

MySQL



ZELINA IRENE CHRISANI - XI RPL/36

DASAR PENGUNAAN



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1. MENJALANKAN SQL

```
C:\Users\yoni>cd C:\xampp\mysql\bin  
C:\xampp\mysql\bin>mysql -u root -p  
Enter password:  
Welcome to the MariaDB monitor. Commands end with ; or \g.  
Your MariaDB connection id is 194  
Server version: 10.4.32-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. KELUAR DARI MYSQL

```
MariaDB [(none)]> quit  
Bye  
C:\xampp\mysql\bin>
```

3. MEMERIKSA APAKAH MYSQL JALAN

```
C:\xampp\mysql\bin>mysqladmin -u root -p ping  
Enter password:  
mysqld is alive  
C:\xampp\mysql\bin>
```

4. CEK VERSI MYSQL

```
C:\xampp\mysql\bin>mysqladmin -u root -p version  
Enter password:  
mysqladmin Ver 9.1 Distrib 10.4.32-MariaDB, for Win64 on AMD64  
Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.  
  
Server version      10.4.32-MariaDB  
Protocol version   10  
Connection          localhost via TCP/IP  
TCP port            3306  
Uptime:             2 hours 24 min 18 sec  
  
Threads: 6  Questions: 8798  Slow queries: 0  Opens: 46  Flush tables: 1  
Open tables: 39  Queries per second avg: 1.016
```

5. TANDA SUDAH ADA DI MYSQL

```
MariaDB [(none)]>
```

6. MENAMPAILKAN HELP

```
MariaDB [(none)]> help  
General information about MariaDB can be found at  
http://mariadb.org
```

7. MENAMPILKAN TANGGAL

```
MariaDB [(none)]> select curdate();
+-----+
| curdate() |
+-----+
| 2024-11-28 |
+-----+
1 row in set (0.000 sec)
```

8. MENAMPILKAN WAKTU/JAM

```
MariaDB [(none)]> select curtime();
+-----+
| curtime() |
+-----+
| 12:53:49 |
+-----+
1 row in set (0.000 sec)
```

9. KALKULATOR PENJUMLAHAN

```
MariaDB [(none)]> select 5 + 5;
+-----+
| 5 + 5 |
+-----+
|    10 |
+-----+
1 row in set (0.000 sec)
```

10. KALKULATOR PENGURANGAN

```
MariaDB [(none)]> select 5 - 5;
+-----+
| 5 - 5 |
+-----+
|      0 |
+-----+
1 row in set (0.000 sec)
```

11. KALKULATOR PERKALIAN

```
MariaDB [(none)]> select 5 * 5;
+-----+
| 5 * 5 |
+-----+
|     25 |
+-----+
1 row in set (0.000 sec)
```

12. KALKULATOR PEMBAGIAN

```
MariaDB [(none)]> select 5 / 5;
+-----+
| 5 / 5 |
+-----+
| 1.0000 |
+-----+
1 row in set (0.000 sec)
```

13. KALKULATOR MODULO

```
MariaDB [(none)]> select 5 % 2;  
+-----+  
| 5 % 2 |  
+-----+  
|      1 |  
+-----+  
1 row in set (0.000 sec)
```

14. KALKULATOR PEMBAGIAN INT (UTUH)

```
MariaDB [(none)]> select 5 div 2;  
+-----+  
| 5 div 2 |  
+-----+  
|      2 |  
+-----+  
1 row in set (0.000 sec)
```

DDL

(DATA DEFINITION LANGUAGE)



1. MENAMPILKAN DATABASES

```
MariaDB [(none)]> show databases;
+-----+
| Database |
+-----+
| dbtoko   |
| information_schema |
| mysql    |
| performance_schema |
| phpmyadmin |
| sekolah   |
| shopee   |
| test     |
| tokoku   |
| wordpress |
+-----+
10 rows in set (0.001 sec)
```

2. MEMBUAT DATABASE

```
MariaDB [(none)]> create database dbtokoo;
Query OK, 1 row affected (0.002 sec)
```

3. MENGHAPUS DATABASE

```
MariaDB [(none)]> drop database dbtokoo;
Query OK, 0 rows affected (0.008 sec)
```

4. MENGAKTIFKAN DATABASE

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

TIPE DATA

1. TIPE DATA NUMERIK

- **TINYINT**
- **SMALLINT**
- **MEDIUMINT**
- **INT**
- **BIGINT**

2. TIPE DATA UNTUK PENANGGALAN DAN WAKTU

- **DATETIME**
- **DATE**
- **TIMESTAMP**
- **TIME**
- **YEAR**

3. TIPE DATA STRING

- **TINYTEXT**
- **TINYBLOB**
- **TEXT**
- **BLOB**
- **MEDIUMTEXT**
- **MEDIUMBLOB**
- **LONGBLOB**
- **VARCHAR**
- **CHAR**
- **ENUM**
- **SET**

DDL

1. MEMBUAT TABEL

```
MariaDB [dbtoko]> create table tblkelompok
-> (
-> idkelompok INT NOT NULL AUTO_INCREMENT PRIMARY KEY,
-> kelompok VARCHAR(100)
-> );
Query OK, 0 rows affected (0.04 sec)
```

2. MENAMPILKAN TABEL

```
MariaDB [dbtoko]> show tables;
+-----+
| Tables_in_dbtoko |
+-----+
| tblkelompok      |
+-----+
1 row in set (0.00 sec)
```

3. MENAMPILKAN STRUKTUR TABEL

```
MariaDB [dbtoko]> describe tblkelompok;
+-----+-----+-----+-----+-----+
| Field      | Type       | Null | Key | Default | Extra          |
+-----+-----+-----+-----+-----+
| idkelompok | int(11)    | NO   | PRI | NULL    | auto_increment |
| kelompok    | varchar(100) | YES  |     | NULL    |                |
+-----+-----+-----+-----+-----+
2 rows in set (0.01 sec)
```

4. MENAMBAH KOLOM

```
MariaDB [dbtoko]> alter table tblbarang add hargajual float;  
Query OK, 0 rows affected (0.07 sec)  
Records: 0  Duplicates: 0  Warnings: 0
```

5. MERUBAH TIPE DATA

```
MariaDB [dbtoko]> alter table tblbarang modify stok INT;  
Query OK, 0 rows affected (0.11 sec)  
Records: 0  Duplicates: 0  Warnings: 0
```

6. MEMBERI NILAI DEFAULT PADA KOLOM

```
MariaDB [dbtoko]> ALTER TABLE tblbarang ALTER COLUMN stok SET DEFAULT 0;  
Query OK, 0 rows affected (0.00 sec)  
Records: 0  Duplicates: 0  Warnings: 0
```

7. MENGHAPUS KOLOM

```
MariaDB [dbtoko]> ALTER TABLE tblbarang DROP COLUMN stokminimal;  
Query OK, 0 rows affected (0.07 sec)  
Records: 0  Duplicates: 0  Warnings: 0
```

8. MERUBAH NAMA KOLOM

```
MariaDB [dbtoko]> ALTER TABLE tblbarang CHANGE stok stokbarang INT;  
Query OK, 0 rows affected (0.01 sec)  
Records: 0  Duplicates: 0  Warnings: 0
```

9. MENAMBAHKAN PRIMARY KEY

```
MariaDB [dbtoko]> ALTER TABLE tblpelanggan  
    -> MODIFY idpelanggan INT NOT NULL AUTO_INCREMENT PRIMARY KEY;  
Query OK, 0 rows affected (0.14 sec)  
Records: 0  Duplicates: 0  Warnings: 0
```

10. MENAMPILKAN ENGINE YANG DIGUNAKAN

```
MariaDB [dbtoko]> SHOW CREATE TABLE tblpelanggan;  
  
| tblpelanggan | CREATE TABLE `tblpelanggan` (  
|           `idpelanggan` int(11) NOT NULL AUTO_INCREMENT,  
|           `nama` varchar(200) DEFAULT NULL,  
|           `alamat` varchar(255) DEFAULT NULL,  
|           PRIMARY KEY (`idpelanggan`)  
| ) ENGINE=InnoDB DEFAULT CHARSET=latin1 |
```

11. MENAMBAH KOLOM SETELAH KOLOM

```
MariaDB [dbtoko]> ALTER TABLE tblorder ADD faktur VARCHAR(50) AFTER idpelanggan;
Query OK, 0 rows affected (0.09 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

12. MEMBUAT INDEX

```
MariaDB [dbtoko]> CREATE INDEX pelangganindex ON tblpelanggan (nama);
Query OK, 0 rows affected (0.04 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

```
MariaDB [dbtoko]> CREATE INDEX barangindex ON tblbarang (barang);
Query OK, 0 rows affected (0.03 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

13. MENAMPILKAN INDEX

```
MariaDB [dbtoko]> SHOW INDEX FROM tblbarang;
```

Table	Non_unique	Key_name	Seq_in_index	Column_name
Index_type	Comment	Index_comment		
tblbarang	0	PRIMARY	1	idbarang
BTREE				
tblbarang	1	barangindex	1	barang
BTREE				

```
2 rows in set (0.00 sec)
```

14. MENGHAPUS INDEX

```
MariaDB [dbtoko]> DROP INDEX pelangganindex ON tblpelanggan;
Query OK, 0 rows affected (0.02 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

DML

DML

(DATA MANIPULATION LANGUAGE)



ZELINA IRENE CHRISANI - XI RPL/36

1. INSERT SEMUA KOLOM

```
MariaDB [dbtoko]> INSERT INTO tblkelompok VALUES('','Gula');
Query OK, 1 row affected, 1 warning (0.01 sec)
```

2. MEMERIKSA DATA INSERT

```
MariaDB [dbtoko]> SELECT * FROM tblkelompok;
+-----+-----+
| idkelompok | kelompok |
+-----+-----+
| 1 | Gula
| 2 | Beras
| 3 | Tepung
| 4 | Minyak
| 5 | Jajan
+-----+-----+
5 rows in set (0.00 sec)
```

3. INSERT SEBAGIAN KOLOM

```
MariaDB [dbtoko]> INSERT INTO tblkelompok (kelompok) VALUES('Beras');
Query OK, 1 row affected (0.01 sec)
```

4. DELETE SEBAGIAN RECORD (BASIS DATA)

```
MariaDB [dbtoko]> DELETE FROM tblkelompok WHERE idkelompok=5;
Query OK, 1 row affected (0.01 sec)
```

5. DELETE SEMUA RECORD

```
MariaDB [dbtoko]> DELETE FROM tblkelompok;  
Query OK, 4 rows affected (0.01 sec)
```

```
MariaDB [dbtoko]> SELECT * FROM tblkelompok;  
Empty set (0.00 sec)
```

7. UPDATE SEMUA RECORD

```
MariaDB [dbtoko]> UPDATE tblkelompok SET kelompok='Makanan';  
Query OK, 3 rows affected (0.01 sec)  
Rows matched: 3  Changed: 3  Warnings: 0
```

6. UPDATE SEBAGIAN RECORD

```
MariaDB [dbtoko]> UPDATE tblkelompok SET kelompok='Snek' WHERE idkelompok=6;  
Query OK, 1 row affected (0.01 sec)  
Rows matched: 1  Changed: 1  Warnings: 0
```

```
MariaDB [dbtoko]> SELECT * FROM tblkelompok;  
+-----+-----+  
| idkelompok | kelompok |  
+-----+-----+  
| 6 | Snek |  
| 7 | Minyak |  
| 8 | Tepung |  
+-----+-----+  
3 rows in set (0.00 sec)
```

TABEL MASTER & TABEL TRANSAKSI (DETAIL)

➤ TBLKELOMPOK

Tabel Master adalah tabel yang MEMASUKI tabel lain. Seperti pada contoh, terdapat kolom [idkelompok] dari tabel [tblkelompok] yang MEMASUKI tabel [tblbarang]. Jadi tabel [tblkelompok] menjadi TABEL MASTER.

```
MariaDB [dbtoko]> DESCRIBE tblkelompok;
```

Field	Type	Null	Key	Default	Extra
idkelompok	int(11)	NO	PRI	NULL	auto_increment
kelompok	varchar(100)	YES		NULL	

```
2 rows in set (0.01 sec)
```

➤ TBLBARANG

Tabel Transaksi adalah tabel yang DIMASUKI tabel lain. Seperti pada contoh, tabel [tblbarang] DIMASUKI kolom [idkelompok] yang berasal dari tabel [tblkelompok]. Jadi yang tabel [tblbarang] menjadi TABEL TRANSAKSI.

```
MariaDB [dbtoko]> DESCRIBE tblbarang;
```

Field	Type	Null	Key	Default	Extra
idbarang	int(11)	NO	PRI	NULL	auto_increment
idkelompok	int(11)	YES		NULL	
barang	varchar(200)	YES	MUL	NULL	
stokbarang	int(11)	YES		NULL	
hargabeli	float	YES		NULL	
hargajual	float	YES		NULL	

```
6 rows in set (0.01 sec)
```

8. MEMBUAT RELASI ANTAR TABEL

```
MariaDB [dbtoko]> ALTER TABLE tblbarang
    -> ADD CONSTRAINT FK_idkelompok FOREIGN KEY (idkelompok)
    -> REFERENCES tblkelompok (idkelompok) ON UPDATE CASCADE
    -> ON DELETE RESTRICT;
Query OK, 0 rows affected (0.10 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

```
MariaDB [dbtoko]> SHOW CREATE TABLE tblbarang;
```

9. MENGUJI HASIL PEMBUATAN RELASI

```
MariaDB [dbtoko]> SELECT * FROM tblkelompok;
+-----+-----+
| idkelompok | kelompok |
+-----+-----+
|       6 | Beras   |
|       7 | Gula    |
|       8 | Tepung  |
+-----+-----+
3 rows in set (0.00 sec)
```

10. PENGUJIAN INSERT

```
MariaDB [dbtoko]> INSERT INTO tblbarang VALUES ('',9,'Tepung Sagu',20,4500,7000);
ERROR 1452 (23000): Cannot add or update a child row: a foreign key constraint fails
(`dbtoko`.`tblbarang`, CONSTRAINT `FK_idkelompok` FOREIGN KEY (`idkelompok`) REFERENCES `tblkelompok` (`idkelompok`) ON UPDATE CASCADE)
MariaDB [dbtoko]>
```

11. PENGUJIAN UPDATE

```
MariaDB [dbtoko]> UPDATE tblkelompok SET idkelompok=9 WHERE kelompok='Tepung';
Query OK, 0 rows affected (0.00 sec)
Rows matched: 1  Changed: 0  Warnings: 0
```

12. PENGUJIAN DELETE

```
MariaDB [dbtoko]> DELETE FROM tblkelompok WHERE idkelompok=9;
ERROR 1451 (23000): Cannot delete or update a parent row: a foreign key constraint fails
(`dbtoko`.`tblbarang`, CONSTRAINT `FK_tblbarang_tblkelompok` FOREIGN KEY (`idkelompok`)
 REFERENCES `tblkelompok`(`idkelompok`) ON UPDATE CASCADE)
MariaDB [dbtoko]>
```

```
MariaDB [dbtoko]> INSERT INTO tblkelompok VALUES (10,'Minyak');
Query OK, 1 row affected (0.01 sec)
```

13. PEMBUATAN VIEW

```
MariaDB [dbtoko]> CREATE VIEW view_barang AS SELECT
-> tblbarang.idbarang, tblbarang.barang,
-> tblbarang.stokbarang, tblbarang.hargabeli,
-> tblbarang.hargajual, tblbarang.idkelompok,
-> tblkelompok.kelompok FROM tblbarang
-> INNER JOIN tblkelompok ON tblbarang.idkelompok = tblkelompok.idkelompok;
Query OK, 0 rows affected (0.01 sec)
```

14. MENAMPILKAN SEMUA VIEW

```
MariaDB [dbtoko]> SHOW FULL TABLES IN dbtoko WHERE TABLE_TYPE LIKE 'VIEW';
+-----+-----+
| Tables_in_dbtoko | Table_type |
+-----+-----+
| view_barang      | VIEW       |
+-----+-----+
1 row in set (0.00 sec)
```

15. MELIHAT ISI VIEW

```
MariaDB [dbtoko]> SELECT * FROM view_barang;
+-----+-----+-----+-----+-----+-----+-----+
| idbarang | barang           | stokbarang | hargabeli | hargajual | idkelompok | kelompok |
+-----+-----+-----+-----+-----+-----+-----+
| 1       | Beras Rojo Lele | 100        | 10000    | 12000    | 6          | Beras     |
| 2       | Beras Cianjur   | 50         | 11000    | 14000    | 6          | Beras     |
| 3       | Beras Medium    | 70         | 8000     | 10000    | 6          | Beras     |
| 4       | Beras Mahal     | 30         | 23000    | 30000    | 6          | Beras     |
| 5       | Gula Putih      | 20         | 12000    | 14000    | 7          | Gula      |
| 6       | Gula Merah      | 10         | 3000     | 5000     | 7          | Gula      |
| 7       | Gula Batu       | 40         | 2000     | 3000     | 7          | Gula      |
| 8       | Gula Aren       | 60         | 7000     | 9000     | 7          | Gula      |
| 10      | Tepung Terigu   | 50         | 4000     | 6000     | 9          | Tepung    |
| 11      | Tepung Tapioka  | 15         | 2000     | 3500     | 9          | Tepung    |
| 12      | Tepung Kanji    | 25         | 3500     | 5000     | 9          | Tepung    |
+-----+-----+-----+-----+-----+-----+-----+
11 rows in set (0.00 sec)
```

16. MENGHAPUS VIEW

```
MariaDB [dbtoko]> DROP VIEW view_barang;
Query OK, 0 rows affected (0.00 sec)
```

17. SELECT SEMUA KOLOM (*)

```
MariaDB [dbtoko]> SELECT * FROM view_barang;
+-----+-----+-----+-----+-----+-----+
| idbarang | barang | stokbarang | hargabeli | hargajual | idkelompok | kelompok |
+-----+-----+-----+-----+-----+-----+
| 1 | Beras Rojo Lele | 100 | 10000 | 12000 | 6 | Beras |
| 2 | Beras Cianjur | 50 | 11000 | 14000 | 6 | Beras |
| 3 | Beras Medium | 70 | 8000 | 10000 | 6 | Beras |
| 4 | Beras Mahal | 30 | 23000 | 30000 | 6 | Beras |
| 5 | Gula Putih | 20 | 12000 | 14000 | 7 | Gula |
| 6 | Gula Merah | 10 | 3000 | 5000 | 7 | Gula |
| 7 | Gula Batu | 40 | 2000 | 3000 | 7 | Gula |
| 8 | Gula Aren | 60 | 7000 | 9000 | 7 | Gula |
| 10 | Tepung Terigu | 50 | 4000 | 6000 | 9 | Tepung |
| 11 | Tepung Tapioka | 15 | 2000 | 3500 | 9 | Tepung |
| 12 | Tepung Kanji | 25 | 3500 | 5000 | 9 | Tepung |
+-----+-----+-----+-----+-----+-----+
11 rows in set (0.00 sec)
```

18. SELECT SEBAGIAN KOLOM

```
MariaDB [dbtoko]> SELECT barang,stokbarang,kelompok FROM view_barang;
+-----+-----+-----+
| barang | stokbarang | kelompok |
+-----+-----+-----+
| Beras Rojo Lele | 100 | Beras |
| Beras Cianjur | 50 | Beras |
| Beras Medium | 70 | Beras |
| Beras Mahal | 30 | Beras |
| Gula Putih | 20 | Gula |
| Gula Merah | 10 | Gula |
| Gula Batu | 40 | Gula |
| Gula Aren | 60 | Gula |
| Tepung Terigu | 50 | Tepung |
| Tepung Tapioka | 15 | Tepung |
| Tepung Kanji | 25 | Tepung |
+-----+-----+-----+
11 rows in set (0.00 sec)
```

19. SELECT ORDER (ASC)

```
MariaDB [dbtoko]> SELECT * FROM view_barang ORDER BY hargabeli ASC;
```

20. SELECT ORDER (DESC)

```
MariaDB [dbtoko]> SELECT * FROM view_barang ORDER BY hargabeli DESC;
+-----+-----+-----+-----+-----+-----+
| idbarang | barang | stokbarang | hargabeli | hargajual | idkelompok | kelompok |
+-----+-----+-----+-----+-----+-----+
| 4 | Beras Mahal | 30 | 23000 | 30000 | 6 | Beras |
| 5 | Gula Putih | 20 | 12000 | 14000 | 7 | Gula |
| 2 | Beras Cianjur | 50 | 11000 | 14000 | 6 | Beras |
| 1 | Beras Rojo Lele | 100 | 10000 | 12000 | 6 | Beras |
| 3 | Beras Medium | 70 | 8000 | 10000 | 6 | Beras |
| 8 | Gula Aren | 60 | 7000 | 9000 | 7 | Gula |
| 10 | Tepung Terigu | 50 | 4000 | 6000 | 9 | Tepung |
| 12 | Tepung Kanji | 25 | 3500 | 5000 | 9 | Tepung |
| 6 | Gula Merah | 10 | 3000 | 5000 | 7 | Gula |
| 11 | Tepung Tapioka | 15 | 2000 | 3500 | 9 | Tepung |
| 7 | Gula Batu | 40 | 2000 | 3000 | 7 | Gula |
+-----+-----+-----+-----+-----+-----+
11 rows in set (0.00 sec)
```

21. SELECT GROUP

```
MariaDB [dbtoko]> SELECT * FROM view_barang GROUP BY barang;
+-----+-----+-----+-----+-----+-----+
| idbarang | barang | stokbarang | hargabeli | hargajual | idkelompok | kelompok |
+-----+-----+-----+-----+-----+-----+
| 2 | Beras Cianjur | 50 | 11000 | 14000 | 6 | Beras |
| 4 | Beras Mahal | 30 | 23000 | 30000 | 6 | Beras |
| 3 | Beras Medium | 70 | 8000 | 10000 | 6 | Beras |
| 1 | Beras Rojo Lele | 100 | 10000 | 12000 | 6 | Beras |
| 8 | Gula Aren | 60 | 7000 | 9000 | 7 | Gula |
| 7 | Gula Batu | 40 | 2000 | 3000 | 7 | Gula |
| 6 | Gula Merah | 10 | 3000 | 5000 | 7 | Gula |
| 5 | Gula Putih | 20 | 12000 | 14000 | 7 | Gula |
| 12 | Tepung Kanji | 25 | 3500 | 5000 | 9 | Tepung |
| 11 | Tepung Tapioka | 15 | 2000 | 3500 | 9 | Tepung |
| 10 | Tepung Terigu | 50 | 4000 | 6000 | 9 | Tepung |
+-----+-----+-----+-----+-----+-----+
11 rows in set (0.00 sec)
```

22. PENGUJIAN WHERE (ORDER BY)

```
MariaDB [dbtoko]> SELECT * FROM tblbarang WHERE hargajual > 5000 ORDER BY hargajual;
+-----+-----+-----+-----+-----+
| idbarang | idkelompok | barang | stokbarang | hargabeli | hargajual |
+-----+-----+-----+-----+-----+
| 10 | 9 | Tepung Terigu | 50 | 4000 | 6000 |
| 8 | 7 | Gula Aren | 60 | 7000 | 9000 |
| 3 | 6 | Beras Medium | 70 | 8000 | 10000 |
| 1 | 6 | Beras Rojo Lele | 100 | 10000 | 12000 |
| 2 | 6 | Beras Cianjur | 50 | 11000 | 14000 |
| 5 | 7 | Gula Putih | 20 | 12000 | 14000 |
| 4 | 6 | Beras Mahal | 30 | 23000 | 30000 |
+-----+-----+-----+-----+-----+
7 rows in set (0.00 sec)
```

23. PENGUJIAN WHERE (LIKE %)

% adalah sebutan untuk sembarang atau apapun

```
MariaDB [dbtoko]> SELECT * FROM view_barang WHERE barang LIKE '%a';
+-----+-----+-----+-----+-----+
| idbarang | barang | stokbarang | hargabeli | hargajual | idkelompok | kelompok |
+-----+-----+-----+-----+-----+
| 11 | Tepung Tapioka | 15 | 2000 | 3500 | 9 | Tepung |
+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)
```

```
MariaDB [dbtoko]> SELECT * FROM view_barang WHERE barang LIKE 'b%';
+-----+-----+-----+-----+-----+
| idbarang | barang | stokbarang | hargabeli | hargajual | idkelompok | kelompok |
+-----+-----+-----+-----+-----+
| 1 | Beras Rojo Lele | 100 | 10000 | 12000 | 6 | Beras |
| 2 | Beras Cianjur | 50 | 11000 | 14000 | 6 | Beras |
| 3 | Beras Medium | 70 | 8000 | 10000 | 6 | Beras |
| 4 | Beras Mahal | 30 | 23000 | 30000 | 6 | Beras |
+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)
```

- %a artinya awalan sembarang yang penting akhirnya a

- b% artinya awalan b akhiran sembarang

24. SUBQUERY (IN)

```
MariaDB [dbtoko]> SELECT * FROM tblkelompok
    -> WHERE idkelompok IN
    -> (SELECT idkelompok FROM view_barang);
+-----+-----+
| idkelompok | kelompok |
+-----+-----+
| 6 | Beras |
| 7 | Gula |
| 9 | Tepung |
+-----+-----+
3 rows in set (0.00 sec)
```

25. SUBQUERY (NOT IN)

```
MariaDB [dbtoko]> select * from tblkelompok
    -> where idkelompok not in
    -> (select idkelompok from view_barang);
+-----+-----+
| idkelompok | kelompok |
+-----+-----+
| 11 | Minyak |
| 12 | Jajan |
| 13 | Roti Basah |
+-----+-----+
3 rows in set (0.068 sec)
```

Penggunaan tanda '*' pada select in hanya bisa dilakukan pada select yang pertama.

26. MEMBUAT RELASI ANTAR TABEL

```
MariaDB [dbtoko]> alter table tblorder  
-> add constraint fk_idpelanggan foreign key (idpelanggan)  
-> references tblpelanggan (idpelanggan)  
-> on update cascade on delete restrict;
```

27. PERIKSA HASIL RELASI

```
MariaDB [dbtoko]> show create table tblorder;
```

28. HASIL PEMBUATAN RELASI

```
+-----+  
|tblorder | CREATE TABLE `tblorder` (  
`idorder` int(11) NOT NULL AUTO_INCREMENT,  
`idpelanggan` int(11) DEFAULT NULL,  
`faktur` varchar(50) DEFAULT NULL,  
`tanggalorder` date DEFAULT NULL,  
`total` float DEFAULT 0,  
`bayar` float DEFAULT NULL,  
`kembali` float DEFAULT NULL,  
PRIMARY KEY (`idorder`),  
KEY `FK_idpelanggan`(`idpelanggan`),  
CONSTRAINT `FK_idpelanggan` FOREIGN KEY (`idpelanggan`) REFERENCES `tblpelanggan`(`idpelanggan`) ON UPDATE CASCADE  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_general_ci |  
+-----+
```

DUMMY DATA

Dummy data adalah data yang tidak sebenarnya. Data ini diperlukan jika data sebenarnya tidak bisa diperoleh. Dummy data biasa digunakan selama pengujian database.

```
MariaDB [dbtoko]> insert into tblpelanggan values('', 'kosong', 'kosong');
Query OK, 1 row affected, 1 warning (0.002 sec)
```

```
MariaDB [dbtoko]> select * from tblpelanggan;
+-----+-----+
| idpelanggan | nama   | alamat |
+-----+-----+
|      5       | kosong | kosong |
+-----+-----+
1 row in set (0.001 sec)
```

<- Penambahan dummy data

Pada tabel terdapat nama pelanggan dengan nama **[kosong]**, jika terjadi pembelian dengan nama pelanggan yang tidak disebutkan maka aplikasi akan memberi nama pelanggan tersebut dengan nama **[kosong]**. Nama pelanggan dengan nama **[kosong]** ini disebut dengan dummy data.

TRIGGER

- AFTER INSERT (**Setelah INSERT**) pada tabel yang dimaksud
- BEFORE INSERT (**Sebelum INSERT**) pada tabel yang dimaksud
- AFTER DELETE (**Setelah DELETE**) pada tabel yang dimaksud
- BEFORE DELETE (**Sebelum DELETE**) pada tabel yang dimaksud
- AFTER UPDATE (**Setelah UPDATE**) pada tabel yang dimaksud
- BEFORE UPDATE (**Sebelum UPDATE**) pada tabel yang dimaksud

Sebelum membuat TRIGGER pastikan tidak ada nama kolom yang sama pada setiap tabel. Lakukan pemeriksaan pada pada kolom yang akan terkena dampak dari proses trigger. Jika yang diproses oleh trigger adalah operasi matematika, pastikan SET DEFAULT VALUE pada kolom tabel tersebut di isi dengan ANGKA NOL. Jika belum di isi angka NOL lakukan ALTER untuk merubah kolom tersebut.

29. MEMBUAT TRIGGER

```
MariaDB [dbtoko]> create trigger tambah_stok
-> before delete on tblorderdetail
-> for each row
-> update tblbarang set stokbarang=stokbarang + old.jumlah
-> where idbarang = old.idbarang;
Query OK, 0 rows affected (0.015 sec)
```

30. MENAMPILKAN TRIGGER

```
MariaDB [dbtoko]> show triggers;
```

31. HASIL TRIGGER

Trigger	Event	Table	Statement	Definer	character_set_client	collation_connection	Database	Collation	Timing	Created
kurang_stok	INSERT	tblorderdetail	UPDATE tblbarang SET stokbarang=stokbarang - NEW.jumlah WHERE idbarang = NEW.idbarang	BEFORE 2024-11-28 09:13:44.30 NO_ZERO_IN_DATE,NO_ZERO_DATE,NO_ENGINE_SUBSTITUTION root@localhost cp850	cp850_general_ci	utf8mb4_general_ci				
tambah_total	DELETE	tblorderdetail	UPDATE tblbarang SET stokbarang=stokbarang + OLD.jumlah WHERE idbarang = OLD.idbarang	BEFORE 2024-11-28 09:15:58.82 NO_ZERO_IN_DATE,NO_ZERO_DATE,NO_ENGINE_SUBSTITUTION root@localhost cp850	cp850_general_ci	utf8mb4_general_ci				
kurang_total	DELETE	tblorderdetail	UPDATE tblorder SET total = total - (OLD.hargapenjualan * OLD.jumlah) WHERE idorder = OLD.idorder BEFORE 2024-11-28 09:18:12.53 NO_ZERO_IN_DATE,NO_ZERO_DATE,NO_ENGINE_SUBSTITUTION root@localhost cp850	cp850_general_ci	utf8mb4_general_ci					
tambah_stok	DELETE	tblorderdetail	update tblbarang set stokbarang=stokbarang + old.jumlah where idbarang = old.idbarang	BEFORE 2024-12-06 20:22:11.21 NO_ZERO_IN_DATE,NO_ZERO_DATE,NO_ENGINE_SUBSTITUTION root@localhost cp850	cp850_general_ci	utf8mb4_general_ci				

4 rows in set (0.027 sec)

32. PENGUJIAN TRIGGER

Insert pada **tblorder** dan **tblorderdetail**

```
MariaDB [dbtoko]> insert into tblorder
-> (idpelanggan, faktur, tanggalorder)
-> values (6, '001', now());
Query OK, 1 row affected, 1 warning (0.004 sec)
```

```
MariaDB [dbtoko]> insert into tblorderdetail
-> (idorder, idbarang, jumlah, hargapenjualan)
-> values (1, 1, 35, 12000);
Query OK, 1 row affected (0.006 sec)
```

Sebelum:

```
MariaDB [dbtoko]> select * from tblorder;
+-----+-----+-----+-----+-----+
| idorder | idpelanggan | faktur | tanggalorder | total |
+-----+-----+-----+-----+-----+
|       1 |           6 |   001 | 2024-12-06 |      0 |
+-----+-----+-----+-----+-----+
1 row in set (0.000 sec)
```

```
MariaDB [dbtoko]> select * from tblbarang where idbarang=1;;
+-----+-----+-----+-----+-----+
| idbarang | idkelompok | barang | stokbarang | hargabeli | hargajual |
+-----+-----+-----+-----+-----+
|       1 |           6 | Beras Rojo Lele |        100 |     10000 |     12000 |
+-----+-----+-----+-----+-----+
1 row in set (0.001 sec)
```

Sesudah:

```
MariaDB [dbtoko]>
MariaDB [dbtoko]> select * from tblbarang where idbarang=1;;
+-----+-----+-----+-----+-----+
| idbarang | idkelompok | barang | stokbarang | hargabeli | hargajual |
+-----+-----+-----+-----+-----+
|       1 |           6 | Beras Rojo Lele |        65 |     10000 |     12000 |
+-----+-----+-----+-----+-----+
1 row in set (0.001 sec)
```

```
MariaDB [dbtoko]> select * from tblorder;
+-----+-----+-----+-----+-----+
| idorder | idpelanggan | faktur | tanggalorder | total |
+-----+-----+-----+-----+-----+
|       1 |           6 |   001 | 2024-12-06 | 420000 |
+-----+-----+-----+-----+-----+
1 row in set (0.001 sec)
```

33. HAPUS TRIGGER

```
MariaDB [dbtoko]> drop trigger kurang_total;
Query OK, 0 rows affected (0.007 sec)
```

34. INNER JOIN

(mengambil bagian yang ada di tabel master dan tabel transaksi)

```
MariaDB [dbtoko]> select tblbarang.barang, tblorderdetail.jumlah,
-> tblorderdetail.hargapenjualan from tblbarang
-> inner join tblorderdetail
-> on tblbarang.idbarang = tblorderdetail.idbarang;
+-----+-----+-----+
| barang | jumlah | hargapenjualan |
+-----+-----+-----+
| Beras Rojo Lele | 35 | 12000 |
| Gula Merah | 5 | 5000 |
| Tepung Kanji | 5 | 5000 |
| Beras Mahal | 5 | 30000 |
| Tepung Terigu | 5 | 6000 |
+-----+-----+-----+
5 rows in set (0.001 sec)
```

35. INNER JOIN BANYAK TABEL

```
MariaDB [dbtoko]> select tblorder.tanggalorder, tblpelanggan.nama,
-> tblbarang.barang, tblorderdetail.jumlah,
-> tblorderdetail.hargapenjualan, tblorder.total
-> from tblpelanggan
-> inner join tblorder
-> on tblpelanggan.idpelanggan = tblorder.idpelanggan
-> inner join tblorderdetail
-> on tblorder.idorder = tblorderdetail.idorder
-> inner join tblbarang
-> on tblorderdetail.idbarang = tblbarang.idbarang
-> order by tblpelanggan.nama;
```

```
+-----+-----+-----+-----+-----+
| tanggalorder | nama | barang | jumlah | hargapenjualan | total |
+-----+-----+-----+-----+-----+
| 2024-12-06 | Kirara | Gula Merah | 5 | 5000 | 470000 |
| 2024-12-06 | Kirara | Tepung Kanji | 5 | 5000 | 470000 |
| 2024-12-06 | Kirara | Beras Rojo Lele | 35 | 12000 | 470000 |
| 2024-12-06 | Mona | Tepung Terigu | 5 | 6000 | 180000 |
| 2024-12-06 | Mona | Beras Mahal | 5 | 30000 | 180000 |
+-----+-----+-----+-----+-----+
5 rows in set (0.001 sec)
```

36. LEFT JOIN

```
MariaDB [dbtoko]> select tblbarang.barang,
    -> tblorderdetail.jumlah, tblorderdetail.hargapenjualan
    -> from tblbarang
    -> left join tblorderdetail
    -> on tblbarang.idbarang = tblorderdetail.idbarang
    -> order by tblorderdetail.jumlah desc;
+-----+-----+-----+
| barang | jumlah | hargapenjualan |
+-----+-----+-----+
| Beras Rojo Lele | 35 | 12000 |
| Gula Merah | 5 | 5000 |
| Tepung Kanji | 5 | 5000 |
| Beras Mahal | 5 | 30000 |
| Tepung Terigu | 5 | 6000 |
| Beras Medium | NULL | NULL |
| Gula Aren | NULL | NULL |
| Gula Batu | NULL | NULL |
| Gula Putih | NULL | NULL |
| Tepung Tapioka | NULL | NULL |
| Beras Cianjur | NULL | NULL |
+-----+-----+-----+
11 rows in set (0.005 sec)
```

37. RIGHT JOIN

```
MariaDB [dbtoko]> select tblbarang.barang,
    -> tblorderdetail.jumlah, tblorderdetail.hargapenjualan
    -> from tblbarang
    -> right join tblorderdetail
    -> on tblbarang.idbarang = tblorderdetail.idbarang
    -> order by tblorderdetail.jumlah desc;
+-----+-----+-----+
| barang | jumlah | hargapenjualan |
+-----+-----+-----+
| Beras Rojo Lele | 35 | 12000 |
| Gula Merah | 5 | 5000 |
| Tepung Kanji | 5 | 5000 |
| Beras Mahal | 5 | 30000 |
| Tepung Terigu | 5 | 6000 |
+-----+-----+-----+
5 rows in set (0.001 sec)
```

STORE PROCEDURE

Store Procedure adalah blok program yang diletakkan pada MySQL. Blok yang sudah dibuat bisa dipanggil jika diperlukan. Procedure tidak memiliki return.

38. PROCEDURE TANPA PARAMETER

```
MariaDB [dbtoko]> create procedure namapelanggan()
-> select * from tblpelanggan;
Query OK, 0 rows affected (0.010 sec)
```

39. PEMANGGILAN PROCEDURE

```
MariaDB [dbtoko]> call namapelanggan;
+-----+-----+-----+
| idpelanggan | nama    | alamat   |
+-----+-----+-----+
|           5 | kosong  | kosong   |
|           6 | Kirara  | Inazuma  |
|           7 | Mona    | Mondstadt|
+-----+-----+-----+
3 rows in set (0.003 sec)
```

40. PROCEDURE DENGAN PARAMETER

```
MariaDB [dbtoko]> create procedure caribarang (barang varchar(100))
-> select * from tblbarang
-> where tblbarang.barang like barang;
Query OK, 0 rows affected (0.009 sec)
```

41. MEMANGGIL PROCEDURE DENGAN KETENTUAN

```
MariaDB [dbtoko]> call caribarang ('%t%');
+-----+-----+-----+-----+-----+
| idbarang | idkelompok | barang | stokbarang | hargabeli |
+-----+-----+-----+-----+
| 5 | 7 | Gula Putih | 20 | 12000 |
| 7 | 7 | Gula Batu | 40 | 2000 |
| 9 | 9 | Tepung Terigu | 45 | 4000 |
| 10 | 9 | Tepung Tapioka | 15 | 2000 |
| 11 | 9 | Tepung Kanji | 20 | 3500 |
+-----+-----+-----+-----+
5 rows in set (0.001 sec)
```

42. MENAMPILKAN SEMUA PROCEDURE

```
MariaDB [dbtoko]> show procedure status;
+-----+-----+-----+-----+-----+-----+-----+
| Db | Name | Type | Definer | Modified | Created | Security_type |
| Comment | character_set_client | collation_connection | Database Collation |
+-----+-----+-----+-----+-----+-----+
| dbtoko | caribarang | PROCEDURE | root@localhost | 2024-12-07 00:57:20 | 2024-12-07 00:57:20 | DEFINER |
| | cp850 | | cp850_general_ci | utf8mb4_general_ci | |
| dbtoko | namapelanggan | PROCEDURE | root@localhost | 2024-12-07 00:52:14 | 2024-12-07 00:52:14 | DEFINER |
| | cp850 | | cp850_general_ci | utf8mb4_general_ci | |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.031 sec)
```

43. MENGHAPUS STORE PROCEDURE

```
MariaDB [dbtoko]> drop procedure caribarang;
Query OK, 0 rows affected (0.019 sec)
```

DATA MANIPULATION LANGUAGE

FUNCTION

Function adalah blok program yang disimpan di MySQL yang bisa menerima INPUT atau PARAMETER dan MEMILIKI RETURN

44. MEMBUAT FUNCTION

```
MariaDB [dbtoko]> CREATE FUNCTION laba (id INT) RETURNS FLOAT
-> RETURN
-> (
-> SELECT hargajual - hargabeli as laba
-> FROM tblbarang
-> WHERE idbarang = id
-> );
Query OK, 0 rows affected (0.019 sec)
```

45. MEMANGGIL FUNCTION

```
MariaDB [dbtoko]> SELECT laba(1);
+-----+
| laba(1) |
+-----+
|    2000 |
+-----+
1 row in set (0.004 sec)
```

46. PENGGUNAAN FUNCTION

Tambahkan sebuah kolom dengan nama **(laba)**

```
MariaDB [dbtoko]> ALTER TABLE tblorderdetail ADD laba FLOAT;
Query OK, 0 rows affected (0.019 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

Periksa tabel **(tblorder)**

```
MariaDB [dbtoko]> DESCRIBE tblorderdetail;
+-----+-----+-----+-----+-----+
| Field      | Type       | Null | Key | Default | Extra           |
+-----+-----+-----+-----+-----+
| idorderdetail | int(11) | NO   | PRI | NULL    | auto_increment |
| idorder     | int(11) | YES  | MUL | NULL    |                 |
| idbarang    | int(11) | YES  |      | NULL    |                 |
| jumlah      | int(11) | YES  |      | NULL    |                 |
| hargapenjualan | float   | YES  |      | NULL    |                 |
| laba        | float    | YES  |      | NULL    |                 |
+-----+-----+-----+-----+-----+
6 rows in set (0.007 sec)
```

47. MENAMPILKAN SEMUA FUNCTION

```
MariaDB [dbtoko]> SHOW FUNCTION STATUS;  
+-----+-----+-----+  
| Db   | Name  | Type   | Definer      | Mod  
se Collation |  
+-----+-----+-----+-----+  
| dbtoko | laba  | FUNCTION | root@localhost | 202  
4_general_ci |  
+-----+-----+-----+-----+
```

48. MENGHAPUS FUNCTION

```
MariaDB [dbtoko]> DROP FUNCTION laba;  
Query OK, 0 rows affected (0.018 sec)
```

```
MariaDB [dbtoko]> SHOW FUNCTION STATUS;  
Empty set (0.012 sec)
```

SELECT AGGREGATE

SELECT AGGREGATE adalah SELECT yang menampilkan function bawaan dari MySQL. Ada beberapa SELECT AGGREGATE yang akan dipelajari yaitu;

- **MIN** : menampilkan nilai TERKECIL pada kolom yang dimaksud
- **MAX** : menampilkan nilai TERBESAR pada kolom yang dimaksud
- **SUM** : menampilkan nilai PENJUMLAHAN pada kolom yang dimaksud
- **AVG** : menampilkan nilai RATA-RATA pada kolom yang dimaksud
- **COUNT** : menampilkan JUMLAH BARIS pada kolom yang dimaksud
- **COUNT(*)** : menampilkan JUMLAH BARIS pada TABEL
- **BETWEEN** : menampilkan data antara dua nilai TERENDAH dan TERTINGGI
- **DISTINCT** : menampilkan data yang sama HANYA SATU KALI

49. SELECT MIN

```
MariaDB [dbtoko]> SELECT MIN(hargajual) FROM tblbarang;
+-----+
| MIN(hargajual) |
+-----+
|      3000      |
+-----+
1 row in set (0.007 sec)
```

50. SELECT MAX

```
MariaDB [dbtoko]> SELECT MAX(hargajual) FROM tblbarang;
+-----+
| MAX(hargajual) |
+-----+
|      30000     |
+-----+
1 row in set (0.001 sec)
```

51. SELECT SUM

```
MariaDB [dbtoko]> SELECT SUM(hargajual) FROM tblbarang;
+-----+
| SUM(hargajual) |
+-----+
|      111500     |
+-----+
1 row in set (0.000 sec)
```

52. SELECT AVG

```
MariaDB [dbtoko]> SELECT AVG(hargajual) FROM tblbarang;
+-----+
| AVG(hargajual) |
+-----+
| 10136.363636363636 |
+-----+
1 row in set (0.001 sec)
```

53. SELECT COUNT

```
MariaDB [dbtoko]> SELECT COUNT(hargajual) FROM tblbarang;
+-----+
| COUNT(hargajual) |
+-----+
|          11      |
+-----+
1 row in set (0.00 sec)
```

54. SELECT COUNT(*)

```
MariaDB [dbtoko]> SELECT COUNT(*) FROM tblbarang;
+-----+
| COUNT(*) |
+-----+
|         11 |
+-----+
1 row in set (0.006 sec)
```

55. SELECT BETWEEN

```
MariaDB [dbtoko]> SELECT * FROM tblbarang
    -> WHERE hargajual BETWEEN 5000 AND 15000;
+-----+-----+-----+-----+-----+-----+
| idbarang | idkelompok | barang       | stokbarang | hargabeli | hargajual |
+-----+-----+-----+-----+-----+-----+
|      1   |      1   | Beras Rojo Lele |      65   | 10000     | 12000     |
|      2   |      1   | Beras Cianjur   |      50   | 11000     | 14000     |
|      3   |      1   | Beras Medium    |      70   | 8000      | 10000     |
|      5   |      2   | Gula Putih      |      20   | 12000     | 14000     |
|      6   |      2   | Gula Merah      |       5   | 3000      | 5000      |
|      8   |      2   | Gula Aren        |      55   | 7000      | 9000      |
|      9   |      4   | Tepung Terigu    |      50   | 4000      | 6000      |
|     11   |      4   | Tepung Kanji     |      25   | 3500      | 5000      |
+-----+-----+-----+-----+-----+-----+
8 rows in set (0.001 sec)
```

56. SELECT DISTINCT

```
MariaDB [dbtoko]> SELECT DISTINCT kelompok FROM view_barang;
+-----+
| kelompok |
+-----+
| Beras   |
| Gula   |
| Tepung |
+-----+
3 rows in set (0.003 sec)
```

START TRANSACTION, COMMIT, & ROLLBACK

Setiap perintah di MySQL yang masuk kelompok (INSERT, UPDATE, DELETE, SELECT) bisa dimasukkan kedalam perintah START TRANSACTION, COMMIT, dan ROLLBACK (undo atau pembatalan perintah). COMMIT digunakan agar perintah yang dijalankan **TIDAK BISA DI ROLLBACK (undo)**.

Kesimpulan START TRANSACTION, COMMIT, & ROLLBACK

- Transaksi adalah perintah (INSERT, UPDATE, DELETE, SELECT)
 - Transaksi yang bisa di ROLLBACK (undo) adalah transaksi yang dimulai dengan START TRANSACTION dan BELUM DIAKHIRI DENGAN COMMIT
 - Transaksi yang sudah di COMMIT TIDAK BISA di ROLLBACK
-

57. START TRANSACTION

```
MariaDB [dbtoko]> START TRANSACTION;  
Query OK, 0 rows affected (0.000 sec)
```

58. ROLLBACK

```
MariaDB [dbtoko]> ROLLBACK;  
Query OK, 0 rows affected (0.009 sec)
```

59. COMMIT

```
MariaDB [dbtoko]> COMMIT;  
Query OK, 0 rows affected (0.000 sec)
```

DML

DCL

(DATA CONTROL LANGUAGE)



ZELINA IRENE CHRISANI - XI RPL/36

TENTANG DCL

(DATA CONTROL LANGUAGE)

DCL adalah materi yang akan digunakan untuk mempelajari tentang manajemen atau pengelolahan USER dan Hak Akses yang akan menggunakan database MySQL. Sebelum menggunakan MySQL kita diharuskan login terlebih dahulu dengan user awal **[root]** dan password **[kosong]**.

LOGIN USER AWAL

```
C:\xampp\mysql\bin>mysql -u root -p
Enter password:
Welcome to the MariaDB monitor. Commands end with ; or \g.
Your MariaDB connection id is 25
Server version: 10.4.32-MariaDB mariadb.org binary distribution
```

1. MENAMPILKAN SEMUA USER

```
MariaDB [(none)]> SELECT user, host, password FROM mysql.user;
+-----+-----+-----+
| User | Host      | Password |
+-----+-----+-----+
| root | localhost |          |
| root | 127.0.0.1 |          |
| root | ::1        |          |
| pma  | localhost |          |
+-----+-----+-----+
4 rows in set (0.011 sec)
```

2. MENAMBAH USER

```
MariaDB [(none)]> CREATE USER 'komputerkit'@'localhost';
Query OK, 0 rows affected (0.011 sec)
```

```
MariaDB [(none)]> SELECT user, host, password FROM mysql.user;
+-----+-----+-----+
| User      | Host      | Password |
+-----+-----+-----+
| root      | localhost |          |
| komputerkit | localhost |          |
| root      | 127.0.0.1 |          |
| root      | ::1        |          |
| pma       | localhost |          |
+-----+-----+-----+
5 rows in set (0.002 sec)
```

3. MEMBERIKAN PASSWORD PADA USER

```
MariaDB [(none)]> SET PASSWORD FOR 'komputerkit'@'localhost' = PASSWORD ('komputerkit');  
Query OK, 0 rows affected (0.012 sec)
```

```
MariaDB [(none)]> FLUSH PRIVILEGES;  
Query OK, 0 rows affected (0.003 sec)
```

4. MENGUBAH USER DAN PASSWORD YANG TELAH DIBUAT

```
MariaDB [(none)]> quit;  
Bye
```

```
C:\xampp\mysql\bin>mysql -u komputerkit -p  
Enter password: *****  
Welcome to the MariaDB monitor. Commands end with ; or \g.  
Your MariaDB connection id is 28  
Server version: 10.4.32-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)]> SHOW DATABASES;  
+-----+  
| Database |  
+-----+  
| information_schema |  
| test |  
+-----+  
2 rows in set (0.001 sec)
```

5. MEMBERIKAN HAK AKSES USER KE DATABASE

```
MariaDB [(none)]> quit;  
Bye
```

```
C:\xampp\mysql\bin>mysql -u root -p  
Enter password:
```

```
MariaDB [(none)]> GRANT ALL PRIVILEGES ON dbtoko.* TO 'komputerkit'@'localhost' IDENTIFIED BY 'komputerkit';  
Query OK, 0 rows affected (0.009 sec)  
  
MariaDB [(none)]> FLUSH PRIVILEGES;  
Query OK, 0 rows affected (0.001 sec)
```

```
MariaDB [(none)]> FLUSH PRIVILEGES;  
Query OK, 0 rows affected (0.003 sec)
```

```
MariaDB [(none)]> SHOW DATABASES;  
+-----+  
| Database |  
+-----+  
| dbtoko |  
| information_schema |  
| test |  
+-----+  
3 rows in set (0.001 sec)
```

6. MENAMPILKAN USER YANG SEDANG LOGIN

```
MariaDB [(none)]> SELECT USER(),CURRENT_USER();
+-----+-----+
| USER() | CURRENT_USER() |
+-----+-----+
| komputerkit@localhost | komputerkit@localhost |
+-----+-----+
1 row in set (0.000 sec)
```

7. MENAMPILKAN HAK AKSES

```
MariaDB [(none)]> quit;
Bye
```

```
C:\xampp\mysql\bin>mysql -u root -p
Enter password:
```

```
MariaDB [(none)]> SHOW GRANTS FOR 'komputerkit'@'localhost';
+-----+
| Grants for komputerkit@localhost
+-----+
| GRANT USAGE ON `.*` TO `komputerkit`@`localhost` IDENTIFIED BY PASSWORD '*4B8A2F9E710BEBA30D7BA115485320067D6D56E5'
| GRANT ALL PRIVILEGES ON `dbtoko`.* TO `komputerkit`@`localhost`
+-----+
2 rows in set (0.002 sec)
```

3. MENGHAPUS HAK AKSES

```
MariaDB [(none)]> SELECT USER(), CURRENT_USER();
+-----+-----+
| USER() | CURRENT_USER() |
+-----+-----+
| root@localhost | root@localhost |
+-----+-----+
1 row in set (0.000 sec)
```

```
MariaDB [(none)]> REVOKE ALL PRIVILEGES ON dbtoko.* FROM 'komputerkit'@'localhost';
Query OK, 0 rows affected (0.004 sec)

MariaDB [(none)]> FLUSH PRIVILEGES;
```

```
MariaDB [(none)]> FLUSH PRIVILEGES;
Query OK, 0 rows affected (0.001 sec)
```

```
MariaDB [(none)]> SHOW GRANTS FOR 'komputerkit'@'localhost';
+-----+-----+
| Grants for komputerkit@localhost |
+-----+-----+
| GRANT USAGE ON *.* TO `komputerkit`@`localhost` IDENTIFIED BY PASSWORD '*4B8A2F9E710BEBA30D7BA115485320067D6D56E5' |
+-----+-----+
1 row in set (0.000 sec)
```

9. MEMBERIKAN HAK AKSES DENGAN TABEL

- a. MariaDB [(none)]> GRANT ALL ON dbtoko.tblkelompok TO 'komputerkit'@'localhost' IDENTIFIED BY 'komputerkit';
Query OK, 0 rows affected (0.012 sec)
- b. MariaDB [(none)]> SHOW GRANTS FOR 'komputerkit'@'localhost';
+-----+
| Grants for komputerkit@localhost
+-----+
| GRANT USAGE ON *.* TO `komputerkit`@`localhost` IDENTIFIED BY PASSWORD '*4B8A2F9E710BEBA30D7BA115485320067D6D56E5'
| GRANT ALL PRIVILEGES ON `dbtoko`.`tblkelompok` TO `komputerkit`@`localhost`
+-----+
2 rows in set (0.000 sec)
- c. MariaDB [(none)]> GRANT ALL on dbtoko.tblbarang TO 'komputerkit'@'localhost' IDENTIFIED BY 'komputerkit';
Query OK, 0 rows affected (0.010 sec)
- d. MariaDB [(none)]> SHOW GRANTS FOR 'komputerkit'@'localhost';
+-----+
| Grants for komputerkit@localhost
+-----+
| GRANT USAGE ON *.* TO `komputerkit`@`localhost` IDENTIFIED BY PASSWORD '*4B8A2F9E710BEBA30D7BA115485320067D6D56E5'
| GRANT ALL PRIVILEGES ON `dbtoko`.`tblkelompok` TO `komputerkit`@`localhost`
| GRANT ALL PRIVILEGES ON `dbtoko`.`tblbarang` TO `komputerkit`@`localhost`
+-----+
3 rows in set (0.000 sec)
- e. MariaDB [(none)]> quit;
Bye
- f. C:\xampp\mysql\bin>mysql -u komputerkit -p
Enter password: *****

- g. MariaDB [(none)]> SHOW DATABASES;
+-----+
| Database
+-----+
| dbtoko
| information_schema
| test
+-----+
- h. MariaDB [(none)]> USE dbtoko;
Database changed
MariaDB [dbtoko]>
- i. MariaDB [dbtoko]> SHOW TABLES;
+-----+
| Tables_in_dbtoko
+-----+
| tblbarang
| tblkelompok
+-----+

10. MEMBERIKAN HAK AKSES PADA SELECT, INSERT, DELETE, UPDATE PADA TABEL

- a.

```
MariaDB [dbtoko]> quit;
Bye
```
- b.

```
C:\xampp\mysql\bin>mysql -u root -p
Enter password:
```
- c.

```
MariaDB [(none)]> GRANT SELECT,INSERT ON
    -> dbtoko.tblpelanggan TO 'komputerkit'@'localhost';
Query OK, 0 rows affected (0.006 sec)
```
- d.

```
MariaDB [(none)]> quit;
Bye
```
- e.

```
C:\xampp\mysql\bin>mysql -u komputerkit -p
Enter password: *****
```
- f.

```
MariaDB [(none)]> USE dbtoko;
Database changed
```

g.

```
MariaDB [dbtoko]> SHOW TABLES;
+-----+
| Tables_in_dbtoko |
+-----+
| tblbarang
| tblkelompok
| tblpelanggan
+-----+
3 rows in set (0.001 sec)
```

h.

```
MariaDB [dbtoko]> DESCRIBE tblpelanggan;
+-----+-----+-----+-----+-----+
| Field      | Type       | Null | Key | Default | Extra
+-----+-----+-----+-----+-----+
| idpelanggan | int(11)    | NO   | PRI | NULL    | auto_increment
| nama        | varchar(200) | YES  |     | NULL    |
| alamat      | varchar(225) | YES  |     | NULL    |
+-----+-----+-----+-----+-----+
3 rows in set (0.015 sec)
```

i.

```
MariaDB [dbtoko]> INSERT INTO tblpelanggan
-> VALUES ('','JONI', 'Sidoarjo');
Query OK, 1 row affected, 1 warning (0.011 sec)
```

j.

```
MariaDB [dbtoko]> SELECT * FROM tblpelanggan;
+-----+-----+-----+
| idpelanggan | nama      | alamat    |
+-----+-----+-----+
|      1 | KOSONG     | KOSONG    |
|      2 | komputerkit | sidoarjo  |
|      3 | Abigail    | Madiun    |
|      4 | JONI       | Sidoarjo  |
+-----+-----+-----+
4 rows in set (0.000 sec)
```

k.

```
MariaDB [dbtoko]> DELETE FROM tblpelanggan
    -> WHERE idpelanggan = 4;
ERROR 1142 (42000): DELETE command denied to user 'komputerkit'@'localhost' for table `dbtoko`.`tblpelanggan`
```

l.

```
MariaDB [dbtoko]> UPDATE tblpelanggan
    -> SET nama= 'JENO' WHERE idpelanggan=4;
ERROR 1142 (42000): UPDATE command denied to user 'komputerkit'@'localhost' for table `dbtoko`.`tblpelanggan`
```

11. UBAH PASSWORD USER

```
C:\xampp\mysql\bin>mysql -u root -p  
Enter password:
```

```
MariaDB [(none)]> SET PASSWORD FOR 'komputerkit'@'localhost' = PASSWORD('123456');  
Query OK, 0 rows affected (0.004 sec)
```

```
MariaDB [(none)]> FLUSH PRIVILEGES;  
Query OK, 0 rows affected (0.001 sec)
```

12. HAPUS USER

```
MariaDB [(none)]> DROP USER 'komputerkit'@'localhost';  
Query OK, 0 rows affected (0.011 sec)
```

```
MariaDB [(none)]> SELECT user, password, host FROM mysql.user;  
+-----+-----+-----+  
| User | Password | Host   |  
+-----+-----+-----+  
| root |          | localhost |  
| root |          | 127.0.0.1 |  
| root |          | ::1      |  
| pma  |          | localhost |  
+-----+-----+-----+  
4 rows in set (0.002 sec)
```

13. MERUBAH PASSWORD USER [ROOT]

```
C:\xampp\mysql\bin>mysqladmin -u root password 123456
```

```
C:\xampp\mysql\bin>mysql -u root -p  
Enter password: *****  
Welcome to the MariaDB monitor. Commands end with ; or \g.  
Your MariaDB connection id is 41  
Server version: 10.4.32-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.
```



```
C:\xampp\mysql\bin>mysqladmin -u root -p123456 password  
New password:  
Confirm new password:
```

TERIMA

KASIH



ZELINA IRENE CHRISANI - XI RPL/36