

TUGAS MERANCANG RELASI DATABASE MENGGUNAKAN SQL

Diajukan Untuk Memenuhi Salah Satu Tugas Mata Kuliah Basis Data I



Disusun Oleh :

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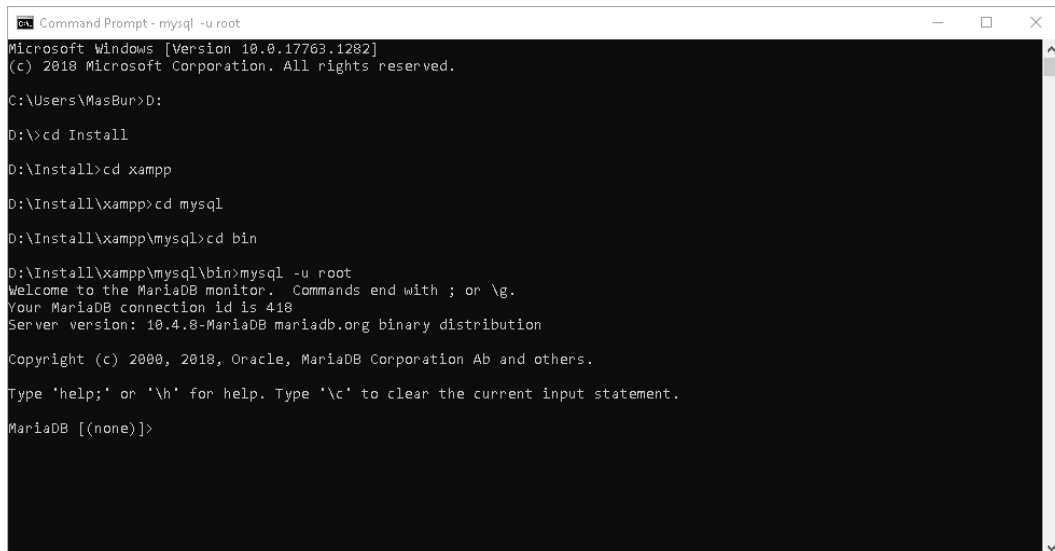
NPM : 1194008

Kelas : D4 TI / 1A

**PROGRAM STUDI DIPLOMA IV TEKNIK INFORMATIKA
POLITEKNIK POS INDONESIA
BANDUNG
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MERANCANG RELASI DATABASE MENGGUNAKAN SQL

1. Untuk membuat database menggunakan SQL yaitu masuk ke Command Prompt (CMD) lalu ketik “cd xampp\mysql\bin” Untuk masuk ke dalam direktori mysql, maka ketik “mysql –u root” (untuk mengakses MariaDB).



```
Command Prompt - mysql -u root
Microsoft Windows [Version 10.0.17763.1282]
(c) 2018 Microsoft Corporation. All rights reserved.

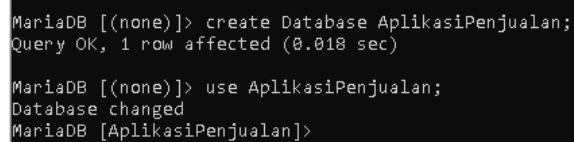
C:\Users\MasBur>D:
D:\>cd Install
D:\Install>cd xampp
D:\Install\xampp>cd mysql
D:\Install\xampp\mysql>cd bin
D:\Install\xampp\mysql\bin>mysql -u root
Welcome to the MariaDB monitor. Commands end with ; or \g.
Your MariaDB connection id is 418
Server version: 10.4.8-MariaDB mariadb.org binary distribution

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]>
```

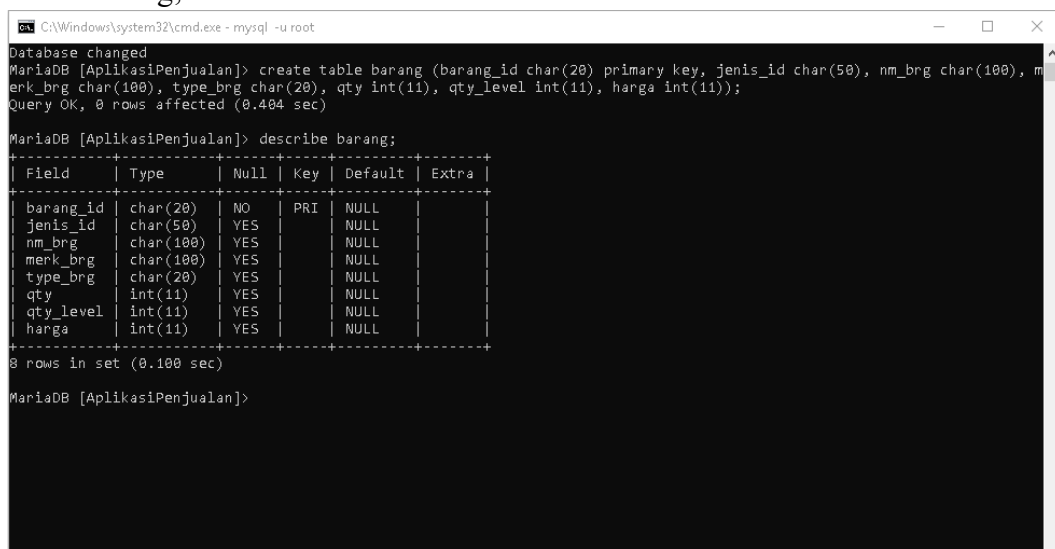
2. Untuk membuat database ketik perintah “create Database AplikasiPenjualan;” dan untuk memuat database AplikasiPenjualan maka ketik perintah “use AplikasiPenjualan;”.



```
MariaDB [(none)]> create Database AplikasiPenjualan;
Query OK, 1 row affected (0.018 sec)

MariaDB [(none)]> use AplikasiPenjualan;
Database changed
MariaDB [AplikasiPenjualan]>
```

3. Membuat tabel barang “create table barang”. Untuk mendeskripsikan hasilnya ketik “describe barang;”.



```
C:\Windows\system32\cmd.exe - mysql -u root
Database changed
MariaDB [AplikasiPenjualan]> create table barang (barang_id char(20) primary key, jenis_id char(50), nm_brg char(100), merk_brg char(100), type_brg char(20), qty int(11), qty_level int(11), harga int(11));
Query OK, 0 rows affected (0.404 sec)

MariaDB [AplikasiPenjualan]> describe barang;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| barang_id | char(20) | NO | PRI | NULL | |
| jenis_id | char(50) | YES | | NULL | |
| nm_brg | char(100) | YES | | NULL | |
| merk_brg | char(100) | YES | | NULL | |
| type_brg | char(20) | YES | | NULL | |
| qty | int(11) | YES | | NULL | |
| qty_level | int(11) | YES | | NULL | |
| harga | int(11) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
8 rows in set (0.100 sec)

MariaDB [AplikasiPenjualan]>
```

4. Membuat tabel jenis “create table jenis”. Untuk mendeskripsikan hasilnya ketik “describe jenis;”.

```
C:\Windows\system32\cmd.exe - mysql -u root
MariaDB [AplikasiPenjualan]> create table jenis (jenis_id int(4) primary key, barang_id char(20), jenis_barang char(100));
Query OK, 0 rows affected (0.312 sec)

MariaDB [AplikasiPenjualan]> describe jenis;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| jenis_id | int(4) | NO | PRI | NULL | |
| barang_id | char(20) | YES | | NULL | |
| jenis_barang | char(100) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.067 sec)

MariaDB [AplikasiPenjualan]>
```

5. Membuat tabel sales “create table sales”. Untuk mendeskripsikan hasilnya ketik “describe sales;”.

```
C:\Windows\system32\cmd.exe - mysql -u root
MariaDB [AplikasiPenjualan]> create table sales (sales_id varchar(10) primary key, nama varchar(200), alamat tinytext);
Query OK, 0 rows affected (0.546 sec)

MariaDB [AplikasiPenjualan]> describe sales;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| sales_id | varchar(10) | NO | PRI | NULL | |
| nama | varchar(200) | YES | | NULL | |
| alamat | tinytext | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.129 sec)

MariaDB [AplikasiPenjualan]>
```

6. Membuat tabel faktur “create table faktur”. Untuk mendeskripsikan hasilnya ketik “describe faktur;”.

```
C:\Windows\system32\cmd.exe - mysql -u root
MariaDB [AplikasiPenjualan]> create table faktur (faktur_id varchar(200) primary key, tgl date, kon_id varchar(20), nb text, disc int(20), debit bigint(20), kredit bigint(20), tempo date, sales_id varchar(10), tgl_byr date, retur bigint(20));
Query OK, 0 rows affected (0.556 sec)

MariaDB [AplikasiPenjualan]> describe faktur;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| faktur_id | varchar(200) | NO | PRI | NULL | |
| tgl | date | YES | | NULL | |
| kon_id | varchar(20) | YES | | NULL | |
| nb | text | YES | | NULL | |
| disc | int(20) | YES | | NULL | |
| debit | bigint(20) | YES | | NULL | |
| kredit | bigint(20) | YES | | NULL | |
| tempo | date | YES | | NULL | |
| sales_id | varchar(10) | YES | | NULL | |
| tgl_byr | date | YES | | NULL | |
| retur | bigint(20) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
11 rows in set (0.087 sec)

MariaDB [AplikasiPenjualan]>
```

7. Membuat tabel supplier “create table supplier”. Untuk mendeskripsikan hasilnya ketik “describe supplier;”.

```
C:\Windows\system32\cmd.exe - mysql -u root

MariaDB [AplikasiPenjualan]> create table supplier ( ID char(20) primary key, nama char(200), alamat char(200), kota char(100));
Query OK, 0 rows affected (0.481 sec)

MariaDB [AplikasiPenjualan]> describe supplier;
+-----+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| ID     | char(20) | NO   | PRI | NULL    |       |
| nama   | char(200) | YES  |     | NULL    |       |
| alamat | char(200) | YES  |     | NULL    |       |
| kota   | char(100) | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.002 sec)

MariaDB [AplikasiPenjualan]>
```

8. Membuat tabel faktur beli “create table faktur_beli”. Untuk mendeskripsikan hasilnya ketik “describe faktur_beli;”.

```
C:\Windows\system32\cmd.exe - mysql -u root

MariaDB [AplikasiPenjualan]> create table faktur_beli (faktur_id varchar(200) primary key, tgl date, sup_id varchar(20), nb text, disc int(20), debit bigint(20), kredit bigint(20), tempo date, tgl_byr date, retur bigint(20));
Query OK, 0 rows affected (0.451 sec)

MariaDB [AplikasiPenjualan]> describe faktur_beli;
+-----+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| faktur_id | varchar(200) | NO   | PRI | NULL    |       |
| tgl       | date        | YES  |     | NULL    |       |
| sup_id    | varchar(20) | YES  |     | NULL    |       |
| nb        | text        | YES  |     | NULL    |       |
| disc      | int(20)     | YES  |     | NULL    |       |
| debit     | bigint(20)  | YES  |     | NULL    |       |
| kredit    | bigint(20)  | YES  |     | NULL    |       |
| tempo     | date        | YES  |     | NULL    |       |
| tgl_byr   | date        | YES  |     | NULL    |       |
| retur     | bigint(20)  | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
10 rows in set (0.004 sec)

MariaDB [AplikasiPenjualan]>
```

9. Membuat tabel pembelian “create table pembelian”. Untuk mendeskripsikan hasilnya ketik “describe pembelian;”.

```
C:\Windows\system32\cmd.exe - mysql -u root

MariaDB [AplikasiPenjualan]> create table pembelian (faktur_id char(20), brg_id char(20), qty int(20), disc float, discrp int(20), harga bigint(20));
Query OK, 0 rows affected (0.402 sec)

MariaDB [AplikasiPenjualan]> describe pembelian;
+-----+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| faktur_id | char(20) | YES  |     | NULL    |       |
| brg_id    | char(20) | YES  |     | NULL    |       |
| qty       | int(20)  | YES  |     | NULL    |       |
| disc      | float    | YES  |     | NULL    |       |
| discrp    | int(20)  | YES  |     | NULL    |       |
| harga     | bigint(20) | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.105 sec)

MariaDB [AplikasiPenjualan]>
```

10. Membuat tabel konsumen “create table konsumen”. Untuk mendeskripsikan hasilnya ketik “describe konsumen;”.

```
C:\Windows\system32\cmd.exe - mysql -u root
MariaDB [AplikasiPenjualan]> create table konsumen ( ID char(50) unique key, nama char (100), alamat char(200), kota char(100), npwp varchar(200));
Query OK, 0 rows affected (0.394 sec)

MariaDB [AplikasiPenjualan]> describe konsumen;
+-----+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| ID     | char(50) | YES  | UNI | NULL    |       |
| nama   | char(100) | YES  |     | NULL    |       |
| alamat | char(200) | YES  |     | NULL    |       |
| kota   | char(100) | YES  |     | NULL    |       |
| npwp   | varchar(200) | YES |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.122 sec)

MariaDB [AplikasiPenjualan]>
```

11. Membuat tabel faktur retur “create table faktur_retur”. Untuk mendeskripsikan hasilnya ketik “describe faktur_retur;”.

```
C:\Windows\system32\cmd.exe - mysql -u root
MariaDB [AplikasiPenjualan]> create table faktur_retur (faktur_id varchar(200) primary key, kon_id varchar(200), tgl date, nb text, disc int(20), retur int(20));
Query OK, 0 rows affected (0.306 sec)

MariaDB [AplikasiPenjualan]> describe faktur_retur;
+-----+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| faktur_id | varchar(200) | NO   | PRI | NULL    |       |
| kon_id    | varchar(200) | YES  |     | NULL    |       |
| tgl       | date        | YES  |     | NULL    |       |
| nb        | text        | YES  |     | NULL    |       |
| disc      | int(20)     | YES  |     | NULL    |       |
| retur     | int(20)     | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.118 sec)

MariaDB [AplikasiPenjualan]>
```

12. Membuat tabel penjualan “create table penjualan”. Untuk mendeskripsikan hasilnya ketik “describe penjualan;”.

```
C:\Windows\system32\cmd.exe - mysql -u root
MariaDB [AplikasiPenjualan]> create table penjualan (faktur_id char(20), brd_id char(20), qty int(20), disc float, discrp int(20), harga bigint(20));
Query OK, 0 rows affected (0.311 sec)

MariaDB [AplikasiPenjualan]> describe penjualan;
+-----+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| faktur_id | char(20) | YES  |     | NULL    |       |
| brd_id    | char(20) | YES  |     | NULL    |       |
| qty       | int(20) | YES  |     | NULL    |       |
| disc      | float    | YES  |     | NULL    |       |
| discrp    | int(20) | YES  |     | NULL    |       |
| harga     | bigint(20) | YES |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.114 sec)

MariaDB [AplikasiPenjualan]>
```

13. Membuat tabel faktur mutasi “create table faktur_mutasi”. Untuk mendeskripsikan hasilnya ketik “describe faktur_mutasi;”.

```
C:\Windows\system32\cmd.exe - mysql -u root
MariaDB [AplikasiPenjualan]> create table faktur_mutasi (faktur_id varchar(200) primary key, tgl date, nb text, debit bigint(20), kon_id char(50));
Query OK, 0 rows affected (0.332 sec)

MariaDB [AplikasiPenjualan]> describe faktur_mutasi;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| faktur_id | varchar(200) | NO | PRI | NULL |  |
| tgl | date | YES |  | NULL |  |
| nb | text | YES |  | NULL |  |
| debit | bigint(20) | YES |  | NULL |  |
| kon_id | char(50) | YES |  | NULL |  |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.066 sec)

MariaDB [AplikasiPenjualan]>
```

14. Membuat tabel mutasi “create table mutasi”. Untuk mendeskripsikan hasilnya ketik “describe mutasi;”.

```
C:\Windows\system32\cmd.exe - mysql -u root
MariaDB [AplikasiPenjualan]> create table mutasi (faktur_id char(20), brg_id char(20) unique key, qty int(20));
Query OK, 0 rows affected (0.297 sec)

MariaDB [AplikasiPenjualan]> describe mutasi;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| faktur_id | char(20) | YES |  | NULL |  |
| brg_id | char(20) | YES | UNI | NULL |  |
| qty | int(20) | YES |  | NULL |  |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.152 sec)

MariaDB [AplikasiPenjualan]>
```

15. Membuat tabel retur penjualan “create table retur_penjualan”. Untuk mendeskripsikan hasilnya ketik “describe retur_penjualan;”.

```
C:\Windows\system32\cmd.exe - mysql -u root
MariaDB [AplikasiPenjualan]> create table retur_penjualan (faktur_id char(20), brg_id char(20), qty int(20), disc float, discrp int(20), harga bigint(20));
Query OK, 0 rows affected (0.319 sec)

MariaDB [AplikasiPenjualan]> describe retur_penjualan;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| faktur_id | char(20) | YES |  | NULL |  |
| brg_id | char(20) | YES |  | NULL |  |
| qty | int(20) | YES |  | NULL |  |
| disc | float | YES |  | NULL |  |
| discrp | int(20) | YES |  | NULL |  |
| harga | bigint(20) | YES |  | NULL |  |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.119 sec)

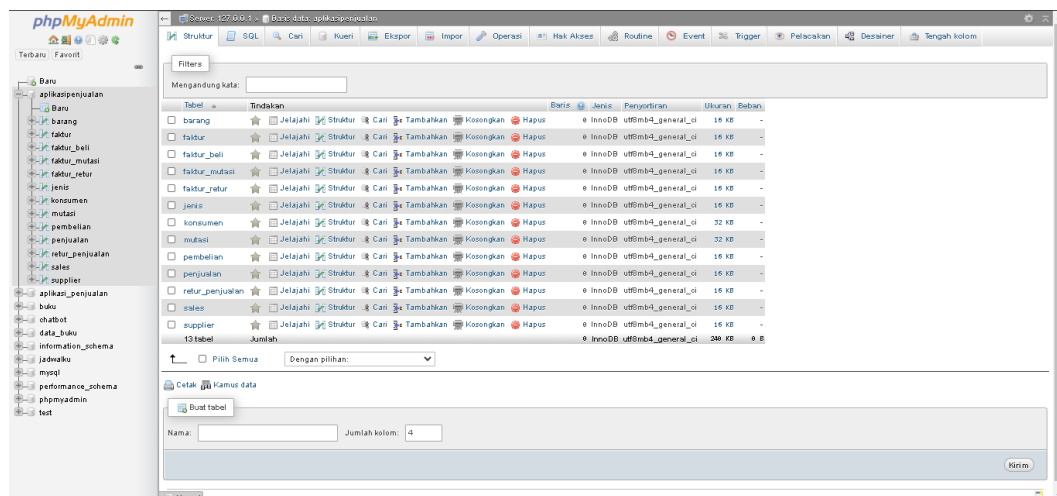
MariaDB [AplikasiPenjualan]>
```

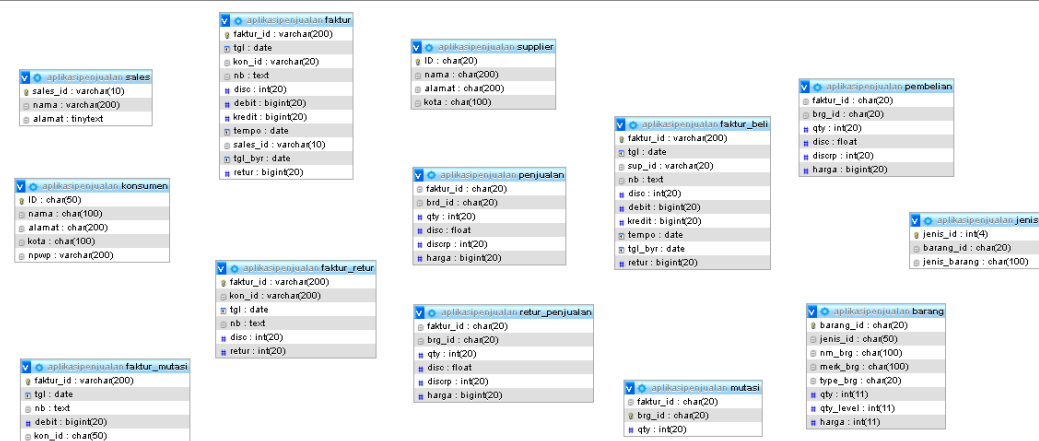
16. Untuk menampilkan semua tabel yang telah dibuat “show tables;”.

```
C:\Windows\system32\cmd.exe - mysql -u root
MariaDB [AplikasiPenjualan]> show tables;
+-----+
| Tables_in_aplikasipenjualan |
+-----+
| barang                      |
| faktur                     |
| faktur_beli                 |
| faktur_mutasi               |
| faktur_retur                |
| jenis                       |
| konsumen                    |
| mutasi                      |
| pembelian                   |
| penjualan                   |
| retur_penjualan             |
| sales                       |
| supplier                    |
+-----+
13 rows in set (0.002 sec)

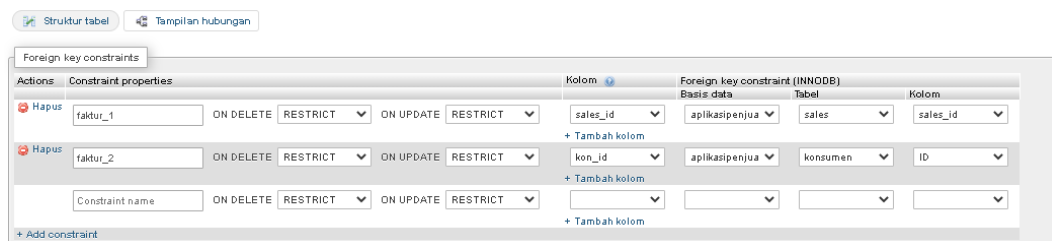
MariaDB [AplikasiPenjualan]>
```

17. Membuat relasi dari Database yang telah dibuat, masuk ke phpmyadmin “localhost/phpmyadmin”. Pilih database yang telah dibuat yaitu aplikasi penjualan lalu klik menu designer.





18. Untuk merelasikannya yaitu dengan cara klik table yang ingin di relasikan, misal table faktur akan berelasi dengan table sales. Maka pilih table faktur lalu structure, setelah itu klik pada relation view lalu edit menjadi berikut kemudian save. Demikian juga untuk menyambungkan pada table yang lain



19. Maka hasilnya akan menjadi seperti berikut ini :

