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RELASI TABEL DAN LOCALHOST
REFERENCIAL INTEGRITY

1. Buat database trans_jual_ilham

```
MariaDB [(none)]> create database trans_jual_ilham;
Query OK, 1 row affected (0.001 sec)

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

2. Buat tabel barang dan kota

```
MariaDB [trans_jual_ilham]> create table barang (
    -> kdbrg char(10) not null unique,
    -> nmbrg char(30),
    -> satuan char(25),
    -> harga int(8));
Query OK, 0 rows affected (0.195 sec)

MariaDB [trans_jual_ilham]> desc barang;
+--------+----------+------+-----+---------+-------+
| Field  | Type     | Null | Key | Default | Extra |
+--------+----------+------+-----+---------+-------+
| kdbrg  | char(10) | NO   | PRI | NULL    |       |
| nmbrg  | char(30) | YES  |     | NULL    |       |
| satuan | char(25) | YES  |     | NULL    |       |
| harga  | int(8)   | YES  |     | NULL    |       |
+--------+----------+------+-----+---------+-------+
4 rows in set (0.015 sec)
```

```
MariaDB [trans_jual_ilham]> create table kota (
    -> kota char(2) not null unique,
    -> namakota char(20),
    -> propinsi char(20));
Query OK, 0 rows affected (0.207 sec)

MariaDB [trans_jual_ilham]> desc kota;
+----------+----------+------+-----+---------+-------+
| Field    | Type     | Null | Key | Default | Extra |
+----------+----------+------+-----+---------+-------+
| kota     | char(2)  | NO   | PRI | NULL    |       |
| namakota | char(20) | YES  |     | NULL    |       |
| propinsi | char(20) | YES  |     | NULL    |       |
+----------+----------+------+-----+---------+-------+
3 rows in set (0.036 sec)
```

Unique artinya nilai yang ada pada kolom tersebut untik dari semua tabel, jadi tidak ada nilai yang sama atau duplikat.
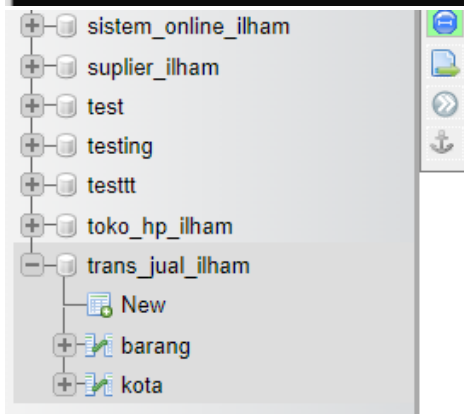
- sistem_online_ilham
- suplier_ilham
- test
- testing
- testtt
- toko_hp_ilham
- trans_jual_ilham
  - New
  - barang
  - kota

trans_jual_ilham **kota**
- kota : char(2)
- namakota : char(20)
- propinsi : char(20)

trans_jual_ilham **barang**
- kdbrg : char(10)
- nmbrg : char(30)
- satuan : char(25)
- harga : int(8)

3. Buat tabel cust, pegawai dan supplier

```
MariaDB [trans_jual_ilham]> create table cust (
    -> kdcust char(10) not null unique,
    -> nmcust char(25),
    -> almtcust char(10),
    -> kotacust char(2),
    -> foreign key (kotacust) references kota(kota)
    -> on update no action);
Query OK, 0 rows affected (0.224 sec)

MariaDB [trans_jual_ilham]> desc cust;
+----------+----------+------+-----+---------+-------+
| Field    | Type     | Null | Key | Default | Extra |
+----------+----------+------+-----+---------+-------+
| kdcust   | char(10) | NO   | PRI | NULL    |       |
| nmcust   | char(25) | YES  |     | NULL    |       |
| almtcust | char(10) | YES  |     | NULL    |       |
| kotacust | char(2)  | YES  | MUL | NULL    |       |
+----------+----------+------+-----+---------+-------+
4 rows in set (0.011 sec)
```

```
MariaDB [trans_jual_ilham]> create table pegawai (
    -> kdpeg char(10) not null unique,
    -> nmpeg char(25),
    -> almtpeg char(35),
    -> kotapeg char(2),
    -> foreign key (kotapeg) references kota(kota)
    -> on update no action);
Query OK, 0 rows affected (0.196 sec)

MariaDB [trans_jual_ilham]> desc pegawai;
+---------+----------+------+-----+---------+-------+
| Field   | Type     | Null | Key | Default | Extra |
+---------+----------+------+-----+---------+-------+
| kdpeg   | char(10) | NO   | PRI | NULL    |       |
| nmpeg   | char(25) | YES  |     | NULL    |       |
| almtpeg | char(35) | YES  |     | NULL    |       |
| kotapeg | char(2)  | YES  | MUL | NULL    |       |
+---------+----------+------+-----+---------+-------+
4 rows in set (0.026 sec)
```

```
MariaDB [trans_jual_ilham]> create table supplier (
    -> kdsuppl char(10) not null unique,
    -> nmsuppl char(35),
    -> almtsuppl char(35),
    -> kotasuppl char(2),
    -> foreign key (kotasuppl) references kota(kota)
    -> on update no action);
Query OK, 0 rows affected (0.359 sec)

MariaDB [trans_jual_ilham]> desc supplier;
+-----------+----------+------+-----+---------+-------+
| Field     | Type     | Null | Key | Default | Extra |
+-----------+----------+------+-----+---------+-------+
| kdsuppl   | char(10) | NO   | PRI | NULL    |       |
| nmsuppl   | char(35) | YES  |     | NULL    |       |
| almtsuppl | char(35) | YES  |     | NULL    |       |
| kotasuppl | char(2)  | YES  | MUL | NULL    |       |
+-----------+----------+------+-----+---------+-------+
4 rows in set (0.015 sec)
```
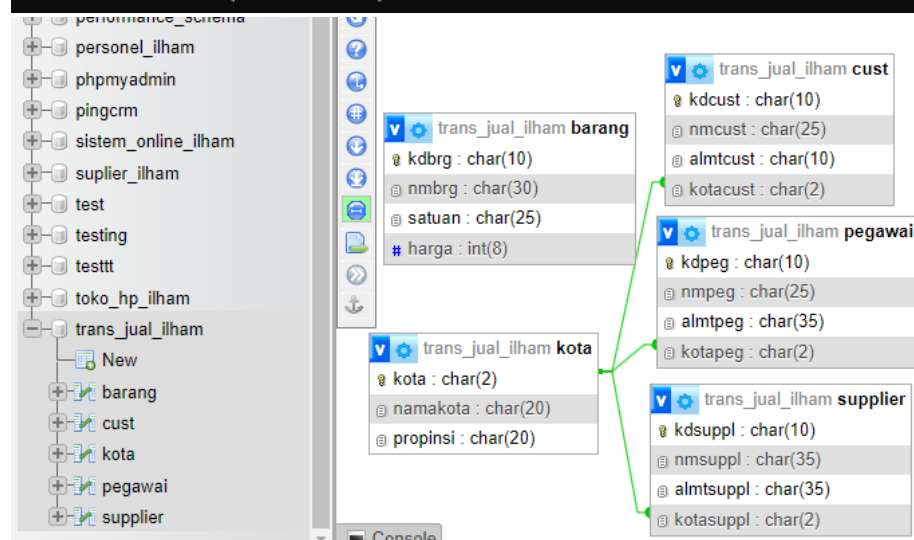
4. Buat tabel transbeli dan returbeli

```
MariaDB [trans_jual_ilham]> create table transbeli (
    -> nofaktur char(10) not null unique,
    -> kdsuppl char(10),
    -> kdbrg char(10),
    -> qty int(8),
    -> jml int(10),
    -> hargabeli int(10),
    -> foreign key (kdsuppl) references supplier (kdsuppl),
    -> foreign key (kdbrg) references barang (kdbrg)
    -> );
Query OK, 0 rows affected (0.235 sec)

MariaDB [trans_jual_ilham]> desc transbeli;
+-----------+----------+------+-----+---------+-------+
| Field     | Type     | Null | Key | Default | Extra |
+-----------+----------+------+-----+---------+-------+
| nofaktur  | char(10) | NO   | PRI | NULL    |       |
| kdsuppl   | char(10) | YES  | MUL | NULL    |       |
| kdbrg     | char(10) | YES  | MUL | NULL    |       |
| qty       | int(8)   | YES  |     | NULL    |       |
| jml       | int(10)  | YES  |     | NULL    |       |
| hargabeli | int(10)  | YES  |     | NULL    |       |
+-----------+----------+------+-----+---------+-------+
6 rows in set (0.011 sec)
```

Tambahkan field tglbeli setelah nofaktur

```
MariaDB [trans_jual_ilham]> alter table transbeli add tglbeli date after nofaktur;
ERROR 2006 (HY000): MySQL server has gone away
No connection. Trying to reconnect...
Connection id:    173
Current database: trans_jual_ilham

Query OK, 0 rows affected (0.129 sec)
Records: 0  Duplicates: 0  Warnings: 0

MariaDB [trans_jual_ilham]> desc transbeli;
+-----------+----------+------+-----+---------+-------+
| Field     | Type     | Null | Key | Default | Extra |
+-----------+----------+------+-----+---------+-------+
| nofaktur  | char(10) | NO   | PRI | NULL    |       |
| tglbeli   | date     | YES  |     | NULL    |       |
| kdsuppl   | char(10) | YES  | MUL | NULL    |       |
| kdbrg     | char(10) | YES  | MUL | NULL    |       |
| qty       | int(8)   | YES  |     | NULL    |       |
| jml       | int(10)  | YES  |     | NULL    |       |
| hargabeli | int(10)  | YES  |     | NULL    |       |
+-----------+----------+------+-----+---------+-------+
7 rows in set (0.010 sec)
```

```
MariaDB [trans_jual_ilham]> create table returbeli (
    -> noretbeli char(10) not null unique,
    -> nofaktur char(10),
    -> tglretur date,
    -> kdbrg char(10),
    -> qty int(8),
    -> ketbrg char(15),
    -> foreign key (nofaktur) references transbeli(nofaktur),
    -> foreign key (kdbrg) references barang(kdbrg));
Query OK, 0 rows affected (0.308 sec)

MariaDB [trans_jual_ilham]> desc returbeli;
+-----------+----------+------+-----+---------+-------+
| Field     | Type     | Null | Key | Default | Extra |
+-----------+----------+------+-----+---------+-------+
| noretbeli | char(10) | NO   | PRI | NULL    |       |
| nofaktur  | char(10) | YES  | MUL | NULL    |       |
| tglretur  | date     | YES  |     | NULL    |       |
| kdbrg     | char(10) | YES  | MUL | NULL    |       |
| qty       | int(8)   | YES  |     | NULL    |       |
| ketbrg    | char(15) | YES  |     | NULL    |       |
+-----------+----------+------+-----+---------+-------+
6 rows in set (0.011 sec)
```
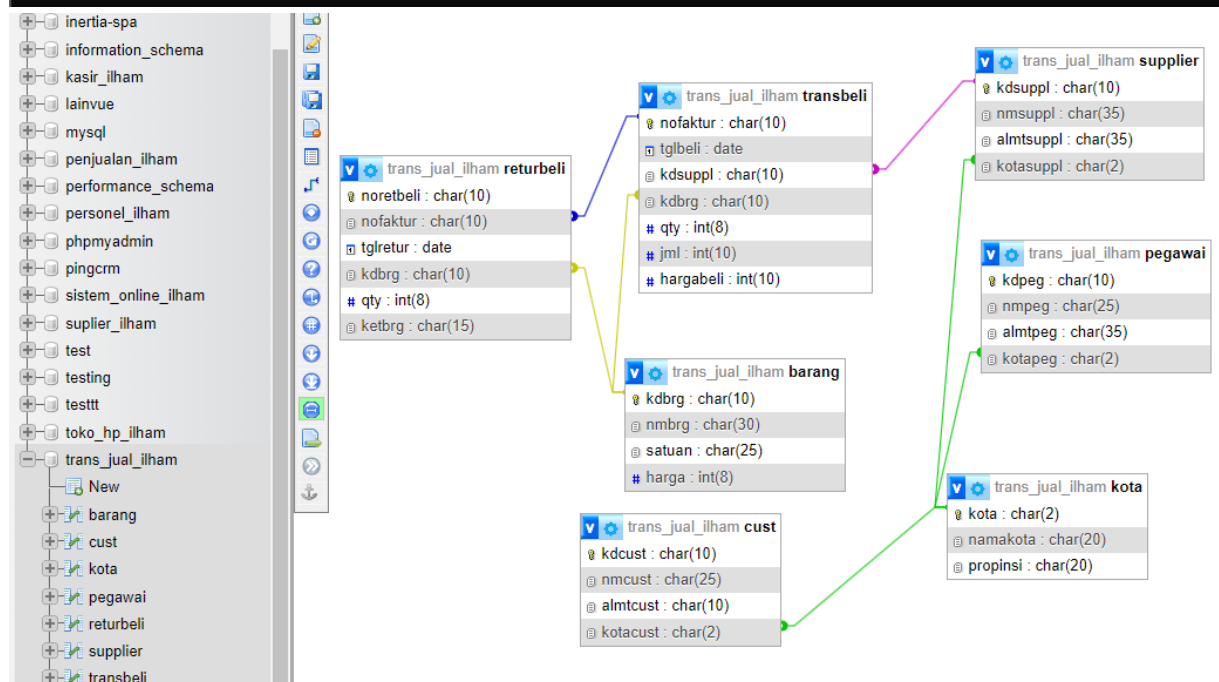
5. Buatlah tabel transjual dan returjual , tampilkan desc dan localhost references. DI COBA DENGAN BAIK

- TABEL TRANSJUAL

```
MariaDB [trans_jual_ilham]> create table transjual (
    -> nota char(10) not null unique,
    -> tglnota date,
    -> kdcust char(10),
    -> kdbrg char(10),
    -> qty char(8),
    -> jml int(10),
    -> hargajual int(10),
    -> kdpeg char(10),
    -> foreign key (kdcust) references cust (kdcust),
    -> foreign key (kdbrg) references barang (kdbrg),
    -> foreign key (kdpeg) references pegawai (kdpeg));
Query OK, 0 rows affected (0.465 sec)

MariaDB [trans_jual_ilham]> desc transjual;
+-----------+----------+------+-----+---------+-------+
| Field     | Type     | Null | Key | Default | Extra |
+-----------+----------+------+-----+---------+-------+
| nota      | char(10) | NO   | PRI | NULL    |       |
| tglnota   | date     | YES  |     | NULL    |       |
| kdcust    | char(10) | YES  | MUL | NULL    |       |
| kdbrg     | char(10) | YES  | MUL | NULL    |       |
| qty       | char(8)  | YES  |     | NULL    |       |
| jml       | int(10)  | YES  |     | NULL    |       |
| hargajual | int(10)  | YES  |     | NULL    |       |
| kdpeg     | char(10) | YES  | MUL | NULL    |       |
+-----------+----------+------+-----+---------+-------+
8 rows in set (0.027 sec)
```

kdcust berleasi dengan tabel cust field kdcust. kdbrg berelasi dengan tabel barang field kdbrg. kdpeg berelasi dengan tabel pegawai field kdpeg.

- TABEL RETURJUAL

```
MariaDB [trans_jual_ilham]> create table returjual (
    -> noreturjual char(10) not null unique,
    -> nota char(10),
    -> tglRetur date,
    -> kdbrg char(10),
    -> qty int(8),
    -> ketbrg char(15),
    -> kdpeg char(10),
    -> foreign key (nota) references transjual(nota),
    -> foreign key (kdbrg) references barang (kdbrg),
    -> foreign key (kdpeg) references pegawai (kdpeg));
Query OK, 0 rows affected (0.242 sec)

MariaDB [trans_jual_ilham]> desc returjual;
+-------------+----------+------+-----+---------+-------+
| Field       | Type     | Null | Key | Default | Extra |
+-------------+----------+------+-----+---------+-------+
| noreturjual | char(10) | NO   | PRI | NULL    |       |
| nota        | char(10) | YES  | MUL | NULL    |       |
| tglRetur    | date     | YES  |     | NULL    |       |
| kdbrg       | char(10) | YES  | MUL | NULL    |       |
| qty         | int(8)   | YES  |     | NULL    |       |
| ketbrg      | char(15) | YES  |     | NULL    |       |
| kdpeg       | char(10) | YES  | MUL | NULL    |       |
+-------------+----------+------+-----+---------+-------+
7 rows in set (0.012 sec)
```
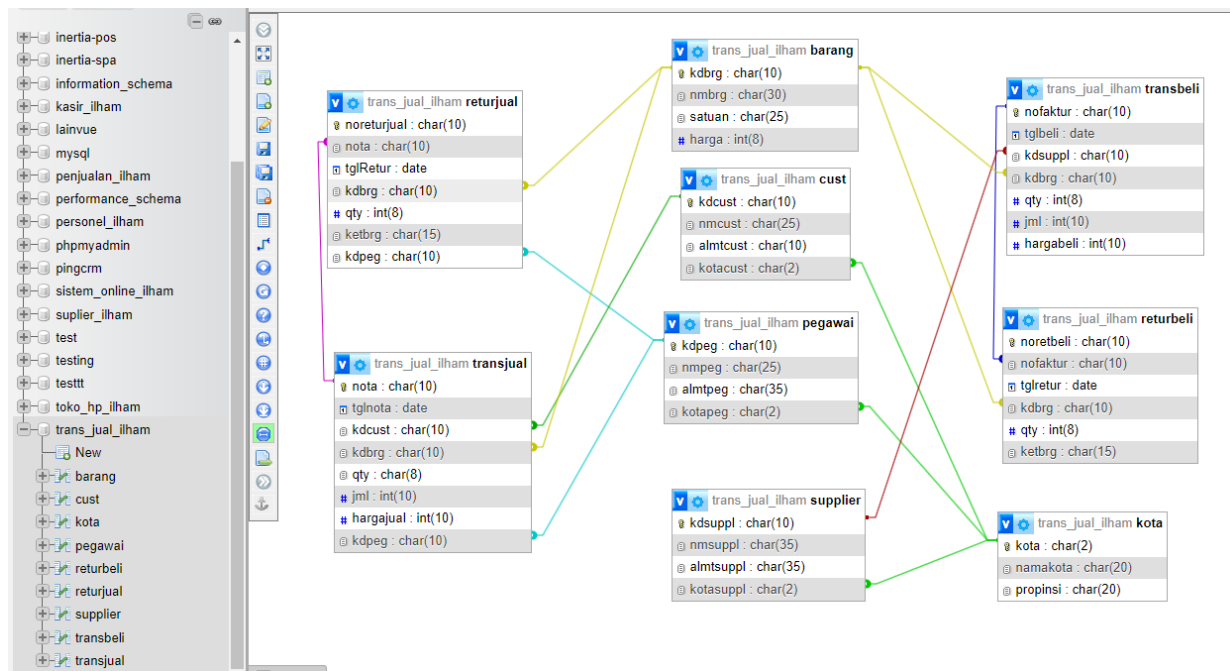
nota berelasi dengan tabel transjual field nota.
kdrg berelasi dengan tabel barang field kdbrg.
kdpeg berelasi dengan tabel pegawai field
kdpeg.

- TAMPILKAN RELASINYA

KUIS 1

Buat index dg nama nminx dari tabel pegawai.


```
MariaDB [trans_jual_ilham]> create index nminx on pegawai(nmpeg);
Query OK, 0 rows affected (0.293 sec)
Records: 0  Duplicates: 0  Warnings: 0

MariaDB [trans_jual_ilham]> show index from pegawai;
```

Table	Non_unique	Key_name	Seq_in_index	Column_name	Collation	Cardinality	Sub_part	Packed	Null	Index_type	Comment	Index_comment
pegawai	0	kdpeg	1	kdpeg	A		0	NULL	NULL		BTREE		
pegawai	1	kotapeg	1	kotapeg	A		0	NULL	NULL	YES	BTREE		
pegawai	1	nminx	1	nmpeg	A		0	NULL	NULL	YES	BTREE		

```
3 rows in set (0.001 sec)
```

Buat index nmcust_inx dari cust.


```
MariaDB [trans_jual_ilham]> create index nmcust_inx on cust(nmcust);
Query OK, 0 rows affected (0.215 sec)
Records: 0  Duplicates: 0  Warnings: 0

MariaDB [trans_jual_ilham]> show index from cust;
```

Table	Non_unique	Key_name	Seq_in_index	Column_name	Collation	Cardinality	Sub_part	Packed	Null	Index_type	Comment	Index_comment
cust	0	kdcust	1	kdcust	A		0	NULL	NULL		BTREE		
cust	1	kotacust	1	kotacust	A		0	NULL	NULL	YES	BTREE		
cust	1	nmcust_inx	1	nmcust	A		0	NULL	NULL	YES	BTREE		

```
3 rows in set (0.001 sec)
```

Lalu kota buat index nmkota_inx dari kota.


```
MariaDB [trans_jual_ilham]> create index nmkota_inx on kota(namakota);
Query OK, 0 rows affected (0.208 sec)
Records: 0  Duplicates: 0  Warnings: 0

MariaDB [trans_jual_ilham]> show index from kota;
```

Table	Non_unique	Key_name	Seq_in_index	Column_name	Collation	Cardinality	Sub_part	Packed	Null	Index_type	Comment	Index_comment
kota	0	kota	1	kota	A		0	NULL	NULL		BTREE		
kota	1	nmkota_inx	1	namakota	A		0	NULL	NULL	YES	BTREE		

```
2 rows in set (0.001 sec)
```

Create index (namaindex) on (tabel)(field)

Buat tabel view dengan nama data_faktur_sales_kota yang diambil faktur, nama_supplier, nama_kota kemudian di desc.

```
MariaDB [trans_jual_ilham]> create view data_fak_sales_kota
    -> (transbeli,supplier,kota) as select nofaktur,nmsuppl,namakota
    -> from transbeli, supplier, kota;
Query OK, 0 rows affected (0.045 sec)

MariaDB [trans_jual_ilham]> show create view data_fak_sales_kota;
+--------------------+------------------------------------------------------------
------------------------------------------------------------------------------
------------------------------------------------------------+----------
-----------+--------------------+
| View               | Create View

                                                              | character
_set_client | collation_connection |
+--------------------+------------------------------------------------------------
------------------------------------------------------------------------------
------------------------------------------------------------+----------
-----------+--------------------+
| data_fak_sales_kota | CREATE ALGORITHM=UNDEFINED DEFINER=`root`@`localhost` SQL SECURITY DEFINER
VIEW `data_fak_sales_kota` AS select `transbeli`.`nofaktur` AS `transbeli`,`supplier`.`nmsuppl` AS
`supplier`,`kota`.`namakota` AS `kota`  from ((`transbeli` join `supplier`) join `kota`) | utf8mb4
           | utf8mb4_general_ci   |
+--------------------+------------------------------------------------------------
------------------------------------------------------------------------------
------------------------------------------------------------+----------
-----------+--------------------+
1 row in set (0.001 sec)
```

create view : Membuat view dalam database.

data_fak_sales_kota : nama view.

(transbeli, supplier, kota) : daftar kolom yang akan ada di view.

as select : as artinya alias, select memilih kolom.

From transbeli,supplier,kota : dari 3 tabel.

KUIS 3

Buat tabel view qty_1000 yang mengambil kolom nofaktur,nmbrg,qty,dan nmsuppl dari tabel transbeli,barang,supplier dengan syarat qty lebih kecil dari 1000 (<1000).

```
MariaDB [trans_jual_ilham]> create view qty_1000 as select
    -> nofaktur,nmbrg,qty,nmsuppl from transbeli,barang,supplier
    -> where qty <1000;
Query OK, 0 rows affected (0.038 sec)
```

create view : Membuat view dalam database.

qty_1000 : nama view.

as select : as artinya alias, select memilih kolom.

nofaktur,nmbrg,qty,nmsuppl: filed yang di pilih.

from transbeli,barang,supplier : dari 3 tabel.

where qty <1000 : kondisi dimana qty kurang dari 1000.

```
MariaDB [trans_jual_ilham]> show create view qty_1000;
+----------+----------------------------------------------------------------
-----------+-------------------+--------------------+
| View     | Create View
           | character_set_client | collation_connection |
+----------+----------------------------------------------------------------
-----------+-------------------+--------------------+
| qty_1000 | CREATE ALGORITHM=UNDEFINED DEFINER=`root`@`localhost` SQL SECURITY DEFINER VIEW `qty_1000` AS select `transbeli`.`nofaktur` AS `nofaktur`,`ba
rang`.`nmbrg` AS `nmbrg`,`transbeli`.`qty` AS `qty`,`supplier`.`nmsuppl` AS `nmsuppl` from ((`transbeli` join `barang`) join `supplier`) where `transbeli`
.`qty` < 1000 | utf8mb4              | utf8mb4_general_ci   |
+----------+----------------------------------------------------------------
-----------+-------------------+--------------------+
1 row in set (0.001 sec)

MariaDB [trans_jual_ilham]> desc qty_1000;
+----------+----------+------+-----+---------+-------+
| Field    | Type     | Null | Key | Default | Extra |
+----------+----------+------+-----+---------+-------+
| nofaktur | char(10) | NO   |     | NULL    |       |
| nmbrg    | char(30) | YES  |     | NULL    |       |
| qty      | int(8)   | YES  |     | NULL    |       |
| nmsuppl  | char(35) | YES  |     | NULL    |       |
+----------+----------+------+-----+---------+-------+
4 rows in set (0.032 sec)
```

RELASINYA

trans_jual_ilham transjual
- nota : char(10)
- tglnota : date
- kdcust : char(10)
- kdbrg : char(10)
- qty : char(8)
- jml : int(10)
- hargajual : int(10)
- kdpeg : char(10)

trans_jual_ilham barang
- kdbrg : char(10)
- nmbrg : char(30)
- satuan : char(25)
- harga : int(8)

trans_jual_ilham transbeli
- nofaktur : char(10)
- tglbeli : date
- kdsuppl : char(10)
- kdbrg : char(10)
- qty : int(8)
- jml : int(10)
- hargabeli : int(10)

trans_jual_ilham qty_1000
- nofaktur : char(10)
- nmbrg : char(30)
- qty : int(8)
- nmsuppl : char(35)

trans_jual_ilham cust
- kdcust : char(10)
- nmcust : char(25)
- almtcust : char(10)
- kotacust : char(2)

trans_jual_ilham returbeli
- noretbeli : char(10)
- nofaktur : char(10)
- tglretur : date
- kdbrg : char(10)
- qty : int(8)
- ketbrg : char(15)

trans_jual_ilham pegawai
- kdpeg : char(10)
- nmpeg : char(25)
- almtpeg : char(35)
- kotapeg : char(2)

trans_jual_ilham kota
- kota : char(2)
- namakota : char(20)
- propinsi : char(20)

trans_jual_ilham returjual
- noreturjual : char(10)
- nota : char(10)
- tglRetur : date
- kdbrg : char(10)
- qty : int(8)
- ketbrg : char(15)
- kdpeg : char(10)

trans_jual_ilham supplier
- kdsuppl : char(10)
- nmsuppl : char(35)
- almtsuppl : char(35)
- kotasuppl : char(2)

trans_jual_ilham data_fak_sales_kota
- transbeli : char(10)
- supplier : char(35)
- kota : char(20)

mysql
penjualan_ilham
performance_schema
personel_ilham
phpmyadmin
pingcrm
sistem_online_ilham
suplier_ilham
test
testing
testtt
toko_hp_ilham
trans_jual_ilham
  Tables
    New
    barang
    cust
    kota
    pegawai
    returbeli
    returjual
    supplier
    transbeli
    transjual
  Views
    New
    data_fak_sales_kota
    qty_1000

Console