Soal TP Modul 8 (Searching)

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Soal 1

```go
package main
import "fmt"

func main(){
    const NMAX int = 10
    var A[NMAX] int
    var i, n, MAX int
    fmt.Scan(&n)
    if n > NMAX{
        n = NMAX
    }
    for i=0;i<n;i++{
        fmt.Scan(&A[i])
    }
    MAX = 0
    for i = 1;i<n;i++{
        if A[i] > A[MAX]{
            MAX = i
        }
    }
    fmt.Println(A[MAX],MAX)
}
```

```
D:\Matkul smester 2\Algoritma Pemrograman\praktikum\TP6_MOD_08_Searc
hing>go run TP_MOD_08_soal1.go
5
4 0 2 5 7
7 4

D:\Matkul smester 2\Algoritma Pemrograman\praktikum\TP6_MOD_08_Searc
hing>go run TP_MOD_08_soal1.go
5
5 4 3 2 1
5 0

D:\Matkul smester 2\Algoritma Pemrograman\praktikum\TP6_MOD_08_Searc
hing>go run TP_MOD_08_soal1.go
7
1 1 1 1 1 1 1
1 0

D:\Matkul smester 2\Algoritma Pemrograman\praktikum\TP6_MOD_08_Searc
hing>go run TP_MOD_08_soal1.go
11
1 2 3 4 5 6 7 8 9 10 11 12 13
10 9

D:\Matkul smester 2\Algoritma Pemrograman\praktikum\TP6_MOD_08_Searc
hing>
```

3	7 1 1 1 1 1 1 1	7 0

Tidak mungkin inputnya 7, karena data yang diberikan hanya angka 1 sebanyak 7 kali.

Soal 2

```go
package main
import "fmt"

func main(){
    const NMAX int = 10
    var A[NMAX] int
    var i,n,MIN int
    fmt.Scan(&n)
    if n > NMAX{
        n = NMAX
    }
    for i=0;i<n;i++{
        fmt.Scan(&A[i])
    }
    MIN = 0
    for i=1;i<n;i++{
        if A[i] < A[MIN]{
            MIN = i
        }
    }
    fmt.Println(A[MIN],MIN)
}
```

```
D:\Matkul smester 2\Algoritma Pemrograman\praktikum\TP6_MOD_08_Searc
hing>go run TP_MOD_08_soal2.go
5
4 0 2 5 7
0 1

D:\Matkul smester 2\Algoritma Pemrograman\praktikum\TP6_MOD_08_Searc
hing>go run TP_MOD_08_soal2.go
5
5 4 3 2 1
1 4

D:\Matkul smester 2\Algoritma Pemrograman\praktikum\TP6_MOD_08_Searc
hing>go run TP_MOD_08_soal2.go
5
2 2 2 2 2
2 0

D:\Matkul smester 2\Algoritma Pemrograman\praktikum\TP6_MOD_08_Searc
hing>go run TP_MOD_08_soal2.go
11
1 2 3 4 5 6 7 8 9 10 11 12 13
1 0

D:\Matkul smester 2\Algoritma Pemrograman\praktikum\TP6_MOD_08_Searc
hing>
```

Soal 3

```go
package main
import "fmt"

const NMAX = 20
type tabInt [NMAX]int

func main() {
    var A tabInt
    var n int

    baca(&A, &n)
    cetakElemen(A, n)
    cetakInfo(A, n)
}

func baca(A *tabInt, n *int) {
    var num int
    var stop bool
    *n = 0
    for *n < NMAX && !stop {
        fmt.Scan(&num)
        if num > 0 {
            A[*n] = num
            *n++
        } else {
            stop = true
        }
    }
}

func cetakElemen(A tabInt, n int) {
    fmt.Print("Elemen array: ")
    for i := 0; i < n; i++ {
        fmt.Printf("%d ", A[i])
    }
    fmt.Println()
}

func maksimum(A tabInt, n int) int {
    var max,i int
    if n == 0 {
        return 0
    }
    max = A[0]
    for i = 1; i < n; i++ {
        if A[i] > max {
            max = A[i]
        }
    }
    return max
}

func minimum(A tabInt, n int) int {
    var min, i int
    if n == 0 {
        return 0
    }
    min = A[0]
    for i = 1; i < n; i++ {
        if A[i] < min {
            min = A[i]
        }
    }
    return min
}

func cetakInfo(A tabInt, n int) {
    fmt.Printf("Nilai maksimum: %d\n", maksimum(A, n))
    fmt.Printf("Nilai minimum: %d\n", minimum(A, n))
    fmt.Printf("Banyak elemen: %d\n", n)
}
```

```
D:\Matkul smester 2\Algoritma Pemrograman\praktikum\TP6_MOD_08_Searching>go run TP_MOD_08_soal3.go
 1 2 3 4 -1
Elemen array: 1 2 3 4
Nilai maksimum: 4
Nilai minimum: 1
Banyak elemen: 4

D:\Matkul smester 2\Algoritma Pemrograman\praktikum\TP6_MOD_08_Searching>go run TP_MOD_08_soal3.go
11 22 44 33 66 66 11 88
99 66 33 22 88 44 33 22
88 77 66 66 22
Elemen array: 11 22 44 33 66 66 11 88 99 66 33 22 88 44 33 22 88 77 66 66
Nilai maksimum: 99
Nilai minimum: 11
Banyak elemen: 20

D:\Matkul smester 2\Algoritma Pemrograman\praktikum\TP6_MOD_08_Searching>go run TP_MOD_08_soal3.go
 55 22 77 99 0 -7
Elemen array: 55 22 77 99
Nilai maksimum: 99
Nilai minimum: 22
Banyak elemen: 4

D:\Matkul smester 2\Algoritma Pemrograman\praktikum\TP6_MOD_08_Searching>go run TP_MOD_08_soal3.go
12 23 34 45 56 78 98 -10
Elemen array: 12 23 34 45 56 78 98
Nilai maksimum: 98
Nilai minimum: 12
Banyak elemen: 7
```