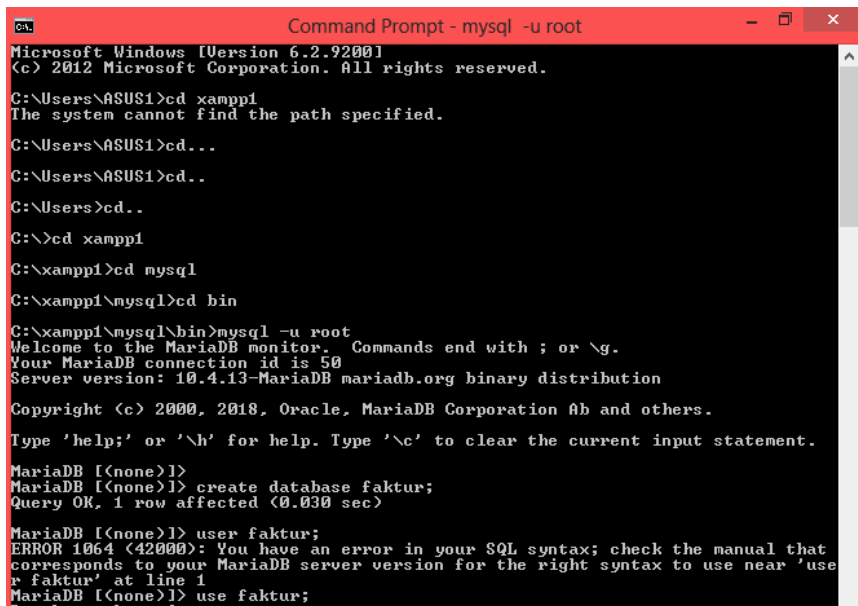


NAMA : Faisal Abdullah

NPM : 1194014

Merancang Database

1. Masuk ke dalam folder bin di dalam mysql, ketikan **mysql -u root** untuk mengakses mariadb, dan buat nama database dengan mengetikan **create database faktur**;



```
Microsoft Windows [Version 6.2.9200]
(c) 2012 Microsoft Corporation. All rights reserved.

C:\Users\ASUS1>cd xampp1
The system cannot find the path specified.

C:\Users\ASUS1>cd...
C:\Users\ASUS1>cd..
C:\Users>cd..
C:\>cd xampp1
C:\xampp1>cd mysql
C:\xampp1\mysql>cd bin
C:\xampp1\mysql\bin>mysql -u root
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 50
Server version: 10.4.13-MariaDB mariadb.org binary distribution

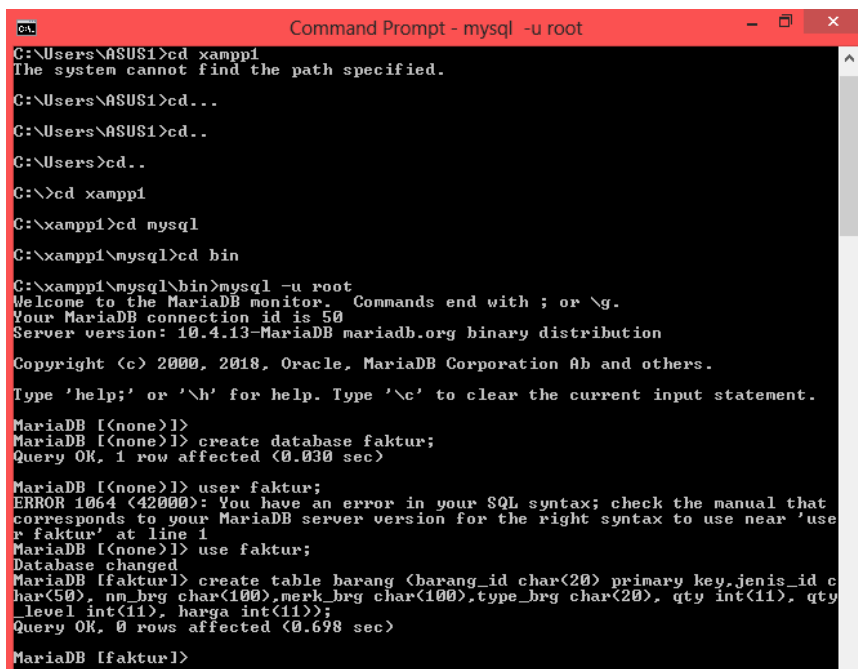
Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

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

MariaDB [(none)]>
MariaDB [(none)]> create database faktur;
Query OK, 1 row affected (0.030 sec)

MariaDB [(none)]> user faktur;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that
corresponds to your MariaDB server version for the right syntax to use near 'use
r faktur' at line 1
MariaDB [(none)]> use faktur;
Database changed
```

2. Create table barang



```
Microsoft Windows [Version 6.2.9200]
(c) 2012 Microsoft Corporation. All rights reserved.

C:\Users\ASUS1>cd xampp1
The system cannot find the path specified.

C:\Users\ASUS1>cd...
C:\Users\ASUS1>cd..
C:\Users>cd..
C:\>cd xampp1
C:\xampp1>cd mysql
C:\xampp1\mysql>cd bin
C:\xampp1\mysql\bin>mysql -u root
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 50
Server version: 10.4.13-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)]>
MariaDB [(none)]> create database faktur;
Query OK, 1 row affected (0.030 sec)

MariaDB [(none)]> user faktur;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that
corresponds to your MariaDB server version for the right syntax to use near 'use
r faktur' at line 1
MariaDB [(none)]> use faktur;
Database changed
MariaDB [faktur]> create table barang (barang_id char(20) primary key, jenis_id c
har(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 (0.698 sec)

MariaDB [faktur]>
```

Untuk melihat hasil nya ketikan **describe barang**;

```
MariaDB [faktur1]> describe barang;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that
corresponds to your MariaDB server version for the right syntax to use near 'des
cribe barang' at line 1
MariaDB [faktur1]> 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 (0.031 sec)
MariaDB [faktur1]>
```

3. Create table jenis

Untuk membuat foreign key pada tabel jenis, relasikan tabel jenis dengan tabel barang menggunakan **CONSTRAINT barang_id FOREIGN KEY (`barang_id`) REFERENCES `barang` (`barang_id`)**,

```
Command Prompt - mysql -u root

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 (0.002 sec)

MariaDB [faktur1]> create table jenis (jenis_id int(4) primary key, barang_id ch
ar(20), CONSTRAINT barang_id FOREIGN KEY (`barang_id`) REFERENCES `barang` (`bar
ang_id`), jenis_barang char(100));
Query OK, 0 rows affected (0.628 sec)

MariaDB [faktur1]> describe jenis;
```

Field	Type	Null	Key	Default	Extra
jenis_id	int(4)	NO	PRI	NULL	
barang_id	char(20)	YES	MUL	NULL	
jenis_barang	char(100)	YES		NULL	

```
3 rows in set (0.030 sec)
MariaDB [faktur1]>
```

4. Create table sales, dan check hasil nya

```
Command Prompt - mysql -u root

jenis_id     int(4) NO PRI NULL
barang_id    char(20) YES MUL NULL
jenis_barang  char(100) YES NULL
3 rows in set (0.030 sec)

MariaDB [faktur1]> create table sales (sales_id varchar(10) primary key, nama var
char(200), alamat tinytext);
Query OK, 0 rows affected (1.672 sec)

MariaDB [faktur1]> describe sales;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that
corresponds to your MariaDB server version for the right syntax to use near 'des
cribe sales' at line 1
MariaDB [faktur1]> 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 (0.027 sec)
MariaDB [faktur1]>
```

5. Create tabel faktur, dan relasikan dengan tabel sales

```

C:\> Command Prompt - mysql -u root

MariaDB [faktur]> 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_hyr date, retur bigint(20), CONSTRAINT sales_id FOREIGN KEY ('sales_id') REFERENCES 'sales' ('sales_id'));
Query OK, 0 rows affected (0.391 sec)

MariaDB [faktur]> 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 | MUL | NULL | |
| tgl_hyr | date | YES | | NULL | |
| retur | bigint(20) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
11 rows in set (0.004 sec)

MariaDB [faktur]>

```

6. Create tabel supplier

```

C:\> Command Prompt - mysql -u root

MariaDB [faktur]> 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 | MUL | NULL | |
| tgl_hyr | date | YES | | NULL | |
| retur | bigint(20) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
11 rows in set (0.004 sec)

MariaDB [faktur]> create table supplier (ID char(20) primary key, nama char(200), alamat char(200), kota char(100));
Query OK, 0 rows affected (0.270 sec)

MariaDB [faktur]> 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 [faktur]>

```

7. Create tabel faktur_beli

```

C:\> Command Prompt - mysql -u root

MariaDB [faktur]> 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 | MUL | NULL | |
| tgl_hyr | date | YES | | NULL | |
| retur | bigint(20) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
11 rows in set (0.004 sec)

MariaDB [faktur]> 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_hyr date, retur bigint(20));
Query OK, 0 rows affected (0.274 sec)

MariaDB [faktur]> 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_hyr | date | YES | | NULL | |
| retur | bigint(20) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
10 rows in set (0.033 sec)

MariaDB [faktur]>

```

8. Create tabel pembelian

```

Command Prompt - mysql -u root

ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that
corresponds to your MariaDB server version for the right syntax to use near '->u
nsigned()' at line 1
MariaDB [faktur1] create table pembelian (faktur_id char(20), brg_id char(20), q
ty int(20), disc float, discrp int(20), harga bigint(20), CONSTRAINT barang_id F
OREIGN KEY ('barang_id') REFERENCES 'barang' ('barang_id'));
ERROR 1072 (42000): Key column 'barang_id' doesn't exist in table
MariaDB [faktur1] create table pembelian (faktur_id char(20), brg_id char(20), q
ty int(20), disc float, discrp int(20), harga bigint(20));
Query OK, 0 rows affected (0.427 sec)

MariaDB [faktur1] 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 (0.056 sec)

MariaDB [faktur1]

```

9. Create tabel konsumen

```

Command Prompt - mysql -u root

+-----+-----+-----+-----+-----+-----+
| 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 (0.056 sec)

MariaDB [faktur1] 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 (0.371 sec)

MariaDB [faktur1] 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 | |
+-----+-----+-----+-----+-----+-----+

```

10. Create tabel faktur_retur

```

Command Prompt - mysql -u root

+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| nama | char(100) | YES | | NULL | |
| alamat | char(200) | YES | | NULL | |
| kota | char(100) | YES | | NULL | |
| npwp | varchar(200) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.003 sec)

MariaDB [faktur1] 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 (0.237 sec)

MariaDB [faktur1] 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 (0.031 sec)

MariaDB [faktur1]

```

11. Create tabel penjualan

```

C:\ Command Prompt - mysql -u root
+-----+-----+-----+-----+-----+-----+
| tempo | date | YES | MUL | NULL | |
| sales_id | varchar(10) | YES | | NULL | |
| tgl_byr | date | YES | | NULL | |
| retur | bigint(20) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
11 rows in set (0.002 sec)

MariaDB [faktur1]> create table 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 (0.238 sec)

MariaDB [faktur1]> describe 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 (0.002 sec)

MariaDB [faktur1]

```

12. Create tabel faktur_mutasi

```

C:\ Command Prompt - mysql -u root
+-----+-----+-----+-----+-----+-----+
| 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 (0.002 sec)

MariaDB [faktur1]> 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 (0.402 sec)

MariaDB [faktur1]> 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 (0.002 sec)

MariaDB [faktur1]

```

13. Create tabel retur penjualan

```

C:\ Command Prompt - mysql -u root
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that
corresponds to your MariaDB server version for the right syntax to use near 'cre
ate table retur_penjualan (faktur_id char(20), brg_id char(20), qty int(20...' a
t line 1
MariaDB [faktur1]
MariaDB [faktur1]> update table retur_penjualan (faktur_id char(20), barang_id ch
ar(20), qty int(20), disc float, discrp int(20), harga bigint(20));
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that
corresponds to your MariaDB server version for the right syntax to use near 'tab
le retur_penjualan (faktur_id char(20), barang_id char(20), qty int(20), d...' a
t line 1
MariaDB [faktur1]> 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 (0.002 sec)

MariaDB [faktur1]

```

14. Create tabel mutasi

```
Command Prompt - mysql -u root

MariaDB [faktur]> create table mutasi (faktur_id char(20), brg_id char(20) unique key, qty int(20));
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'key , qty int(20))' at line 1
MariaDB [faktur]> create table mutasi (faktur_id char(20), brg_id char(20) unique key, qty int(20));
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'key , qty int(20))' at line 1
MariaDB [faktur]> create table mutasi (faktur_id char(20), brg_id char(20) unique key, qty int(20));
Query OK, 0 rows affected (0.326 sec)

MariaDB [faktur]> 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 (0.002 sec)

MariaDB [faktur]>
```

15. Ini adalah tabel-tabel yang sudah dibuat sebelumnya

```
Command Prompt - mysql -u root

+-----+-----+-----+-----+-----+
| qty | int(20) | YES | | NULL | |
+-----+-----+-----+-----+-----+
3 rows in set (0.002 sec)

MariaDB [faktur]> show tables;
+-----+
| Tables_in_faktur |
+-----+
| barang            |
| faktur            |
| faktur_beli       |
| faktur_mutasi     |
| faktur_retur      |
| jenis             |
| konsumen          |
| mutasi            |
| pembelian         |
| penjualan         |
| retur_penjualan   |
| sales             |
| supplier          |
+-----+
13 rows in set (0.040 sec)

MariaDB [faktur]>
```

The diagram illustrates the following tables and their attributes:

- faktur_sales**: sales_id : varchar(10), nama : varchar(200), alamat : tinytext
- faktur_konsumen**: ID : char(50), nama : char(100), alamat : char(200), kota : char(100), npwp : varchar(200)
- faktur_faktur**: faktur_id : varchar(200), 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)
- faktur_supplier**: ID : char(20), nama : char(200), alamat : char(200), kota : char(100)
- faktur_penjualan**: faktur_id : char(20), barang_id : char(20), qty : int(20), disc : float, discrp : int(20), harga : bigint(20)
- faktur_retur_penjualan**: faktur_id : char(20), barang_id : char(20), qty : int(20), disc : float, discrp : int(20), harga : bigint(20)
- faktur_mutasi**: faktur_id : varchar(200), tgl : date, nb : text, debit : bigint(20), kon_id : char(50)
- faktur_faktur_retur**: faktur_id : varchar(200), kon_id : varchar(200), tgl : date, nb : text, disc : int(20), retur : int(20)
- faktur_beli**: faktur_id : varchar(200), 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)
- faktur_barang**: barang_id : char(20), 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)
- faktur_jenis**: jenis_id : int(4), barang_id : char(20), jenis_barang : char(100)
- faktur_pembelian**: faktur_id : char(20), barang_id : char(20), qty : int(20), disc : float, discrp : int(20), harga : bigint(20)

Relationships are shown as follows:

- faktur_sales** (primary) connects to **faktur_faktur** (foreign).
- faktur_konsumen** (primary) connects to **faktur_faktur** (foreign).
- faktur_faktur** (primary) connects to **faktur_supplier** (foreign).
- faktur_faktur** (primary) connects to **faktur_penjualan** (foreign).
- faktur_faktur** (primary) connects to **faktur_retur_penjualan** (foreign).
- faktur_faktur** (primary) connects to **faktur_mutasi** (foreign).
- faktur_faktur** (primary) connects to **faktur_faktur_retur** (foreign).
- faktur_faktur** (primary) connects to **faktur_beli** (foreign).
- faktur_penjualan** (primary) connects to **faktur_barang** (foreign).
- faktur_retur_penjualan** (primary) connects to **faktur_barang** (foreign).
- faktur_barang** (primary) connects to **faktur_jenis** (foreign).
- faktur_barang** (primary) connects to **faktur_pembelian** (foreign).