

LAPORAN PRAKTIKUM
Algoritma Pemrograman

MODUL 11

Switch-case



Disusun oleh:

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S1IF-13-04

PROGRAM STUDI S1 INFORMATIKA
FAKULTAS INFORMATIKA
TELKOM UNIVERSITY PURWOKERTO
2025

1. Guided 1

Source Code

```
package main

import "fmt"

func main() {
    var time12, time24 int
    var lable string
    fmt.Scan(&time24)
    switch {
    case time24 > 12:
        time12 = time24 - 12
        lable = " PM"
    default:
        time12 = time24
        lable = " AM"
    }

    fmt.Println(time12, lable)
}
```

Screenshot program

```
PROBLEMS 12 OUTPUT DEBUG CONSOLE TERMINAL TEST RESULTS
PS C:\Code> go run "c:\Code\GoCode\Modul-11\Guided-1.go"
12
12 AM
PS C:\Code> go run "c:\Code\GoCode\Modul-11\Guided-1.go"
24
12 PM
PS C:\Code> go run "c:\Code\GoCode\Modul-11\Guided-1.go"
13
1 PM
PS C:\Code> go run "c:\Code\GoCode\Modul-11\Guided-1.go"
0
0 AM
PS C:\Code> go run "c:\Code\GoCode\Modul-11\Guided-1.go"
18
6 PM
PS C:\Code>
```

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Nama : Cofa Xavier Marvel
Nim : 109082500001
Kelas : IF-13-04

Deskripsi program

This is a program that uses a switch-case operator with a blank expression and one case, case one has the value `time24 > 12` if true `time12` is `time24 - 12` and `label` is `PM`, in default when `time24 > 12` is false then `time12` is `time24` and the `label` is `AM`.

2. Guided 2

Source Code

```
package main

import "fmt"

func main() {
    var plant_name string
    fmt.Scan(&plant_name)
    switch plant_name {
    case "nepenthes", "drosera":
        fmt.Println("Including Carnivorous Plants.")
        fmt.Println("Native to Indonesia.")
    case "venus", "sarracenia":
        fmt.Println("Including Carnivorous Plants.")
        fmt.Println("Not Native to Indonesia.")
    default:
        fmt.Println("Excluding Carnivorous Plants.")
    }
}
```

Screenshot program

The screenshot shows a code editor interface with several tabs at the top: 'Guided-1.go 3. U', 'Guided-2.go 1. U X', 'Guided-3.go 1. U', 'tempCodeRunner', and a terminal tab. The 'Guided-2.go 1. U X' tab is active, displaying the Go code provided above. The terminal tab shows the execution of the program:

```
PS C:\Code> go run "c:\Code\GoCode\Modul-11\Guided-2.go"
nepenthes
Including Carnivorous Plants.
Native to Indonesia.
PS C:\Code> go run "c:\Code\GoCode\Modul-11\Guided-2.go"
drosera
Including Carnivorous Plants.
Native to Indonesia.
PS C:\Code> go run "c:\Code\GoCode\Modul-11\Guided-2.go"
venus
Including Carnivorous Plants.
Not Native to Indonesia.
PS C:\Code> go run "c:\Code\GoCode\Modul-11\Guided-2.go"
kodorak
Excluding Carnivorous Plants.
PS C:\Code>
```

Below the terminal, there is a preview window showing the following table:

Nama	: Cofa Xavier Marvel
Nim	: 109082500001
Kelas	: IF-13-04

Deskripsi program

This program is a simple classifier that checks whether a plant is a carnivore plant or not and if it is native to Indonesia or not the outputs the appropriate message based on the category

3. Guided 3

Source Code

```
package main

import "fmt"

func main() {
    var vehicle string
    var duration int
    var price int
    fmt.Print("Enter the type of vehicle
(Motorcycle/Car/Truck): ")
    fmt.Scan(&vehicle)
    fmt.Print("Enter the parking duration (in hours): ")
    fmt.Scan(&duration)
    switch {
        case vehicle == "Motorcycle" && duration >= 1 && duration
<= 2:
            price = 7000
        case vehicle == "Motorcycle" && duration > 2:
            price = 9000
        case vehicle == "Car" && duration >= 1 && duration <= 2:
            price = 15000
        case vehicle == "Car" && duration > 2:
            price = 20000
        case vehicle == "Truck" && duration >= 1 && duration <=
2:
            price = 25000
        case vehicle == "Truck" && duration > 2:
            price = 35000
        default:
            fmt.Println("Invalid vehicle type or parking
duration")
    }
    fmt.Printf("Parking rates: Rp %d\n", price)
}
```

Screenshoot program

Guided-1.go 3, U Guided-2.go 1, U **Guided-3.go 1, U X** tempCodeRunner ⌂ ⌓ ⌖ ...

Code > Modul-11 > Guided-3.go > main

```
3 import "fmt"
4
5 func main() {
6     var vehicle string
7     var duration int
8     var price int
9     fmt.Print("Enter the type of vehicle (Motorcycle/Car/Truck): ")
0     fmt.Scan(&vehicle)
1     fmt.Print("Enter the parking duration (in hours): ")
2     fmt.Scan(&duration)
3     switch vehicle {
4         case "Motorcycle", "motorcycle":
5             if duration >= 1 && duration <= 2 {
6                 price = 7000
7             } else if duration > 2 {
8                 price = 9000
9             }
0         case "Car", "car":
1             if duration >= 1 && duration <= 2 {
2                 price = 15000
3             } else if duration > 2 {
4                 price = 20000
5             }
6         case "Truck", "truck":
7             if duration >= 1 && duration <= 2 {
8                 price = 25000
9             } else if duration > 2 {
0                 price = 35000
1             }
2         default:
3             fmt.Println("Invalid vehicle type or parking duration")
4         }
5     fmt.Printf("Parking rates: Rp %d\n", price)
6 }
7
```

The terminal window shows the execution of a Go program named `Guided-3.go`. The program prompts the user for the type of vehicle (Motorcycle, Car, or Truck) and the parking duration (in hours). It then calculates and prints the parking rates. The text editor window shows the student's information: Name (Cofa Xavier Marvel), Nim (109082500001), and Kelas (IF-13-04).

```
PS C:\Code> go run "c:\Code\GoCode\Modul-11\Guided-3.go"
Enter the type of vehicle (Motorcycle/Car/Truck): motorcycle 2
Enter the parking duration (in hours): Parking rates: Rp 7000
PS C:\Code> go run "c:\Code\GoCode\Modul-11\Guided-3.go"
Enter the type of vehicle (Motorcycle/Car/Truck): car 4
Enter the parking duration (in hours): Parking rates: Rp 20000
PS C:\Code> go run "c:\Code\GoCode\Modul-11\Guided-3.go"
Enter the type of vehicle (Motorcycle/Car/Truck): motorcycle 3
Enter the parking duration (in hours): Parking rates: Rp 9000
PS C:\Code> go run "c:\Code\GoCode\Modul-11\Guided-3.go"
Enter the type of vehicle (Motorcycle/Car/Truck): truck 1
Enter the parking duration (in hours): Parking rates: Rp 25000
PS C:\Code> go run "c:\Code\GoCode\Modul-11\Guided-3.go"
Enter the type of vehicle (Motorcycle/Car/Truck): biycile 2
Enter the parking duration (in hours): Invalid vehicle type or parkin
g duration
Parking rates: Rp 0
PS C:\Code>
```

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Deskripsi program

This program sets the price of parking based on the vehicle type it uses a switch-case to identify the vehicle and an if-else thing to find the amount owed.

TUGAS

Tugas 1

Source code

```
package main

import "fmt"

func main() {
    var ph float64
    fmt.Scan(&ph)

    switch {
    case ph >= 6.5 && ph <= 8.6:
        fmt.Println("Drinkable Water")
    case ph < 6.5 && ph > 8.6:
        fmt.Println("Undrinkable Water")
    case ph < 0 || ph > 14:
        fmt.Println("Invalid input, pH range 0 - 14")
    default:
        fmt.Println("Water not fit for drinking")
    }
}
```

Screenshot program



```
1 package main
2
3 import "fmt"
4
5 func main(){
6     var ph float64
7     fmt.Scan(&ph)
8
9     switch{
10     case ph >= 6.5 && ph <= 8.6:
11         fmt.Println("Drinkable Water")
12     case ph < 6.5 && ph > 8.6:
13         fmt.Println("Undrinkable Water")
14     case ph < 0 || ph > 14:
15         fmt.Println("Invalid input, pH range 0 - 14")
16     default:
17         fmt.Println("Water not fit for drinking")
18     }
19 }
20
```

```
PROBLEMS 8 OUTPUT TERMINAL ... Code + X
```

```
PS C:\Code> go run "c:\Code\GoCode\Modul-11\Tugas-1.go"
8.6
Drinkable Water
PS C:\Code> go run "c:\Code\GoCode\Modul-11\Tugas-1.go"
9
Water not fit for drinking
PS C:\Code> go run "c:\Code\GoCode\Modul-11\Tugas-1.go"
16
Invalid input, pH range 0 - 14
PS C:\Code> 
```



```
File Edit View H1 I Aa
```

Nama : Cofa Xavier Marvel
Nim : 109082500001
Kelas : IF-13-04

```
In 4 Col 1 62 characters Plain text 240% Windows (CR LF) UTF-8
```

Deskripsi program

This program finds the drinkability of water depending on the ph level using a switch-case with no expression and 3 cases with a default

Tugas 2

Source code

```
package main

import "fmt"

func main() {
    var duration, price int
    var vehicle string

    fmt.Scan(&vehicle, &duration)

    if duration == 0 {
        duration = 1
    }
}
```

```

}

switch vehicle {
case "Motorcycle", "motorcycle":
    price = 2000 * duration
case "Car", "car":
    price = 5000 * duration
case "Truck", "truck":
    price = 8000 * duration
default:
    fmt.Println("Invalid vehicle type or parking
duration")
}
fmt.Printf("Parking rates: Rp %d\n", price)
}

```

Screenshot program

The screenshot shows a terminal window and a text editor side-by-side.

Terminal Window:

```

GoCode > Modul-11 > >> Tugas-2.go ...
1 package main
2
3 import "fmt"
4
5 func main() {
6     var duration, price int
7     var vehicle string
8
9     fmt.Scan(&vehicle, &duration)
10
11    if duration == 0 {
12        duration = 1
13    }
14
15    switch vehicle {
16    case "Motorcycle", "motorcycle":
17        price = 2000 * duration
18    case "Car", "car":
19        price = 5000 * duration
20    case "Truck", "truck":
21        price = 8000 * duration
22    default:
23        fmt.Println("Invalid vehicle type or parking duration")
24    }
25    fmt.Printf("Parking rates: Rp %d\n", price)
26 }

```

Output:

```

PS C:\Code> go run "c:\Code\GoCode\Modul-11\Tugas-2.go"
motorcycle 2
Parking rates: Rp 4000
PS C:\Code> go run "c:\Code\GoCode\Modul-11\Tugas-2.go"
motorcycle 0
Parking rates: Rp 2000
PS C:\Code> go run "c:\Code\GoCode\Modul-11\Tugas-2.go"
Truck 12
Parking rates: Rp 96000
PS C:\Code> go run "c:\Code\GoCode\Modul-11\Tugas-2.go"
Car 1
Parking rates: Rp 5000
PS C:\Code> go run "c:\Code\GoCode\Modul-11\Tugas-2.go"
Mikecycle 69
Invalid vehicle type or parking duration
Parking rates: Rp 0
PS C:\Code> []

```

Text Editor:

A small window titled "Untitled" displays student information:

Nama	: Cofa Xavier Marvel
Nim	: 109082500001
Kelas	: IF-13-04

Deskripsi program

This program is the same as Guided 3 but the way it calculates the price of parking is linear instead of constant.

Tugas 3

Source code

```

package main

import "fmt"

```

```
func main() {
    var num, num1 int
    var Category string
    fmt.Scan(&num)

    switch {
    case num%10 == 0 && num > 10:
        Category = "Multiple of 10"
        num1 = num / 10
    case num%5 == 0 && num > 10:
        Category = "Multiple of 5"
        num1 = num * num
    }
    switch {
    case num%2 != 0 && num < 10:
        Category = "Even Number"
        num1 = num + (num + 1)
    case num%2 == 0 && num < 10:
        Category = "Odd Number"
        num1 = num * (num + 1)
    }
    fmt.Printf("Category: %s \nResult: %d", Category, num1)
}
```

Screenshot program

2.go 1, U [~go Tugas-1.go 1, U](#) [~go Tugas-2.go 1, U](#) [~go Tugas-3.go 1, U X](#) ⌂ ⌂ ⌂ ...

GoCode > Modul-11 > [~go Tugas-3.go](#) > [main](#)

```
1 package main
2
3 import "fmt"
4
5 func main() {
6     var num, num1 int
7     var Category string
8     fmt.Scan(&num)
9
10    switch {
11    case num%10 == 0 && num > 10:
12        Category = "Multiple of 10"
13        num1 = num / 10
14    case num%5 == 0 && num > 10:
15        Category = "Multiple of 5"
16        num1 = num * num
17    }
18    switch {
19    case num%2 != 0 && num < 10:
20        Category = "Even Number"
21        num1 = num + (num + 1)
22    case num%2 == 0 && num < 10:
23        Category = "Odd Number"
24        num1 = num * (num + 1)
25    }
26    Q fmt.Printf("Category: %s\nResult: %d", Category, num1)
27 }
```

The terminal window shows the following Go code execution:

```
PS C:\Code> go run "c:\Code\GoCode\Modul-11\Tugas-3.go"
5
Category: Even Number
Result: 11
PS C:\Code> go run "c:\Code\GoCode\Modul-11\Tugas-3.go"
8
Category: Odd Number
Result: 72
PS C:\Code> go run "c:\Code\GoCode\Modul-11\Tugas-3.go"
25
Category: Multiple of 5
Result: 625
PS C:\Code> go run "c:\Code\GoCode\Modul-11\Tugas-3.go"
20
Category: Multiple of 10
Result: 2
PS C:\Code>
```

The code editor window shows the following student information:

Nama	: Cofa Xavier Marvel
Nim	: 109082500001
Kelas	: IF-13-04

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Deskripsi program

This program uses two switch-case operations each with two cases neither have expressions, the first switch-case finds if the number given is a multiple of 10 or multiple of 5 and greater, greater than 10 exist to avoid the conflict that comes when the number is even or odd and is a multiple of 5 or 10, the second switch-case checks if the number given is odd or even then it Outputs the correct number using the appropriate formula depending on whether the number is a multiple of 10, a multiple of 5, Odd or Even and greater or lesser than 10.