code> go run "c:\Code\GoCode\Modul-12\Guided-2.go"
12345
abcd
12345abcde
Congratulations you have successfully logged in
PS C:\Code>

```

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### Deskripsi program

This program checks if token is not equal to the string “12345abcde” if it is equal then login is success

### Guided 3

#### Source Code

```

package main

import "fmt"

func main() {
    var N, s1, s2, j, temp int
    fmt.Scan(&N)
    s1 = 0
    s2 = 1
    for j = 0; j < N; j++ {
        fmt.Print(s1, " ")
        temp = s1 + s2
        s1 = temp
        temp = s2
    }
}

```

```
    s1 = s2
    s2 = temp
}
}
```

### Screenshot program

The screenshot shows a GoCode IDE interface. The code editor displays a Go program named Guided-3.go. The terminal window shows the execution of the program for different input values (5, 2, 10) and the resulting Fibonacci sequence output. Below the terminal is a text editor window displaying student information.

```
GoCode > Modul-12 > Guided-3.go > ...
1 package main
2
3 import "fmt"
4
5 func main() {
6     var N, s1, s2, j, temp int
7     fmt.Scan(&N)
8     s1 = 0
9     s2 = 1
10    for j = 0; j < N; j++ {
11        fmt.Println(s1, " ")
12        temp = s1 + s2
13        s1 = s2
14        s2 = temp
15    }
16 }
```

PROBLEMS (35) OUTPUT DEBUG CONSOLE TERMINAL TEST RESULTS

```
PS C:\Code> go run "c:\Code\GoCode\Modul-12\Guided-3.go"
5
0 1 1 2 3
PS C:\Code> go run "c:\Code\GoCode\Modul-12\Guided-3.go"
2
0 1
PS C:\Code> go run "c:\Code\GoCode\Modul-12\Guided-3.go"
10
0 1 1 2 3 5 8 13 21 34
PS C:\Code>
```

File	Edit	View	H1	...	Color	Font	Size	...	X
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## **Deskripsi program**

***This program prints the first N numbers in the Fibonacci sequence.***

## **Tugas 1**

### **Source code**

```
package main

import "fmt"

func main() {
    var passcode, username string
    var failedAttempts int
    fmt.Scan(&passcode, &username)

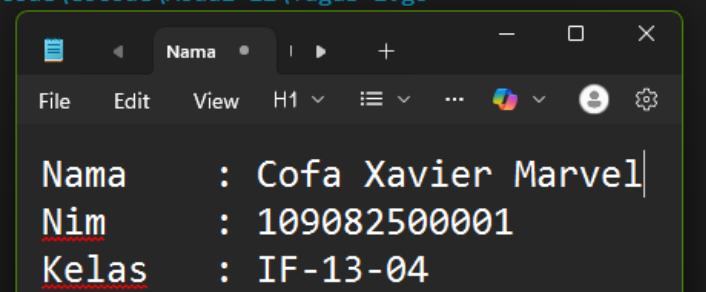
    for passcode != "admin" || username != "admin" {
        fmt.Scan(&passcode, &username)
        failedAttempts++
    }
    fmt.Println(failedAttempts, "failed login attempts")
}
```

### **Screenshot program**

```
GoCode > Modul-12 > Tugas-1.go > ...
1 package main
2
3 import "fmt"
4
5 func main() {
6     var passcode, username string
7     var failedAttempts int
8     fmt.Scan(&passcode, &username)
9
10    for passcode != "admin" || username != "admin" {
11        fmt.Scan(&passcode, &username)
12        failedAttempts++
13    }
14    fmt.Println(failedAttempts, "failed login attempts")
15 }
16
```

PROBLEMS 35 OUTPUT DEBUG CONSOLE TERMINAL TEST RESULTS PORTS

```
PS C:\Code> go run "c:\Code\GoCode\Modul-12\Tugas-1.go"
password admin
admin password
admin admin
2 failed login attempts
PS C:\Code>
```



### Deskripsi program

This program is used to count how many times a user fails to log in, due to a username and password error.

### Tugas 2

#### Source code

```
package main

import (
    "fmt"
    "strconv"
)

func main() {
    var num, mod10, digit int
```

```
fmt.Scan(&num)

str := strconv.Itoa(num)
len := len(str)

mod10 = 10

for len >= 1 {
    digit = (num % mod10) / (mod10 / 10)
    len--
    mod10 *= 10
    fmt.Print(digit, " ")
}

}
```

### Screenshot program

The screenshot shows a code editor interface with a dark theme. On the left, there is a code editor window displaying Go code. The code reads a positive integer from standard input, converts it to a string, and then prints its digits in reverse order (from least significant to most significant). The code editor has tabs for PROBLEMS (35), OUTPUT, DEBUG CONSOLE, and TERMINAL. The TERMINAL tab is active, showing the command `go run "c:\Code\GoCode\Modul-12\Tugas-2.go"` and its output for two different inputs: 12345 and 543765987.

```
1 package main
2
3 import (
4     "fmt"
5     "strconv"
6 )
7
8 func main() {
9     var num, mod10, digit int
10    fmt.Scan(&num)
11
12    str := strconv.Itoa(num)
13    len := len(str)
14
15    mod10 *= 10
16
17    for len >= 1 {
18        digit = (num % mod10) / (mod10 / 10)
19        len--
20        mod10 *= 10
21        fmt.Print(digit, " ")
22    }
23
24 }
```

PROBLEMS 35    OUTPUT    DEBUG CONSOLE    TERMINAL

```
\Code\GoCode\Modul-12\Tugas-2.go"
12345
5 4 3 2 1
PS C:\Code> go run "c:\Code\GoCode\Modul-12\Tugas-2.go"
543765987
7 8 9 5 6 7 3 4 5
PS C:\Code> go run "c:\Code\GoCode\Modul-12\Tugas-2.go"
321654987
7 8 9 4 5 6 1 2 3
PS C:\Code>
```

### Deskripsi program

This is a program that enumerates every digit contained in a positive integer. The input consists of a positive integer.

### Tugas 3

#### Source code

```
package main

import "fmt"

func main() {
```

```
var X, Y, Z int
fmt.Scan(&X, &Y)

for X >= Y {
    X = X - Y
    Z++
}
fmt.Println(Z)
}
```

### Screenshoot program

```
GoCode > Modul-12 > Tugas-3.go > ...
```

```
1 package main
2
3 import "fmt"
4
5 func main() {
6     var X, Y, Z int
7     fmt.Scan(&X, &Y)
8
9     for X >= Y {
10         X = X - Y
11         Z++
12     }
13     fmt.Println(Z)
14 }
15
```

PROBLEMS 35    OUTPUT    DEBUG CONSOLE    TERMINAL    TEST RESULTS

```
PS C:\Code> go run "c:\Code\GoCode\Modul-12\Tugas-3.go"
1234 1234
1
PS C:\Code> go run "c:\Code\GoCode\Modul-12\Tugas-3.go"
5 2
2
PS C:\Code> go run "c:\Code\GoCode\Modul-12\Tugas-3.go"
3600 120
30
PS C:\Code>
```

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**Deskripsi program**

**The is a program to find the integer division result of two numbers. Use looping and no division operator**