

LAPORAN AKHIR PRAKTIKUM

Mata Praktikum : Algoritma Pemrograman 3

Kelas : 2IA13

Praktikum Ke-3

Tanggal : 4/01/2024

Materi : Database Go

NPM : 50422069

Nama : Achmad Fadli Iskandar

Ketua Asisten : Sri Meinis

Jumlah Lembar : 4



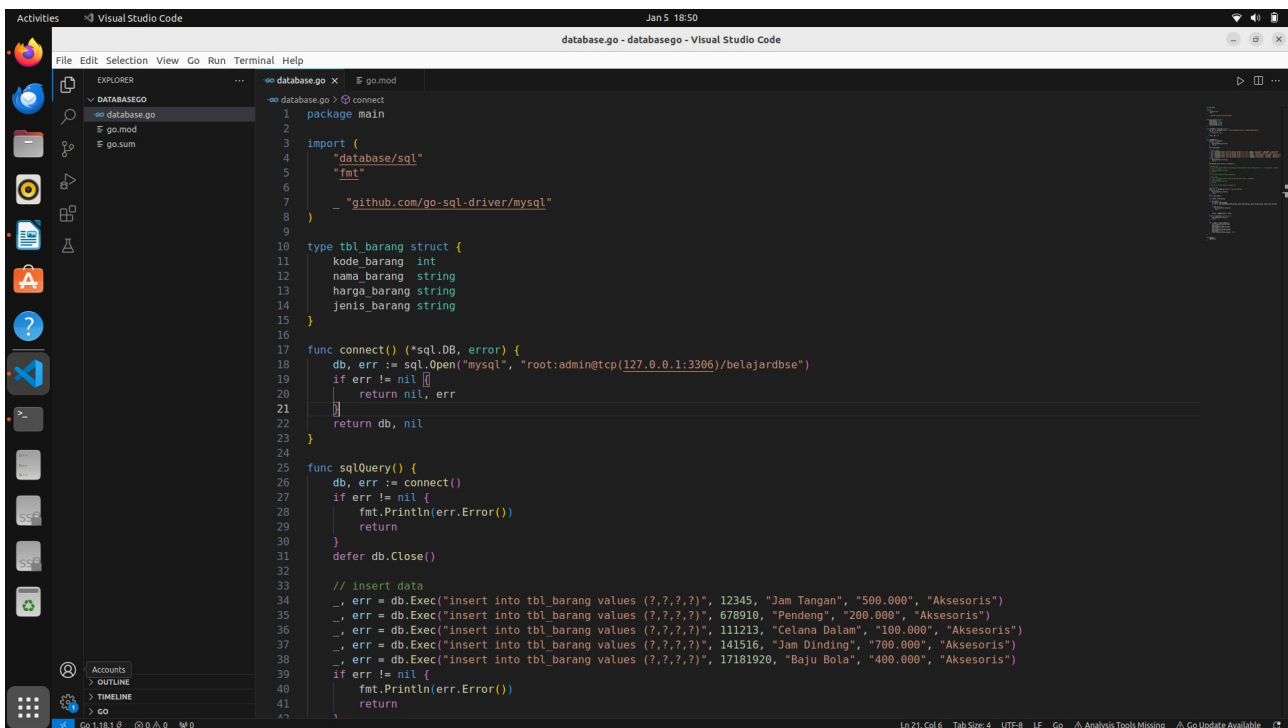
LABORATORIUM TEKNIK INFORMATIKA
UNIVERSITAS GUNADARMA

2024

Jelaskan Menurut Pemahaman Kalian sendiri mengenai basis data(database) : menurut saya database adalah sebuah tempat/wadah untuk menyimpan sebuah isi/record atau pun field dan berisikan juga tabel yang memiliki struktur dan juga dapat saling berhubungan(relasi) dan melalui penggabungan data(join) dapat di tambahkan di ubah dihapus dan dilihat(select,delete,update) dan dikondisikan (where)

2.Lanjutkanlah database sebelumnya dan tambahkanlah masing-masing lima(5) data bebas ss,code,copyan program ss output dan logika program :

Source Code



```
1 package main
2
3 import (
4     "database/sql"
5     "fmt"
6     _ "github.com/go-sql-driver/mysql"
7 )
8
9
10 type tbl_barang struct {
11     kode_barang int
12     nama_barang string
13     harga_barang string
14     jenis_barang string
15 }
16
17 func connect() (*sql.DB, error) {
18     db, err := sql.Open("mysql", "root:admin@tcp(127.0.0.1:3306)/belajardbse")
19     if err != nil {
20         return nil, err
21     }
22     return db, nil
23 }
24
25 func sqlQuery() {
26     db, err := connect()
27     if err != nil {
28         fmt.Println(err.Error())
29         return
30     }
31     defer db.Close()
32
33     // insert data
34     _, err = db.Exec("insert into tbl_barang values (?, ?, ?, ?)", 12345, "Jam Tangan", "500.000", "Aksesoris")
35     _, err = db.Exec("insert into tbl_barang values (?, ?, ?, ?)", 678910, "Pendeng", "200.000", "Aksesoris")
36     _, err = db.Exec("insert into tbl_barang values (?, ?, ?, ?)", 111213, "Celana Dalam", "100.000", "Aksesoris")
37     _, err = db.Exec("insert into tbl_barang values (?, ?, ?, ?)", 141516, "Jam Dinding", "700.000", "Aksesoris")
38     _, err = db.Exec("insert into tbl_barang values (?, ?, ?, ?)", 17181920, "Baju Bola", "400.000", "Aksesoris")
39     if err != nil {
40         fmt.Println(err.Error())
41         return
42     }
43 }
```

Visual Studio Code interface showing a Go program for database operations. The Explorer sidebar shows the project structure with files: database.go, go.mod, and go.sum. The main editor displays the code for database.go, which includes functions for connecting to a database, inserting, updating, deleting, and selecting data from a table named tbl_barang. The code uses the gorm package for database interactions.

```
42 }
43 fmt.Printf("Data berhasil ditambah\n")
44
45 //Update data
46 // _, err = db.Exec("update tbl_barang set nama_barang= ? where kode_barang = ?", "Tas Laptop", 12345)
47 // if err != nil {
48 //     fmt.Println(err.Error())
49 //     return
50 // }
51 // fmt.Printf("Data berhasil diubah\n")
52
53 // Hapus Data
54 // _, err = db.Exec("delete from tbl_barang where npm=?", 51420175)
55 // if err != nil {
56 //     fmt.Println(err.Error())
57 //     return
58 // }
59 // fmt.Printf("Data berhasil dihapus\n")
60
61 //select data
62 rows, err := db.Query("select * from tbl_barang")
63 if err != nil {
64     fmt.Println(err.Error())
65     return
66 }
67 defer rows.Close()
68
69 var result []tbl_barang
70
71 for rows.Next() {
72     var each = tbl_barang{}
73     var err = rows.Scan(&each.kode_barang, &each.nama_barang, &each.harga_barang, &each.jenis_barang)
74
75     if err != nil {
76         fmt.Println(err.Error())
77         return
78     }
79
80     result = append(result, each)
81 }
82 if err = rows.Err(); err != nil {
83     fmt.Println(err.Error())
84 }
```

Visual Studio Code interface showing the same Go program, but with the main function and a range loop added to the end of the file. The Explorer sidebar shows the project structure with files: database.go, go.mod, and go.sum. The main editor displays the code for database.go, which includes functions for connecting to a database, inserting, updating, deleting, and selecting data from a table named tbl_barang. The code uses the gorm package for database interactions.

```
63 if err != nil {
64     fmt.Println(err.Error())
65     return
66 }
67 defer rows.Close()
68
69 var result []tbl_barang
70
71 for rows.Next() {
72     var each = tbl_barang{}
73     var err = rows.Scan(&each.kode_barang, &each.nama_barang, &each.harga_barang, &each.jenis_barang)
74
75     if err != nil {
76         fmt.Println(err.Error())
77         return
78     }
79
80     result = append(result, each)
81 }
82 if err = rows.Err(); err != nil {
83     fmt.Println(err.Error())
84     return
85 }
86
87 for _, each := range result {
88     fmt.Print(each.kode_barang)
89     fmt.Print(" | ")
90     fmt.Print(each.nama_barang)
91     fmt.Print(" | ")
92     fmt.Print(each.harga_barang)
93     fmt.Print(" | ")
94     fmt.Print(each.jenis_barang, "\n")
95 }
96
97
98 func main() {
99     sqlQuery()
100 }
101
```

Output Program(hasilnya sama dengan di database)

```
31 defer db.Close()
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
● achmadfadli@achmadfadli-Lenovo-V14-G2-ITL:~/Documents/Labti/belajargolang/databasego$ go run database.go
678910 | Piring | 200.000 | Aksesoris
● achmadfadli@achmadfadli-Lenovo-V14-G2-ITL:~/Documents/Labti/belajargolang/databasego$ go run database.go
Data berhasil ditambah
12345 | Jam Tangan | 500.000 | Aksesoris
111213 | Celana Dalam | 100.000 | Aksesoris
141516 | Jam Dinding | 700.000 | Aksesoris
678910 | Piring | 200.000 | Aksesoris
17181920 | Baju Bola | 400.000 | Aksesoris
○ achmadfadli@achmadfadli-Lenovo-V14-G2-ITL:~/Documents/Labti/belajargolang/databasego$
```

Logika Program

```
33 // insert data
34 _, err = db.Exec("insert into tbl_barang values (?, ?, ?, ?)", 12345, "Jam Tangan", "500.000", "Aksesoris")
35 _, err = db.Exec("insert into tbl_barang values (?, ?, ?, ?)", 678910, "Pendeng", "200.000", "Aksesoris")
36 _, err = db.Exec("insert into tbl_barang values (?, ?, ?, ?)", 111213, "Celana Dalam", "100.000", "Aksesoris")
37 _, err = db.Exec("insert into tbl_barang values (?, ?, ?, ?)", 141516, "Jam Dinding", "700.000", "Aksesoris")
38 _, err = db.Exec("insert into tbl_barang values (?, ?, ?, ?)", 17181920, "Baju Bola", "400.000", "Aksesoris")
39 if err != nil {
40     fmt.Println(err.Error())
41     return
42 }
43 fmt.Printf("Data berhasil ditambah\n")
```