

Tugas Sistem Basis Data Lanjut

Roy_Minimarket

1. Deskripsi Entitas Tabel

- a. Tabel produk
 - Id_produk
 - Nama_produk
 - Harga_beli
 - Harga_jual
 - Stok
 - Deskripsi
- b. Tabel transaksi
 - Id_transaksi
 - Id_produk
 - Tanggal_transaksi
 - Jml_transaksi

2. Kegiatan

2.1 Membuat dan menggunakan Database Roy Minimarket

```
C:\WINDOWS\system32\cmd.exe X Windows PowerShell X + v
PS C:\Users\roide> mysql -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 10
Server version: 10.4.28-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)]> create database roy_minimarket
-> ;
Query OK, 1 row affected (0.005 sec)

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

2.2 Membuat tabel

a. tabel produk

```
C:\WINDOWS\system32\cmd.exe X Windows PowerShell X + v
MariaDB [roy_minimarket]> create table produk(
-> id_produk int(11) PRIMARY KEY AUTO_INCREMENT,
-> nama_produk varchar(50) not null,
-> harga_beli decimal(10,2) not null,
-> harga_jual decimal(10,2) not null,
-> stok int not null,
-> deskripsi varchar(255) null
-> );
Query OK, 0 rows affected (0.048 sec)

MariaDB [roy_minimarket]>
```

```
C:\WINDOWS\system32\cmd.exe X Windows PowerShell X + v
MariaDB [roy_minimarket]> desc produk;
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra      |
+-----+-----+-----+-----+-----+-----+
| id_produk  | int(11)    | NO   | PRI | NULL     | auto_increment |
| nama_produk | varchar(50) | NO   |     | NULL     |              |
| harga_beli  | decimal(10,2) | NO   |     | NULL     |              |
| harga_jual  | decimal(10,2) | NO   |     | NULL     |              |
| stok       | int(11)    | NO   |     | NULL     |              |
| deskripsi  | varchar(255) | YES  |     | NULL     |              |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.038 sec)
```

b. tabel transaksi

```
C:\WINDOWS\system32\cmd.exe X Windows PowerShell X + v
MariaDB [roy_minimarket]> create table transaksi(
  -> id_transaksi int(11) PRIMARY KEY AUTO_INCREMENT,
  -> id_produk int(11) not null,
  -> tanggal_transaksi date not null,
  -> jml_transaksi int not null
  -> );
Query OK, 0 rows affected (0.020 sec)

MariaDB [roy_minimarket]>
```

```
MariaDB [roy_minimarket]> desc transaksi;
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra      |
+-----+-----+-----+-----+-----+-----+
| id_transaksi | int(11)    | NO   | PRI | NULL     | auto_increment |
| id_produk    | int(11)    | NO   |     | NULL     |              |
| tanggal_transaksi | date      | NO   |     | NULL     |              |
| jml_transaksi | int(11)    | NO   |     | NULL     |              |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.077 sec)
```

2.3 Menambahkan constraint menggunakan foreign key, untuk menghubungkan Tabel transaksi dengan tabel produk

```
C:\WINDOWS\system32\cmd.exe X Windows PowerShell X + v
MariaDB [(none)]> use roy_minimarket
Database changed
MariaDB [roy_minimarket]> alter table transaksi
  -> add constraint fk_produk_transaksi
  -> foreign key (id_produk)
  -> references produk(id_produk);
Query OK, 0 rows affected (0.130 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [roy_minimarket]>
```

Berikut tabel transaksi setelah ditambahkan constraint

```
C:\WINDOWS\system32\cmd.exe X Windows PowerShell X + v

MariaDB [roy_minimarket]> desc transaksi;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| id_transaksi | int(11) | NO | PRI | NULL | auto_increment |
| id_produk | int(11) | NO | MUL | NULL | |
| tanggal_transaksi | date | NO | | NULL | |
| jml_transaksi | int(11) | NO | | NULL | |
+-----+-----+-----+-----+-----+-----+

4 rows in set (0.022 sec)

MariaDB [roy_minimarket]>
```

3. Menambahkan data

a. Data produk

```
MariaDB [roy_minimarket]> insert into produk (nama_produk, harga_beli, harga_jual, stok, deskripsi) values
-> ('Pasta Gigi',10000,15000,10,'Pasta Gigi Peps***nt kemasan 500ml'),
-> ('Fris**n Fl*g SKM Sachet', 5000, 10000, 20, 'Susu kental manis kemasan sachet'),
-> ('Minyak Goreng Bim*li 850ml', 5000, 10000, 20, 'Minyak goreng plastik kemasan 850ml');
Query OK, 3 rows affected (0.004 sec)
Records: 3 Duplicates: 0 Warnings: 0

MariaDB [roy_minimarket]> select * from produk
-> ;
+-----+-----+-----+-----+-----+-----+
| id_produk | nama_produk | harga_beli | harga_jual | stok | deskripsi |
+-----+-----+-----+-----+-----+-----+
| 1 | Pasta Gigi | 10000.00 | 15000.00 | 10 | Pasta Gigi Peps***nt kemasan 500ml |
| 2 | Fris**n Fl*g SKM Sachet | 5000.00 | 10000.00 | 20 | Susu kental manis kemasan sachet |
| 3 | Minyak Goreng Bim*li 850ml | 5000.00 | 10000.00 | 20 | Minyak goreng plastik kemasan 850ml |
+-----+-----+-----+-----+-----+-----+

3 rows in set (0.001 sec)

MariaDB [roy_minimarket]> |
```

b. Data transaksi

Di data transaksi saya menambahkan trigger untuk secara otomatis mengurangi stok di tabel produk ketika transaksi dilakukan

```
C:\WINDOWS\system32\cmd.exe X Windows PowerShell X + v

MariaDB [roy_minimarket]> delimiter //
MariaDB [roy_minimarket]> create trigger kurangi_stok
-> after insert on transaksi
-> for each row
-> begin
-> declare jumlah_terjual int;
-> declare id_produk_terjual int;
-> select new.jml_transaksi, new.id_produk into jumlah_terjual, id_produk_terjual;
-> update produk
-> set stok = stok - jumlah_terjual
-> where id_produk = id_produk_terjual;
-> end;
-> //
Query OK, 0 rows affected (0.009 sec)

MariaDB [roy_minimarket]> |

MariaDB [roy_minimarket]> show triggers;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| Trigger | Event | Table | Statement | Definer | character_set_client | collation_connection | Database Collation | Timing | Created | s |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| kurangi_stok | INSERT | transaksi | begin
declare jumlah_terjual int;
declare id_produk_terjual int;
select new.jml_transaksi, new.id_produk into jumlah_terjual, id_produk_terjual;
update produk
set stok = stok - jumlah_terjual
where id_produk = id_produk_terjual;
end | AFTER | 2024-04-12 10:06:15.17 | NO_ZERO_IN_DATE,NO_ZERO_DATE,NO_ENGINE_SUBSTITUTION | root@localhost | cp850 | cp850_general_ci | latin1_swedish_ci |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+

1 row in set (0.087 sec)

MariaDB [roy_minimarket]>
```

Proses menambahkan transaksi

```
Database changed
MariaDB [roy_minimarket]> insert into transaksi (id_produk, tanggal_transaksi, jml_transaksi) values
-> (1, '2024-04-12', 5),
-> (2, '2024-04-12', 8),
-> (3, '2024-04-12', 10);
Query OK, 3 rows affected (0.007 sec)
Records: 3 Duplicates: 0 Warnings: 0

MariaDB [roy_minimarket]> select * from transaksi
-> ;
+-----+-----+-----+-----+
| id_transaksi | id_produk | tanggal_transaksi | jml_transaksi |
+-----+-----+-----+-----+
|          1 |         1 | 2024-04-12        |             5 |
|          2 |         2 | 2024-04-12        |             8 |
|          3 |         3 | 2024-04-12        |            10 |
+-----+-----+-----+-----+
3 rows in set (0.001 sec)

MariaDB [roy_minimarket]> select * from produk;
+-----+-----+-----+-----+-----+-----+
| id_produk | nama_produk                | harga_beli | harga_jual | stok | deskripsi |
+-----+-----+-----+-----+-----+-----+
|          1 | Pasta Gigi                 | 10000.00 | 15000.00 |    5 | Pasta Gigi Peps***nt kemasan 500ml |
|          2 | Friis**n Fl*g SKM Sachet | 5000.00 | 10000.00 |   12 | Susu kental manis kemasan sachet |
|          3 | Minyak Goreng Bim*li 850ml | 5000.00 | 10000.00 |   10 | Minyak goreng plastik kemasan 850ml |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.006 sec)

MariaDB [roy_minimarket]>
```