

## Tugas : Database

1. Membuka CMD dan menjalankan MySQL

```

C:\Users\TIARA>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 34
Server version: 10.4.20-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>quit
'quit' is not recognized as an internal or external command,
operable program or batch file.

C:\xampp\mysql\bin>

```

### 3. Memeriksa MySQL jalan atau tidak

```
C:\xampp\mysql\bin>mysqladmin -u root -p ping
Enter password:
mysqladmin: [Warning] Using a password on the command line interface can be insecure.
mysqladmin is alive

C:\xampp\mysql\bin>
```

#### 4. Mengecek Versi MySQL

```

C:\xampp\mysql\bin>mysqladmin -u root -p version
Enter password:
mysqladmin Ver 9.1 Distrib 10.4.20-MariaDB, for Win64 on AMD64
Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Server version          10.4.20-MariaDB
Protocol version        10
Connection              localhost via TCP/IP
TCP port                3306
Uptime:                 1 hour 5 min 52 sec

Threads: 6 Questions: 173 Slow queries: 0 Opens: 39 Flush tables: 1 Open tables: 32 Queries per second avg: 0.043

C:\xampp\mysql\bin>

```

### 5. Menampilkan help MySQL

```

C:\Users\Nigel>mysql -u root -p
Welcome to the MariaDB monitor. Commands end with ; or \g.
Your MariaDB connection id is 41
Server version: 10.4.30-MariaDB MariaDB 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)]> help

General information about MariaDB can be found at
http://mariadb.org

List of all client commands:
help      (U) This command must be first on line and end with ';'
clear     (U) Clear the current input statement.
connect   (U) Reconnect to the server. Optional arguments are db and host.
delimiter (U) Set statement delimiter.
quit      (U) Send command to MariaDB server, display result vertically.
help      (U) Ask mysql name as an alias.
go        (U) Send command to MariaDB server.
quit      (U) Stop this mysql.
note     (U) Don't write into outfile.
print    (U) Print current command.
prompt    (U) Change your mysql prompt.
quit      (U) Exit mysql.
rehash    (U) Refresh completion hash.
source    (U) Execute on the server file. Takes a file name as an argument.
status    (U) Get status information from the server.
system    (U) Get status [to outfile]. Append everything into given outfile.
use       (U) Use another database. Takes database name as argument;
          (U) Use database name. Right be needed for processing binding with multi-byte charsets.
warnings  (U) Show warnings after every statement.
warning    (U) Don't show warnings after every statement.

The server also help, type 'help contents'

MariaDB [(none)]>

```

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**Absen : 33**  
**Tugas : Database**

## 6. Menampilkan Tanggal

```
Command Prompt - mysql -u root -p
MariaDB [(none)]> select curdate();
+-----+
| curdate() |
+-----+
| 2022-08-16 |
+-----+
1 row in set (0.001 sec)
```

## 7. Menampilkan Waktu Atau Jam

```
MariaDB [(none)]> select curtime();
+-----+
| curtime() |
+-----+
| 08:37:38 |
+-----+
1 row in set (0.003 sec)
```

## 8. Menggunakan Kalkulator

### ➤ Penjumlahan

```
MariaDB [(none)]> select 3+4;
+-----+
| 3+4 |
+-----+
| 7 |
+-----+
1 row in set (0.000 sec)
```

### ➤ Perkalian

```
MariaDB [(none)]> select 3 * 4;
+-----+
| 3 * 4 |
+-----+
| 12 |
+-----+
1 row in set (0.000 sec)
```

### ➤ Pengurangan

```
MariaDB [(none)]> select 3 - 4;
+-----+
| 3 - 4 |
+-----+
| -1 |
+-----+
```

### ➤ Pembagian

```
MariaDB [(none)]> select 3/4;
+-----+
| 3/4 |
+-----+
| 0.7500 |
+-----+
1 row in set (0.003 sec)
```

### ➤ Modulo (sisanya pembagian)

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

### ➤ Hasil Pembagian Integer (utuh)

```
MariaDB [(none)]> select 5 div 3;
+-----+
| 5 div 3 |
+-----+
| 1 |
+-----+
1 row in set (0.001 sec)

MariaDB [(none)]> .
```

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## 9. Menampilkan Database

```
Command Prompt - mysql -u root -p

MariaDB [(none)]> show databases;
+-----+
| Database |
+-----+
| apirestoran |
| dbrestoran |
| dbrestoranemil |
| information_schema |
| laravel-resto |
| laravel-resto2 |
| mysql |
| performance_schema |
| phpmyadmin |
| restoran-ci4 |
| test |
| toko |
+-----+
12 rows in set (0.004 sec)

MariaDB [(none)]>
```

## 10. Membuat Database dan Menampilkan database yang baru dibuat

```
Command Prompt - mysql -u root -p

MariaDB [(none)]> create database dbwarung;
Query OK, 1 row affected (0.003 sec)

MariaDB [(none)]> show databases;
+-----+
| Database |
+-----+
| apirestoran |
| dbrestoran |
| dbrestoranemil |
| dbwarung |
| information_schema |
| laravel-resto |
| laravel-resto2 |
| mysql |
| performance_schema |
| phpmyadmin |
| restoran-ci4 |
| test |
| toko |
+-----+
13 rows in set (0.001 sec)

MariaDB [(none)]>
```

## 11. Menghapus Database

```
Command Prompt - mysql -u root -p

MariaDB [(none)]> drop database dbwarung;
Query OK, 0 rows affected (0.033 sec)

MariaDB [(none)]>
```

## 12. Mengaktifkan Database

```
Command Prompt - mysql -u root -p

MariaDB [(none)]> create database dbwarung;
Query OK, 1 row affected (0.003 sec)

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

## 13. Membuat Tabel

```
Command Prompt - mysql -u root -p

MariaDB [dbwarung]> create table tblkelompok
-> (
-> idkelompok INT NOT NULL AUTO_INCREMENT PRIMARY KEY,
-> kelompok VARCHAR(100)
-> );
Query OK, 0 rows affected (0.040 sec)

MariaDB [dbwarung]>
```

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#### 14. Menampilkan Tabel

```
Command Prompt - mysql -u root -p

MariaDB [dbwarung]> show tables;
+-----+
| Tables_in_dbwarung |
+-----+
| tblkelompok        |
+-----+
1 row in set (0.001 sec)

MariaDB [dbwarung]> _
```

#### 15. Menampilkan Struktur Tabel

```
Command Prompt - mysql -u root -p

MariaDB [dbwarung]> 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 (0.023 sec)

MariaDB [dbwarung]> _
```

#### 16. Membuat Tabel Barang

```
Command Prompt - mysql -u root -p

MariaDB [dbwarung]> create table tblbarang
-> (
-> idbarang INT NOT NULL AUTO_INCREMENT PRIMARY KEY,
-> idkelompok INT,
-> barang VARCHAR(200),
-> stok FLOAT,
-> hargabeli FLOAT
-> );
Query OK, 0 rows affected (0.034 sec)

MariaDB [dbwarung]> 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 | | NULL | |
| stok     | float | YES | | NULL | |
| hargabeli | float | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.019 sec)

MariaDB [dbwarung]>
```

#### 17. Menampilkan Tabel

```
MariaDB [dbwarung]> show tables;
+-----+
| Tables_in_dbwarung |
+-----+
| tblbarang          |
| tblkelompok       |
+-----+
2 rows in set (0.002 sec)

MariaDB [dbwarung]>
```

#### 18. Menambah Kolom

```
Command Prompt - mysql -u root -p

MariaDB [dbwarung]> alter table tblbarang add hargajual float;
Query OK, 0 rows affected (0.022 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [dbwarung]> 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 | | NULL | |
| stok     | float | YES | | NULL | |
| hargabeli | float | YES | | NULL | |
| hargajual | float | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.020 sec)
```

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## 19. Merubah Tipe Data

```
Command Prompt - mysql -u root -p

MariaDB [dbwarung]> alter table tblbarang modify stok INT;
Query OK, 0 rows affected (0.085 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [dbwarung]> 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 | | NULL | |
| stok | int(11) | YES | | NULL | |
| hangabeli | float | YES | | NULL | |
| hangajual | float | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.021 sec)

MariaDB [dbwarung]>
```

## 20. Menghapus Kolom dan Menampilkan Tabelnya

```
Command Prompt - mysql -u root -p

MariaDB [dbwarung]> ALTER TABLE tblbarang ADD stokminimal INT;
Query OK, 0 rows affected (0.030 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [dbwarung]> 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 | | NULL | |
| stok | int(11) | YES | | NULL | |
| hangabeli | float | YES | | NULL | |
| hangajual | float | YES | | NULL | |
| stokminimal | int(11) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
7 rows in set (0.015 sec)

MariaDB [dbwarung]> ALTER TABLE tblbarang DROP COLUMN stokminimal;
Query OK, 0 rows affected (0.021 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [dbwarung]> 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 | | NULL | |
| stok | int(11) | YES | | NULL | |
| hangabeli | float | YES | | NULL | |
| hangajual | float | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.016 sec)

MariaDB [dbwarung]> _
```

## 21. Merubah Nama Kolom dan Menampilkan Tabelnya

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> ALTER TABLE tblbarang CHANGE stok stokbarang INT;
Query OK, 0 rows affected (0.044 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [dbwarung]> 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 | | NULL | |
| stokbarang | int(11) | YES | | NULL | |
| hangabeli | float | YES | | NULL | |
| hangajual | float | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.024 sec)

MariaDB [dbwarung]> _
```

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## 22. Membuat Tabel **tblpelanggan**

```
MariaDB [dbwarung]> CREATE TABLE tblpelanggan
-> (
-> idpelanggan INT,
-> nama VARCHAR (200),
-> alamat VARCHAR (225)
-> );
Query OK, 0 rows affected (0.045 sec)

MariaDB [dbwarung]>
```

```
C:\Windows\System32\cmd.exe - mysql -u root -p
MariaDB [dbwarung]> CREATE TABLE tblorder
-> (
-> idorder INT NOT NULL AUTO_INCREMENT PRIMARY KEY,
-> idpelanggan INT,
-> tanggalorder DATE,
-> total FLOAT,
-> bayar FLOAT,
-> kembali FLOAT
-> );
Query OK, 0 rows affected (0.045 sec)

MariaDB [dbwarung]> DESCRIBE tblorder;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| idorder | int(11) | NO | PRI | NULL | auto_increment |
| idpelanggan | int(11) | YES | | NULL | |
| tanggalorder | date | YES | | NULL | |
| total | float | YES | | NULL | |
| bayar | float | YES | | NULL | |
| kembali | float | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.022 sec)

MariaDB [dbwarung]> _
```

## 23. Menambahkan PRIMARY KEY dan Memeriksa Struktur Tabel

```
C:\Windows\System32\cmd.exe - mysql -u root -p
MariaDB [dbwarung]> ALTER TABLE tblpelanggan
-> MODIFY idpelanggan INT NOT NULL AUTO_INCREMENT PRIMARY KEY;
Query OK, 0 rows affected (0.047 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [dbwarung]> 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)

MariaDB [dbwarung]>
```

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## 24. Menampilkan Engine Yang Digunakan

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> SHOW CREATE TABLE tblpelanggan;
+-----+
| Table           | Create Table                               |
+-----+
| tblpelanggan    | CREATE TABLE `tblpelanggan` (
  `idpelanggan` int(11) NOT NULL AUTO_INCREMENT,
  `nama` varchar(200) DEFAULT NULL,
  `alamat` varchar(225) DEFAULT NULL,
  PRIMARY KEY (`idpelanggan`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 |
+-----+
1 row in set (0.000 sec)

MariaDB [dbwarung]>
```

## 25. Membuat Tabel **tblorder** dan Struktur Tabel **tblorder**

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> SHOW CREATE TABLE tblpelanggan;
+-----+
| Table           | Create Table                               |
+-----+
| tblpelanggan    | CREATE TABLE `tblpelanggan` (
  `idpelanggan` int(11) NOT NULL AUTO_INCREMENT,
  `nama` varchar(200) DEFAULT NULL,
  `alamat` varchar(225) DEFAULT NULL,
  PRIMARY KEY (`idpelanggan`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 |
+-----+
1 row in set (0.000 sec)

MariaDB [dbwarung]>
```

## 26. Menampilkan Struktur Tabel **tblorder**

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> ALTER TABLE tblorder ADD faktur VARCHAR(50) AFTER idpelanggan;
Query OK, 0 rows affected (0.019 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [dbwarung]> DESCRIBE tblorder;
+-----+
| Field           | Type           | Null | Key | Default | Extra           |
+-----+
| idorder         | int(11)        | NO   | PRI | NULL    | auto_increment |
| idpelanggan     | int(11)        | YES  |     | NULL    |                 |
| faktur          | varchar(50)    | YES  |     | NULL    |                 |
| tanggalorder   | date           | YES  |     | NULL    |                 |
| total           | float          | YES  |     | NULL    |                 |
| bayar           | float          | YES  |     | NULL    |                 |
| kembali         | float          | YES  |     | NULL    |                 |
+-----+
7 rows in set (0.018 sec)

MariaDB [dbwarung]>
```

## 27. Membuat Tabel **tblorderdetail** dan Struktur Tabelnya

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> CREATE TABLE tblorder
-> (
-> idorder INT NOT NULL AUTO_INCREMENT PRIMARY KEY,
-> idpelanggan INT,
-> tanggalorder DATE,
-> total FLOAT,
-> bayar FLOAT,
-> kembali FLOAT
-> );
Query OK, 0 rows affected (0.045 sec)

MariaDB [dbwarung]> DESCRIBE tblorder;
+-----+
| Field           | Type           | Null | Key | Default | Extra           |
+-----+
| idorder         | int(11)        | NO   | PRI | NULL    | auto_increment |
| idpelanggan     | int(11)        | YES  |     | NULL    |                 |
| tanggalorder   | date           | YES  |     | NULL    |                 |
| total           | float          | YES  |     | NULL    |                 |
| bayar           | float          | YES  |     | NULL    |                 |
| kembali         | float          | YES  |     | NULL    |                 |
+-----+
6 rows in set (0.022 sec)

MariaDB [dbwarung]>
```

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## 28. Membuat INDEX

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> CREATE INDEX pelangganindex ON tblpelanggan (nama);
Query OK, 0 rows affected (0.022 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [dbwarung]> CREATE INDEX barangindex ON tblbarang (barang);
Query OK, 0 rows affected (0.020 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [dbwarung]>
```

## 29. Menampilkan INDEX

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> SHOW INDEX FROM tblbarang;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| Table | Non_unique | Key_name | Seq_in_index | Column_name | Collation | Cardinality | Sub_part | Packed | Null | Index_type | Comment | Index_comment |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| tblbarang | 0 | PRIMARY | 1 | idbarang | A | 0 | NULL | NULL | YES | BTREE | | |
| tblbarang | 1 | barangindex | 1 | barang | A | 0 | NULL | NULL | YES | BTREE | | |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
2 rows in set (0.003 sec)

MariaDB [dbwarung]> _
```

## 30. Menghapus INDEX (win shift s)

```
MariaDB [dbwarung]> DROP INDEX pelangganindex ON tblpelanggan;
Query OK, 0 rows affected (0.012 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [dbwarung]> _
```

## 31. Insert Semua Kolom

```
Select C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> SHOW TABLES;
+-----+
| Tables_in_dbwarung |
+-----+
| tblbarang           |
| tblkelompok         |
| tblorder            |
| tblorderdetail       |
| tblpelanggan        |
+-----+
5 rows in set (0.002 sec)

MariaDB [dbwarung]> 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 (0.038 sec)
```



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```
C:\Windows\System32\cmd.exe - mysql -u root -p
MariaDB [dbwarung]> INSERT INTO tblkelompok VALUES('', 'Gula');
Query OK, 1 row affected, 1 warning (0.074 sec)

MariaDB [dbwarung]> SELECT * FROM tblkelompok;
+-----+-----+
| idkelompok | kelompok |
+-----+-----+
|          1 | Gula     |
+-----+-----+
1 row in set (0.001 sec)

MariaDB [dbwarung]>
```

### 32. Insert Sebagian Kolom

```
MariaDB [dbwarung]> INSERT INTO tblkelompok (kelompok) VALUES('Beras');
Query OK, 1 row affected (0.004 sec)
```

```
C:\Windows\System32\cmd.exe - mysql -u root -p
MariaDB [dbwarung]> SELECT * FROM tblkelompok;
+-----+-----+
| idkelompok | kelompok |
+-----+-----+
|          1 | Gula     |
|          2 | Beras    |
|          3 | Tepung    |
|          4 | Minyak  |
|          5 | Jajan    |
+-----+-----+
5 rows in set (0.001 sec)

MariaDB [dbwarung]> _
```

### 33. Delete Sebagian Record (Baris Data)

```
C:\Windows\System32\cmd.exe - mysql -u root -p
MariaDB [dbwarung]> DELETE FROM tblkelompok WHERE idkelompok=5;
Query OK, 1 row affected (0.006 sec)

MariaDB [dbwarung]> SELECT * FROM tblkelompok;
+-----+-----+
| idkelompok | kelompok |
+-----+-----+
|          1 | Gula     |
|          2 | Beras    |
|          3 | Tepung    |
|          4 | Minyak  |
+-----+-----+
4 rows in set (0.001 sec)

MariaDB [dbwarung]>
```

### 34. Delete Semua Record

```
C:\Windows\System32\cmd.exe - mysql -u root -p
MariaDB [dbwarung]> DELETE FROM tblkelompok;
Query OK, 4 rows affected (0.002 sec)

MariaDB [dbwarung]> SELECT * FROM tblkelompok;
Empty set (0.001 sec)

MariaDB [dbwarung]> _
```

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### 35. Update Sebagian Record

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> SELECT * FROM tblkelompok;
+-----+-----+
| idkelompok | kelompok |
+-----+-----+
|          6 | Jajan    |
|          7 | Minyak   |
|          8 | Tepung     |
+-----+-----+
3 rows in set (0.001 sec)

MariaDB [dbwarung]> UPDATE tblkelompok SET kelompok='snack' WHERE idkelompok=6;
Query OK, 1 row affected (0.006 sec)
Rows matched: 1  Changed: 1  Warnings: 0

MariaDB [dbwarung]> _
```

```
MariaDB [dbwarung]> SELECT * FROM tblkelompok;
+-----+-----+
| idkelompok | kelompok |
+-----+-----+
|          6 | snack    |
|          7 | Minyak   |
|          8 | Tepung     |
+-----+-----+
3 rows in set (0.001 sec)

MariaDB [dbwarung]> _
```

### 36. Update Semua Record

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> UPDATE tblkelompok SET kelompok='Makanan';
Query OK, 3 rows affected (0.004 sec)
Rows matched: 3  Changed: 3  Warnings: 0

MariaDB [dbwarung]> SELECT * FROM tblkelompok;
+-----+-----+
| idkelompok | kelompok |
+-----+-----+
|          6 | Makanan  |
|          7 | Makanan  |
|          8 | Makanan  |
+-----+-----+
3 rows in set (0.001 sec)
```

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> UPDATE tblkelompok SET kelompok='snack' WHERE idkelompok=6;
Query OK, 1 row affected (0.004 sec)
Rows matched: 1  Changed: 1  Warnings: 0

MariaDB [dbwarung]> UPDATE tblkelompok SET kelompok='Gula' WHERE idkelompok=7;
Query OK, 1 row affected (0.006 sec)
Rows matched: 1  Changed: 1  Warnings: 0

MariaDB [dbwarung]> SELECT * FROM tblkelompok;
+-----+-----+
| idkelompok | kelompok |
+-----+-----+
|          6 | snack    |
|          7 | Gula      |
|          8 | Makanan  |
+-----+-----+
3 rows in set (0.001 sec)

MariaDB [dbwarung]> _
```

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Absen : 33  
Tugas : Database

37. Tabel Master dan Tabel Transaksi (Detail)

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> 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 (0.020 sec)

MariaDB [dbwarung]> 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    |              |
| hangabeli  | float      | YES  |     | NULL    |              |
| hangajual  | float      | YES  |     | NULL    |              |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.016 sec)

MariaDB [dbwarung]>
```

38. Proses Bisnis (Alur Kerja)

```
MariaDB [dbwarung]> SELECT * FROM tblkelompok;
+-----+-----+
| idkelompok | kelompok |
+-----+-----+
| 6           | Makanan  |
| 7           | Makanan  |
| 8           | Makanan  |
+-----+-----+
3 rows in set (0.001 sec)
```

39. Tabel Barang

```
MariaDB [dbwarung]> 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    |              |
| hangabeli  | float      | YES  |     | NULL    |              |
| hangajual  | float      | YES  |     | NULL    |              |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.016 sec)

MariaDB [dbwarung]>
```

**Nama : Tiara Rani Lukkensari**  
**Absen : 33**  
**Tugas : Database**

#### 40. Membuat Relasi Antar Tabel

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> ALTER TABLE tblbarang
  -> ADD CONSTRAINT FK_idkelompok FOREIGN KEY (idkelompok)
  -> REFERENCES tblkelompok (idkelompok) ON UPDATE CASCADE
  -> ON DELETE RESTRICT;
Query OK, 0 rows affected (0.100 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [dbwarung]> SHOW CREATE TABLE tblbarang;
+-----+
| Table | Create Table
+-----+
| tblbarang | CREATE TABLE `tblbarang` (
  `idbarang` int(11) NOT NULL AUTO_INCREMENT,
  `idkelompok` int(11) DEFAULT NULL,
  `barang` varchar(200) DEFAULT NULL,
  `stokbarang` int(11) DEFAULT NULL,
  `hargabeli` float DEFAULT NULL,
  `hargajual` float DEFAULT NULL,
  PRIMARY KEY (`idbarang`),
  KEY `barangindex` (`barang`),
  KEY `FK_idkelompok` (`idkelompok`),
  CONSTRAINT `FK_idkelompok` FOREIGN KEY (`idkelompok`) REFERENCES `tblkelompok` (`idkelompok`) ON UPDATE CASCADE
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 |
+-----+
1 row in set (0.003 sec)

MariaDB [dbwarung]> _
```

#### 44. Menguji Hasil Relasi

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> INSERT INTO tblbarang VALUES ('',6, 'Beras Cianjur', 50,11000,14000);
Query OK, 1 row affected, 1 warning (0.004 sec)

MariaDB [dbwarung]> INSERT INTO tblbarang VALUES ('',6, 'Beras Cianjur',70,8000,10000);
Query OK, 1 row affected, 1 warning (0.003 sec)

MariaDB [dbwarung]> INSERT INTO tblbarang VALUES ('',6, 'Beras Cianjur', 30,23000,30000);
Query OK, 1 row affected, 1 warning (0.006 sec)

MariaDB [dbwarung]> SELECT * FROM tblbarang;
+-----+-----+-----+-----+-----+-----+
| idbarang | idkelompok | barang          | stokbarang | hargabeli | hargajual |
+-----+-----+-----+-----+-----+-----+
| 1       | 6          | Beras Rojo Lele | 100       | 1000      | 12000     |
| 2       | 6          | Beras Cianjur   | 50        | 11000     | 14000     |
| 3       | 6          | Beras Cianjur   | 70        | 8000      | 10000     |
| 4       | 6          | Beras Cianjur   | 30        | 23000     | 30000     |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.001 sec)

MariaDB [dbwarung]> _
```

Nama : Tiara Rani Lukkensari  
Absen : 33  
Tugas : Database

```
C:\Windows\System32\cmd.exe - mysql -u root -p
MariaDB [dbwarung]> INSERT INTO tblbarang VALUES ('',7, 'Gula Putih',20,12000,14000);
Query OK, 1 row affected, 1 warning (0.004 sec)

MariaDB [dbwarung]> INSERT INTO tblbarang VALUES ('',7, 'Gula Merah',10,3000,5000);
Query OK, 1 row affected, 1 warning (0.004 sec)

MariaDB [dbwarung]> INSERT INTO tblbarang VALUES ('',7, 'Gula Batu', 40,2000,3000);
Query OK, 1 row affected, 1 warning (0.004 sec)

MariaDB [dbwarung]> INSERT INTO tblbarang VALUES ('',7, 'Gula Aren', 60,7000,9000);
Query OK, 1 row affected, 1 warning (0.003 sec)

MariaDB [dbwarung]> SELECT * FROM tblbarang;
```

idbarang	idkelompok	barang	stokbarang	hargabeli	harga jual
1	6	Beras Rojo Lele	100	1000	12000
2	6	Beras Cianjur	50	11000	14000
3	6	Beras Cianjur	70	8000	10000
4	6	Beras Cianjur	30	23000	30000
5	7	Gula Putih	20	12000	14000
6	7	Gula Merah	10	3000	5000
7	7	Gula Batu	40	2000	3000
8	7	Gula Aren	60	7000	9000

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

```
C:\Windows\System32\cmd.exe - mysql -u root -p
MariaDB [dbwarung]> INSERT INTO tblbarang VALUES ('',8, 'Tepung Terigu', 50,4000,6000);
Query OK, 1 row affected, 1 warning (0.003 sec)

MariaDB [dbwarung]> INSERT INTO tblbarang VALUES ('',8, 'Tepung Tapioka', 15,2000,3500);
Query OK, 1 row affected, 1 warning (0.003 sec)

MariaDB [dbwarung]> INSERT INTO tblbarang VALUES ('',8, 'Tepung Kanji', 25,3500,5000);
Query OK, 1 row affected, 1 warning (0.004 sec)

MariaDB [dbwarung]> SELECT * FROM tblbarang;
```

idbarang	idkelompok	barang	stokbarang	hargabeli	harga jual
1	6	Beras Rojo Lele	100	1000	12000
2	6	Beras Cianjur	50	11000	14000
3	6	Beras Cianjur	70	8000	10000
4	6	Beras Cianjur	30	23000	30000
5	7	Gula Putih	20	12000	14000
6	7	Gula Merah	10	3000	5000
7	7	Gula Batu	40	2000	3000
8	7	Gula Aren	60	7000	9000
9	8	Tepung Terigu	50	4000	6000
10	8	Tepung Tapioka	15	2000	3500
11	8	Tepung Kanji	25	3500	5000

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

#### 45. Pengujian Insert

```
MariaDB [dbwarung]> 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 ('dbwarung`.`tblbarang`, CONSTRAINT `FK_idkelompok` FOREIGN KEY (`idkelompok`) REFERENCES `tblkelompok` (`idkelompok`) ON UPDATE CASCADE)
MariaDB [dbwarung]>
```

#### 46. Pengujian Update

```
MariaDB [dbwarung]> UPDATE tblkelompok SET idkelompok=9 WHERE kelompok='Tepung';
Query OK, 0 rows affected (0.002 sec)
Rows matched: 0 Changed: 0 Warnings: 0

MariaDB [dbwarung]>
```

Nama : Tiara Rani Lukkensari  
Absen : 33  
Tugas : Database

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> SELECT * FROM tblkelompok;
+-----+-----+
| idkelompok | kelompok |
+-----+-----+
|          6 | snack    |
|          7 | Gula     |
|          8 | Makanan  |
+-----+-----+
3 rows in set (0.001 sec)

MariaDB [dbwarung]> SELECT * FROM tblbarang;
+-----+-----+-----+-----+-----+-----+
| idbarang | idkelompok | barang          | stokbarang | hargabeli | hargajual |
+-----+-----+-----+-----+-----+-----+
|        1 |          6 | Beras Rojo Lele |         100 |       1000 |       12000 |
|        2 |          6 | Beras Cianjur   |          50 |      11000 |       14000 |
|        3 |          6 | Beras Cianjur   |          70 |       8000 |       10000 |
|        4 |          6 | Beras Cianjur   |          30 |      23000 |       30000 |
|        5 |          7 | Gula Putih      |          20 |      12000 |       14000 |
|        6 |          7 | Gula Merah      |          10 |       3000 |        5000 |
|        7 |          7 | Gula Batu       |          40 |       2000 |        3000 |
|        8 |          7 | Gula Aren       |          60 |       7000 |        9000 |
|        9 |          8 | Tepung Terigu    |          50 |       4000 |        6000 |
|       10 |          8 | Tepung Tapioka   |          15 |      2000 |        3500 |
|       11 |          8 | Tepung Kanji     |          25 |      3500 |        5000 |
+-----+-----+-----+-----+-----+-----+
11 rows in set (0.001 sec)

MariaDB [dbwarung]> _
```

#### 47. Pengujian Delete

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> DELETE FROM tblkelompok WHERE idkelompok=9;
Query OK, 0 rows affected (0.001 sec)

MariaDB [dbwarung]> INSERT INTO tblkelompok VALUES(10, 'Minyak');
Query OK, 1 row affected (0.002 sec)

MariaDB [dbwarung]> SELECT * FROM tblkelompok;
+-----+-----+
| idkelompok | kelompok |
+-----+-----+
|          6 | snack    |
|          7 | Gula     |
|          8 | Makanan  |
|         10 | Minyak   |
+-----+-----+
4 rows in set (0.001 sec)

MariaDB [dbwarung]> DELETE FROM tblkelompok WHERE idkelompok=10;
Query OK, 1 row affected (0.003 sec)

MariaDB [dbwarung]> SELECT * FROM tblkelompok;
+-----+-----+
| idkelompok | kelompok |
+-----+-----+
|          6 | snack    |
|          7 | Gula     |
|          8 | Makanan  |
+-----+-----+
3 rows in set (0.001 sec)

MariaDB [dbwarung]>
```

#### 48. Pembuatan View

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> 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 (0.012 sec)

MariaDB [dbwarung]> _
```

Nama : Tiara Rani Lukkensari  
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Tugas : Database

#### 49. Menampilkan Semua View Yang Sudah Dibuat

```
MariaDB [dbwarung]> SHOW FULL TABLES IN dbwarung WHERE TABLE_TYPE LIKE 'VIEW';
+-----+-----+
| Tables_in_dbwarung | Table_type |
+-----+-----+
| view_barang        | VIEW       |
+-----+-----+
1 row in set (0.002 sec)

MariaDB [dbwarung]> _
```

#### 50. Melihat Isi View

C:\Windows\System32\cmd.exe - mysql -u root -p

```
MariaDB [dbwarung]> SELECT * FROM view_barang;
+-----+-----+-----+-----+-----+-----+-----+
| idbarang | barang          | stokbarang | hargabeli | hargajual | idkelompok | kelompok |
+-----+-----+-----+-----+-----+-----+-----+
| 1        | Beras Rojo Lele | 100        | 1000      | 12000     | 6           | snack    |
| 2        | Beras Cianjur   | 50         | 11000     | 14000     | 6           | snack    |
| 3        | Beras Cianjur   | 70         | 8000      | 10000     | 6           | snack    |
| 4        | Beras Cianjur   | 30         | 23000     | 30000     | 6           | snack    |
| 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     |
| 9        | Tepung Terigu    | 50         | 4000      | 6000      | 8           | Makanan  |
| 10       | Tepung Tapioka   | 15         | 2000      | 3500      | 8           | Makanan  |
| 11       | Tepung Kanji     | 25         | 3500      | 5000      | 8           | Makanan  |
+-----+-----+-----+-----+-----+-----+-----+
11 rows in set (0.004 sec)

MariaDB [dbwarung]> _
```

#### 51. Menghapus View

C:\Windows\System32\cmd.exe - mysql -u root -p

```
MariaDB [dbwarung]> DROP VIEW view_barang;
Query OK, 0 rows affected (0.001 sec)

MariaDB [dbwarung]> _
```

Nama : Tiara Rani Lukkensari  
Absen : 33  
Tugas : Database

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> SELECT * FROM view_barang;
+-----+-----+-----+-----+-----+-----+-----+
| idbarang | barang          | stokbarang | hargabeli | hargajual | idkelompok | kelompok |
+-----+-----+-----+-----+-----+-----+-----+
| 1        | Beras Rojo Lele | 100        | 1000      | 12000     | 6           | snack    |
| 2        | Beras Cianjur   | 50         | 11000     | 14000     | 6           | snack    |
| 3        | Beras Cianjur   | 70         | 8000      | 10000     | 6           | snack    |
| 4        | Beras Cianjur   | 30         | 23000     | 30000     | 6           | snack    |
| 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     |
| 9        | Tepung Terigu    | 50         | 4000      | 6000      | 8           | Makanan  |
| 10       | Tepung Tapioka   | 15         | 2000      | 3500      | 8           | Makanan  |
| 11       | Tepung Kanji     | 25         | 3500      | 5000      | 8           | Makanan  |
+-----+-----+-----+-----+-----+-----+-----+
11 rows in set (0.001 sec)

MariaDB [dbwarung]> _
```

### 53. Select Sebagian Kolom

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> SELECT barang, stokbarang, kelompok FROM view_barang;
+-----+-----+-----+
| barang          | stokbarang | kelompok |
+-----+-----+-----+
| Beras Rojo Lele | 100        | snack    |
| Beras Cianjur   | 50         | snack    |
| Beras Cianjur   | 70         | snack    |
| Beras Cianjur   | 30         | snack    |
| Gula Putih      | 20         | Gula     |
| Gula Merah      | 10         | Gula     |
| Gula Batu       | 40         | Gula     |
| Gula Aren       | 60         | Gula     |
| Tepung Terigu    | 50         | Makanan  |
| Tepung Tapioka   | 15         | Makanan  |
| Tepung Kanji     | 25         | Makanan  |
+-----+-----+-----+
11 rows in set (0.001 sec)

MariaDB [dbwarung]> _
```



Nama : Tiara Rani Lukkensari  
Absen : 33  
Tugas : Database

54. Select Order

➤ Hasil Select ORDER BY view\_barang ASC

```
C:\Windows\System32\cmd.exe - mysql -u root -p
MariaDB [dbwarung]> SELECT barang, stokbarang, kelompok FROM view_barang;
+-----+-----+-----+
| barang          | stokbarang | kelompok |
+-----+-----+-----+
| Beras Rojo Lele |         100 | snack    |
| Beras Cianjur   |          50 | snack    |
| Beras Cianjur   |          70 | snack    |
| Beras Cianjur   |          30 | snack    |
| Gula Putih      |          20 | Gula     |
| Gula Merah      |          10 | Gula     |
| Gula Batu       |          40 | Gula     |
| Gula Aren       |          60 | Gula     |
| Tepung Terigu    |          50 | Makanan  |
| Tepung Tapioka   |          15 | Makanan  |
| Tepung Kanji     |          25 | Makanan  |
+-----+-----+-----+
11 rows in set (0.001 sec)

MariaDB [dbwarung]> _
```

➤ Hasil Select ORDER BY view\_barang DESC

```
C:\Windows\System32\cmd.exe - mysql -u root -p
MariaDB [dbwarung]> SELECT * FROM view_barang ORDER BY hargabeli DESC;
+-----+-----+-----+-----+-----+-----+-----+
| idbarang | barang          | stokbarang | hargabeli | hargajual | idkelompok | kelompok |
+-----+-----+-----+-----+-----+-----+-----+
| 4        | Beras Cianjur   |          30 |      23000 |      30000 | 6           | snack    |
| 5        | Gula Putih      |          20 |      12000 |      14000 | 7           | Gula     |
| 2        | Beras Cianjur   |          50 |      11000 |      14000 | 6           | snack    |
| 3        | Beras Cianjur   |          70 |       8000 |      10000 | 6           | snack    |
| 8        | Gula Aren       |          60 |       7000 |       9000 | 7           | Gula     |
| 9        | Tepung Terigu    |          50 |       4000 |       6000 | 8           | Makanan  |
| 11       | Tepung Kanji     |          25 |       3500 |       5000 | 8           | Makanan  |
| 6        | Gula Merah      |          10 |       3000 |       5000 | 7           | Gula     |
| 7        | Gula Batu       |          40 |       2000 |       3000 | 7           | Gula     |
| 10       | Tepung Tapioka   |          15 |       2000 |       3500 | 8           | Makanan  |
| 1        | Beras Rojo Lele |         100 |       1000 |      12000 | 6           | snack    |
+-----+-----+-----+-----+-----+-----+-----+
11 rows in set (0.001 sec)

MariaDB [dbwarung]> _
```

Nama : Tiara Rani Lukkensari  
Absen : 33  
Tugas : Database

#### 55. Select Group

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> SELECT * FROM view_barang GROUP BY barang;
+-----+-----+-----+-----+-----+-----+-----+
| idbarang | barang          | stokbarang | hargabeli | hargajual | idkelompok | kelompok |
+-----+-----+-----+-----+-----+-----+-----+
| 2        | Beras Cianjur   | 50         | 11000    | 14000    | 6           | snack    |
| 1        | Beras Rojo Lele | 100        | 1000     | 12000    | 6           | snack    |
| 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     |
| 11       | Tepung Kanji     | 25         | 3500     | 5000     | 8           | Makanan  |
| 10       | Tepung Tapioka   | 15         | 2000     | 3500     | 8           | Makanan  |
| 9        | Tepung Terigu    | 50         | 4000     | 6000     | 8           | Makanan  |
+-----+-----+-----+-----+-----+-----+-----+
9 rows in set (0.004 sec)

MariaDB [dbwarung]>
```

#### 56. Pengujian Where

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> SELECT *FROM tblbarang WHERE hargajual > 5000 ORDER BY hargajual;
+-----+-----+-----+-----+-----+-----+
| idbarang | idkelompok | barang          | stokbarang | hargabeli | hargajual |
+-----+-----+-----+-----+-----+-----+
| 9        | 8           | Tepung Terigu    | 50         | 4000      | 6000      |
| 8        | 7           | Gula Aren       | 60         | 7000      | 9000      |
| 3        | 6           | Beras Cianjur   | 70         | 8000      | 10000     |
| 1        | 6           | Beras Rojo Lele | 100        | 1000      | 12000     |
| 2        | 6           | Beras Cianjur   | 50         | 11000     | 14000     |
| 5        | 7           | Gula Putih      | 20         | 12000     | 14000     |
| 4        | 6           | Beras Cianjur   | 30         | 23000     | 30000     |
+-----+-----+-----+-----+-----+-----+
7 rows in set (0.002 sec)

MariaDB [dbwarung]> _
```

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> SELECT * FROM tblbarang
-> WHERE hargajual > 5000
-> AND hargabeli > 7000
-> ORDER BY hargabeli;
+-----+-----+-----+-----+-----+-----+
| idbarang | idkelompok | barang          | stokbarang | hargabeli | hargajual |
+-----+-----+-----+-----+-----+-----+
| 3        | 6           | Beras Cianjur   | 70         | 8000      | 10000     |
| 2        | 6           | Beras Cianjur   | 50         | 11000     | 14000     |
| 5        | 7           | Gula Putih      | 20         | 12000     | 14000     |
| 4        | 6           | Beras Cianjur   | 30         | 23000     | 30000     |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.002 sec)

MariaDB [dbwarung]>
```

Nama : Tiara Rani Lukkensari  
Absen : 33  
Tugas : Database

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> SELECT * FROM tblbarang
-> WHERE hargajual > 5000
-> OR hargabeli > 7000
-> ORDER BY hargabeli;
+-----+-----+-----+-----+-----+-----+
| idbarang | idkelompok | barang          | stokbarang | hargabeli | hargajual |
+-----+-----+-----+-----+-----+-----+
| 1        | 6           | Beras Rojo Lele | 100        | 1000      | 12000     |
| 9        | 8           | Tepung Terigu    | 50         | 4000      | 6000      |
| 8        | 7           | Gula Aren       | 60         | 7000      | 9000      |
| 3        | 6           | Beras Cianjur   | 70         | 8000      | 10000     |
| 2        | 6           | Beras Cianjur   | 50         | 11000     | 14000     |
| 5        | 7           | Gula Putih      | 20         | 12000     | 14000     |
| 4        | 6           | Beras Cianjur   | 30         | 23000     | 30000     |
+-----+-----+-----+-----+-----+-----+
7 rows in set (0.001 sec)

MariaDB [dbwarung]>
```

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> SELECT * FROM view_barang WHERE barang LIKE '%a';
+-----+-----+-----+-----+-----+-----+-----+
| idbarang | barang          | stokbarang | hargabeli | hargajual | idkelompok | kelompok |
+-----+-----+-----+-----+-----+-----+-----+
| 10       | Tepung Tapioka   | 15         | 2000      | 3500      | 8           | Makanan  |
+-----+-----+-----+-----+-----+-----+-----+
1 row in set (0.004 sec)
```

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> SELECT * FROM view_barang WHERE barang LIKE 'b%';
+-----+-----+-----+-----+-----+-----+-----+
| idbarang | barang          | stokbarang | hargabeli | hargajual | idkelompok | kelompok |
+-----+-----+-----+-----+-----+-----+-----+
| 1        | Beras Rojo Lele | 100        | 1000      | 12000     | 6           | snack    |
| 2        | Beras Cianjur   | 50         | 11000     | 14000     | 6           | snack    |
| 3        | Beras Cianjur   | 70         | 8000      | 10000     | 6           | snack    |
| 4        | Beras Cianjur   | 30         | 23000     | 30000     | 6           | snack    |
+-----+-----+-----+-----+-----+-----+-----+
4 rows in set (0.006 sec)

MariaDB [dbwarung]> _
```

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> SELECT * FROM view_barang WHERE barang LIKE '%c%';
+-----+-----+-----+-----+-----+-----+-----+
| idbarang | barang          | stokbarang | hargabeli | hargajual | idkelompok | kelompok |
+-----+-----+-----+-----+-----+-----+-----+
| 2        | Beras Cianjur   | 50         | 11000     | 14000     | 6           | snack    |
| 3        | Beras Cianjur   | 70         | 8000      | 10000     | 6           | snack    |
| 4        | Beras Cianjur   | 30         | 23000     | 30000     | 6           | snack    |
+-----+-----+-----+-----+-----+-----+-----+
3 rows in set (0.001 sec)

MariaDB [dbwarung]>
```

Nama : Tiara Rani Lukkensari  
Absen : 33  
Tugas : Database

57. Subquery ( Select In Select )

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> INSERT INTO tblkelompok VALUES ('', 'Minyak');
Query OK, 1 row affected, 1 warning (0.006 sec)

MariaDB [dbwarung]> INSERT INTO tblkelompok VALUES ('', 'Jajan');
Query OK, 1 row affected, 1 warning (0.003 sec)

MariaDB [dbwarung]> INSERT INTO tblkelompok VALUES ('', 'Roti Basah');
Query OK, 1 row affected, 1 warning (0.004 sec)

MariaDB [dbwarung]> SELECT * FROM tblkelompok;
+-----+-----+
| idkelompok | kelompok |
+-----+-----+
|          6 | snack   |
|          7 | Gula    |
|          8 | Makanan |
|         11 | Minyak  |
|         12 | Jajan   |
|         13 | Roti Basah |
+-----+-----+
6 rows in set (0.000 sec)

MariaDB [dbwarung]>
```

58. Menggunakan **Subquery** untuk mengetahui jumlah data dari tblkelompok yang sudah digunakan pada view dan jumlah data yang belum digunakan pada view

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> SELECT * FROM tblkelompok
-> WHERE idkelompok IN
-> (SELECT idkelompok FROM view_barang);
+-----+-----+
| idkelompok | kelompok |
+-----+-----+
|          6 | snack   |
|          7 | Gula    |
|          8 | Makanan |
+-----+-----+
3 rows in set (0.006 sec)

MariaDB [dbwarung]> _
```

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> 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 (0.004 sec)

MariaDB [dbwarung]>
```

**Nama : Tiara Rani Lukkensari**  
**Absen : 33**  
**Tugas : Database**

## 59. Membuat Relasi Antar Tabel

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> ALTER TABLE tblorder
  -> ADD CONSTRAINT FK_idpelanggan FOREIGN KEY (idpelanggan)
  -> REFERENCES tblpelanggan (idpelanggan)
  -> ON UPDATE CASCADE ON DELETE RESTRICT;
Query OK, 0 rows affected (0.119 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [dbwarung]> SHOW CREATE TABLE tblorder;
+-----+
| Table | Create Table
+-----+
| 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 NULL,
  `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 |
+-----+
1 row in set (0.007 sec)

MariaDB [dbwarung]> _
```

## 60. Relasi 2 Tabel Master Dan 1 Tabel Transaksi

### ➤ Relasi Antara Tabel (tblorderdetail) dan tabel (tblorder)

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> ALTER TABLE tblorderdetail
  -> ADD CONSTRAINT FK_idorder FOREIGN KEY (idorder)
  -> REFERENCES tblorder (idorder)
  -> ON UPDATE CASCADE ON DELETE RESTRICT;
Query OK, 0 rows affected (0.063 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [dbwarung]> _
```

### ➤ Relasi Antara Tabel (tblorderdetail) dan Tabel (tblbarang)

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> ALTER TABLE tblorderdetail
  -> ADD CONSTRAINT FK_idorder FOREIGN KEY (idorder)
  -> REFERENCES tblorder (idorder)
  -> ON UPDATE CASCADE ON DELETE RESTRICT;
Query OK, 0 rows affected (0.063 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [dbwarung]> _
```

Nama : Tiara Rani Lukkensari  
Absen : 33  
Tugas : Database

➤ Hasil Pembuatan Relasi

C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> SHOW CREATE TABLE tblorderdetail;

```
+-----+-----+
| Table           | Create Table                               |
+-----+-----+
| tblorderdetail  | CREATE TABLE `tblorderdetail` (
  `idorderdetail` int(11) NOT NULL AUTO_INCREMENT,
  `idorder` int(11) DEFAULT NULL,
  `idbarang` int(11) DEFAULT NULL,
  `jumlah` int(11) DEFAULT NULL,
  `hargajual` float DEFAULT NULL,
  PRIMARY KEY (`idorderdetail`),
  KEY `FK_idorder` (`idorder`),
  CONSTRAINT `FK_idorder` FOREIGN KEY (`idorder`) REFERENCES `tblorder` (`idorder`) ON UPDATE CASCADE
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 |
+-----+-----+
1 row in set (0.004 sec)

MariaDB [dbwarung]>
```

61. Dummy Data

➤ Struktur Tabel

C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> 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 (0.022 sec)

MariaDB [dbwarung]> _
```

Nama : Tiara Rani Lukkensari  
Absen : 33  
Tugas : Database

- Isikan Nama Pelanggan Dengan Dummy Data Dan Periksa Hasil Insert Datanya

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> 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 (0.022 sec)

MariaDB [dbwarung]> INSERT INTO tblpelanggan VALUES('', 'KOSONG', 'KOSONG');
Query OK, 1 row affected, 1 warning (0.004 sec)

MariaDB [dbwarung]> SELECT * FROM tblpelanggan;
+-----+-----+-----+
| idpelanggan | nama  | alamat |
+-----+-----+-----+
|          1 | KOSONG | KOSONG |
+-----+-----+-----+
1 row in set (0.000 sec)

MariaDB [dbwarung]> _
```

## 62. Konsep Triger

- Menampilkan Semua Tabel

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> SHOW TABLES;
+-----+
| Tables_in_dbwarung |
+-----+
| tblbarang           |
| tblkelompok        |
| tblorder            |
| tblorderdetail      |
| tblpelanggan        |
| view_barang         |
+-----+
6 rows in set (0.003 sec)

MariaDB [dbwarung]>
```

Nama : Tiara Rani Lukkensari  
Absen : 33  
Tugas : Database

➤ Melihat Struktur Tabel

C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> DESCRIBE tblbarang;

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

6 rows in set (0.013 sec)

MariaDB [dbwarung]> 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 (0.010 sec)

MariaDB [dbwarung]> DESCRIBE tblorder;

Field	Type	Null	Key	Default	Extra
idorder	int(11)	NO	PRI	NULL	auto_increment
idpelanggan	int(11)	YES	MUL	NULL	
faktur	varchar(50)	YES		NULL	
tanggalorder	date	YES		NULL	
total	float	YES		NULL	
bayar	float	YES		NULL	
kembali	float	YES		NULL	

7 rows in set (0.011 sec)

C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> 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	
hargajual	float	YES		NULL	

5 rows in set (0.013 sec)

MariaDB [dbwarung]> 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 (0.012 sec)

MariaDB [dbwarung]> \_



Nama : Tiara Rani Lukkensari  
Absen : 33  
Tugas : Database

➤ Pemeriksaan Nama Kolom Yang Sama

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> ALTER TABLE tblorderdetail CHANGE hargajual hargapenjualan FLOAT;
Query OK, 0 rows affected (0.016 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [dbwarung]> 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    |              |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.011 sec)

MariaDB [dbwarung]> _
```

➤ Peintah ALTER pada tbl barang

```
MariaDB [dbwarung]> ALTER TABLE tblbarang ALTER COLUMN stokbarang SET DEFAULT 0;
Query OK, 0 rows affected (0.013 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [dbwarung]> _
```

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> DESCRIBE tblbarang;
+-----+-----+-----+-----+-----+-----+
| Field          | Type      | Null | Key | Default | Extra      |
+-----+-----+-----+-----+-----+-----+
| idbarang       | int(11)   | NO   | PRI | NULL    | auto_increment |
| idkelompok    | int(11)   | YES  | MUL | NULL    |              |
| barang         | varchar(200) | YES  | MUL | NULL    |              |
| stokbarang     | int(11)   | YES  |     | 0       |              |
| hargabeli      | float     | YES  |     | NULL    |              |
| hargajual      | float     | YES  |     | NULL    |              |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.012 sec)

MariaDB [dbwarung]>
```

Nama : Tiara Rani Lukkensari  
Absen : 33  
Tugas : Database

➤ Perintah ALTER pada tblorder

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> ALTER TABLE tblorder ALTER COLUMN total SET DEFAULT 0;
Query OK, 0 rows affected (0.013 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [dbwarung]> DESCRIBE tblorder;
+-----+-----+-----+-----+-----+-----+
| Field          | Type          | Null | Key | Default | Extra          |
+-----+-----+-----+-----+-----+-----+
| idorder        | int(11)       | NO   | PRI | NULL    | auto_increment |
| idpelanggan    | int(11)       | YES  | MUL | NULL    |                |
| faktur         | varchar(50)   | YES  |     | NULL    |                |
| tanggalorder  | date          | YES  |     | NULL    |                |
| total          | float         | YES  |     | 0       |                |
| bayar         | float         | YES  |     | NULL    |                |
| kembali        | float         | YES  |     | NULL    |                |
+-----+-----+-----+-----+-----+-----+
7 rows in set (0.014 sec)

MariaDB [dbwarung]> _
```

63. Pembuatan Trigger

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> CREATE TRIGGER kurang_stok
-> BEFORE INSERT ON tblorderdetail
-> FOR EACH ROW
-> UPDATE tblbarang SET stokbarang=stokbarang - NEW.jumlah
-> WHERE idbarang = NEW.idbarang;
Query OK, 0 rows affected (0.011 sec)

MariaDB [dbwarung]> CREATE TRIGGER tambah_total
-> AFTER INSERT ON tblorderdetail
-> FOR EACH ROW
-> UPDATE tblorder SET
-> total = total + (NEW.hargapenjualan * NEW.jumlah)
-> WHERE idorder = NEW.idorder;
Query OK, 0 rows affected (0.014 sec)

MariaDB [dbwarung]> 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 (0.011 sec)

MariaDB [dbwarung]> CREATE TRIGGER kurang_total
-> AFTER DELETE ON tblorderdetail
-> FOR EACH ROW
-> UPDATE tblorder SET
-> total = total - (OLD.hargapenjualan * OLD.jumlah)
-> WHERE idorder = OLD.idorder;
Query OK, 0 rows affected (0.009 sec)

MariaDB [dbwarung]>
```

Nama : Tiara Rani Lukkensari  
Absen : 33  
Tugas : Database

#### 64. Menampilkan TRIGGER

```
C:\Windows\System32\cmd.exe - mysql -u root -p
MariaDB [dbwarung]> SHOW TRIGGERS;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 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 | 2022-09-10 11:53:05.91 | NO_ZERO_IN_DATE,NO_ZERO_DATE,NO_ENGINE_SUBSTITUTION | root@localhost | cp850 |
| tambah_total | INSERT | tblorderdetail | UPDATE tblorder SET  
total = total + (NEW.hargapenjualan * NEW.jumlah)  
WHERE idorder = NEW.idorder | AFTER | 2022-09-10 11:55:38.64 | NO_ZERO_IN_DATE,NO_ZERO_DATE,NO_ENGINE_SUBSTITUTION | root@localhost | cp850 |
| tambah_stok | DELETE | tblorderdetail | UPDATE tblbarang SET stokbarang=stokbarang + OLD.jumlah  
WHERE idbarang = OLD.idbarang | BEFORE | 2022-09-10 11:57:11.30 | NO_ZERO_IN_DATE,NO_ZERO_DATE,NO_ENGINE_SUBSTITUTION | root@localhost | cp850 |
| kurang_total | DELETE | tblorderdetail | UPDATE tblorder SET  
total = total - (OLD.hargapenjualan * OLD.jumlah)  
WHERE idorder = OLD.idorder | AFTER | 2022-09-10 11:59:15.93 | NO_ZERO_IN_DATE,NO_ZERO_DATE,NO_ENGINE_SUBSTITUTION | root@localhost | cp850 |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
4 rows in set (0.019 sec)

MariaDB [dbwarung]> _
```

#### 65. Pengujian TRIGGER

- Persiapan
- Tambahkan 2 Pelanggan Untuk Pengujian

```
C:\Windows\System32\cmd.exe - mysql -u root -p
MariaDB [dbwarung]> INSERT INTO tblpelanggan VALUES ('', 'Tiara', 'Gedangan');
Query OK, 1 row affected, 1 warning (0.005 sec)

MariaDB [dbwarung]> INSERT INTO tblpelanggan VALUES ('', 'Rani', 'Sidoarjo');
Query OK, 1 row affected, 1 warning (0.004 sec)

MariaDB [dbwarung]> SELECT * FROM tblpelanggan;
+-----+-----+-----+
| idpelanggan | nama | alamat |
+-----+-----+-----+
| 1 | KOSONG | KOSONG |
| 2 | Tiara | Gedangan |
| 3 | Rani | Sidoarjo |
+-----+-----+-----+
3 rows in set (0.001 sec)

MariaDB [dbwarung]> _
```

- Pengujian Insert Pada Tabel (tblorderdetail)

```
C:\Windows\System32\cmd.exe - mysql -u root -p
MariaDB [dbwarung]> INSERT INTO tblorder
-> (idpelanggan, faktur, tanggalorder)
-> VALUES (2, '001', NOW());
Query OK, 1 row affected, 1 warning (0.005 sec)

MariaDB [dbwarung]> SELECT * FROM tblorder;
+-----+-----+-----+-----+-----+-----+
| idorder | idpelanggan | faktur | tanggalorder | total | bayar | kembali |
+-----+-----+-----+-----+-----+-----+
| 1 | 2 | 001 | 2022-09-10 | 0 | NULL | NULL |
+-----+-----+-----+-----+-----+-----+
1 row in set (0.000 sec)

MariaDB [dbwarung]> _
```

Nama : Tiara Rani Lukkensari  
Absen : 33  
Tugas : Database

➤ INSERT DATA pada tabel [tblorderdetail]

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> INSERT INTO tblorderdetail
-> (idorder, idbarang, jumlah, hargapenjualan)
-> VALUES (1, 1, 35, 12000);
Query OK, 1 row affected (0.055 sec)

MariaDB [dbwarung]>
```

➤ Hasil Pada Tiap Tabel

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> SELECT * FROM tblorderdetail;
+-----+-----+-----+-----+-----+
| idorderdetail | idorder | idbarang | jumlah | hargapenjualan |
+-----+-----+-----+-----+-----+
| 1 | 1 | 1 | 35 | 12000 |
+-----+-----+-----+-----+-----+
1 row in set (0.001 sec)

MariaDB [dbwarung]> SELECT * FROM tblorder;
+-----+-----+-----+-----+-----+-----+-----+
| idorder | idpelanggan | faktur | tanggalorder | total | bayar | kembali |
+-----+-----+-----+-----+-----+-----+-----+
| 1 | 2 | 001 | 2022-09-10 | 420000 | NULL | NULL |
+-----+-----+-----+-----+-----+-----+-----+
1 row in set (0.001 sec)

MariaDB [dbwarung]> SELECT * FROM tblbarang;
+-----+-----+-----+-----+-----+-----+
| idbarang | idkelompok | barang | stokbarang | hargabeli | hargajual |
+-----+-----+-----+-----+-----+-----+
| 1 | 6 | Beras Rojo Lele | 65 | 1000 | 12000 |
| 2 | 6 | Beras Cianjur | 50 | 11000 | 14000 |
| 3 | 6 | Beras Cianjur | 70 | 8000 | 10000 |
| 4 | 6 | Beras Cianjur | 30 | 22000 | 30000 |
| 5 | 7 | Gula Putih | 20 | 12000 | 14000 |
| 6 | 7 | Gula Merah | 10 | 3000 | 5000 |
| 7 | 7 | Gula Batu | 40 | 2000 | 3000 |
| 8 | 7 | Gula Aren | 60 | 7000 | 9000 |
| 9 | 8 | Tepung Terigu | 50 | 4000 | 6000 |
| 10 | 8 | Tepung Tapioka | 15 | 2000 | 3500 |
| 11 | 8 | Tepung Kanji | 25 | 3500 | 5000 |
+-----+-----+-----+-----+-----+-----+
11 rows in set (0.003 sec)

MariaDB [dbwarung]>
```

➤ Pengujian Delete Pada Tabel (tblorderdetail)

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> DELETE FROM tblorderdetail
-> WHERE idorderdetail = 1;
Query OK, 1 row affected (0.005 sec)

MariaDB [dbwarung]> SELECT * FROM tblorder;
+-----+-----+-----+-----+-----+-----+-----+
| idorder | idpelanggan | faktur | tanggalorder | total | bayar | kembali |
+-----+-----+-----+-----+-----+-----+-----+
| 1 | 2 | 001 | 2022-09-10 | 0 | NULL | NULL |
+-----+-----+-----+-----+-----+-----+-----+
1 row in set (0.001 sec)

MariaDB [dbwarung]> SELECT * FROM tblbarang WHERE idbarang = 1;
+-----+-----+-----+-----+-----+-----+
| idbarang | idkelompok | barang | stokbarang | hargabeli | hargajual |
+-----+-----+-----+-----+-----+-----+
| 1 | 6 | Beras Rojo Lele | 30 | 1000 | 12000 |
+-----+-----+-----+-----+-----+-----+
1 row in set (0.001 sec)

MariaDB [dbwarung]>
```

Nama : Tiara Rani Lukkensari  
Absen : 33  
Tugas : Database

## 66. Hapus TRIGGER

```
C:\Windows\System32\cmd.exe - mysql -u root -p
MariaDB [dbwarung]> DROP TRIGGER kurang_total;
Query OK, 0 rows affected (0.008 sec)

MariaDB [dbwarung]> SHOW TRIGGERS;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 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 | root@localhost | cp850 | NO_ZERO_IN_DATE,NO_ZERO_DATE,NO_ENGINE_SUBSTITUTION | root@localhost | cp850 | 2022-09-10 11:53:05.91 |
| tambah_total | INSERT | tblorderdetail | UPDATE tblorder SET total = total + (NEW.hargapenjualan * NEW.jumlah) WHERE idorder = NEW.idorder | root@localhost | cp850 | NO_ZERO_IN_DATE,NO_ZERO_DATE,NO_ENGINE_SUBSTITUTION | root@localhost | cp850 | 2022-09-10 11:55:38.64 |
| tambah_stok | DELETE | tblorderdetail | UPDATE tblbarang SET stokbarang=stokbarang + OLD.jumlah WHERE idbarang = OLD.idbarang | root@localhost | cp850 | NO_ZERO_IN_DATE,NO_ZERO_DATE,NO_ENGINE_SUBSTITUTION | root@localhost | cp850 | 2022-09-10 11:57:11.30 |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
3 rows in set (0.021 sec)

MariaDB [dbwarung]>
```

## 67. JOIN (Gabungan Tabel)

➤ Membuat TRIGGER Kembali

```
MariaDB [dbwarung]> CREATE TRIGGER kurang_total
-> AFTER DELETE ON tblorderdetail
-> FOR EACH ROW
-> UPDATE tblorder SET
-> total = total - (OLD.hargapenjualan * OLD.jumlah)
-> WHERE idorder = OLD.idorder;
Query OK, 0 rows affected (0.014 sec)
```

➤ Insert kembali data

```
C:\Windows\System32\cmd.exe - mysql -u root -p
MariaDB [dbwarung]> INSERT INTO tblorderdetail
-> (idorder, idbarang, jumlah, hargapenjualan)
-> VALUES (1, 6, 5, 5000);
Query OK, 1 row affected (0.011 sec)

MariaDB [dbwarung]> INSERT INTO tblorderdetail
-> (idorder, idbarang, jumlah, hargapenjualan)
-> VALUES (1, 12, 5, 5000);
Query OK, 1 row affected (0.010 sec)

MariaDB [dbwarung]> SELECT * FROM tblorderdetail;
+-----+-----+-----+-----+-----+
| idorderdetail | idorder | idbarang | jumlah | hargapenjualan |
+-----+-----+-----+-----+-----+
| 2 | 1 | 6 | 5 | 5000 |
| 3 | 1 | 12 | 5 | 5000 |
+-----+-----+-----+-----+-----+
2 rows in set (0.001 sec)

MariaDB [dbwarung]>
```

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Tugas : Database

C:\Windows\System32\cmd.exe - mysql -u root -p

```
MariaDB [dbwarung]> INSERT INTO tblorder
  -> (idpelanggan, faktur, tanggalorder)
  -> VALUES (1, '002', NOW() );
Query OK, 1 row affected, 1 warning (0.005 sec)

MariaDB [dbwarung]> SELECT * FROM tblorder;
+-----+-----+-----+-----+-----+-----+-----+
| idorder | idpelanggan | faktur | tanggalorder | total | bayar | kembali |
+-----+-----+-----+-----+-----+-----+-----+
|      1 |          2 | 001    | 2022-09-10    | 50000 | NULL  | NULL    |
|      2 |          1 | 002    | 2022-09-10    |      0 | NULL  | NULL    |
+-----+-----+-----+-----+-----+-----+-----+
2 rows in set (0.001 sec)

MariaDB [dbwarung]>
```

C:\Windows\System32\cmd.exe - mysql -u root -p

```
MariaDB [dbwarung]> INSERT INTO tblorderdetail
  -> (idorder, idbarang, jumlah, hargapenjualan)
  -> VALUES (2, 10, 5, 6000);
Query OK, 1 row affected (0.003 sec)

MariaDB [dbwarung]> SELECT * FROM tblorderdetail;
+-----+-----+-----+-----+-----+
| idorderdetail | idorder | idbarang | jumlah | hargapenjualan |
+-----+-----+-----+-----+-----+
|             2 |      1 |      6   |      5 |           5000 |
|             3 |      1 |     12   |      5 |           5000 |
|             4 |      2 |     10   |      5 |           6000 |
+-----+-----+-----+-----+-----+
3 rows in set (0.001 sec)

MariaDB [dbwarung]>
```

68. Inner Join (Mengambil Bagian Yang Ada Di Tabel Master Dan Tabel Transaksi)

C:\Windows\System32\cmd.exe - mysql -u root -p

```
MariaDB [dbwarung]> SELECT tblbarang.barang, tblorderdetail.jumlah,
  -> tblorderdetail.hargapenjualan FROM tblbarang
  -> INNER JOIN tblorderdetail
  -> ON tblbarang.idbarang = tblorderdetail.idbarang;
+-----+-----+-----+
| barang          | jumlah | hargapenjualan |
+-----+-----+-----+
| Gula Merah      |      5 |           5000 |
| Tepung Tapioka   |      5 |           6000 |
+-----+-----+-----+
2 rows in set (0.001 sec)

MariaDB [dbwarung]>
```

Nama : Tiara Rani Lukkensari  
Absen : 33  
Tugas : Database

- INNER JOIN untuk mengetahui pelanggan yang melakukan ORDER

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> SELECT tblpelanggan.nama,
-> tblorder.tanggalorder, tblorder.total
-> FROM tblpelanggan
-> INNER JOIN tblorder
-> ON tblpelanggan.idpelanggan = tblorder.idpelanggan;
+-----+-----+-----+
| nama   | tanggalorder | total |
+-----+-----+-----+
| KOSONG | 2022-09-10    | 30000 |
| Tiara  | 2022-09-10    | 50000 |
+-----+-----+-----+
2 rows in set (0.001 sec)

MariaDB [dbwarung]> _
```

- INNER JOIN Banyak Tabel

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> 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 |
+-----+-----+-----+-----+-----+-----+
| 2022-09-10   | KOSONG | Tepung Tapioka   | 5       | 6000           | 30000 |
| 2022-09-10   | Tiara  | Gula Merah      | 5       | 5000           | 50000 |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.003 sec)

MariaDB [dbwarung]>
```

#### 69. Left Join (Menampilkan Tabel Master)

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> 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 |
+-----+-----+-----+
| Gula Merah  | 5       | 5000           |
| Tepung Tapioka | 5       | 6000           |
| Gula Putih  | NULL    | NULL           |
| Beras Cianjur | NULL    | NULL           |
| Tepung Kanji | NULL    | NULL           |
| Beras Cianjur | NULL    | NULL           |
| Tepung Terigu | NULL    | NULL           |
| Beras Rojo Lele | NULL    | NULL           |
| Gula Aren   | NULL    | NULL           |
| Gula Batu   | NULL    | NULL           |
| Beras Cianjur | NULL    | NULL           |
+-----+-----+-----+
11 rows in set (0.003 sec)

MariaDB [dbwarung]> _
```



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Tugas : Database

70. Right Join (Memampilkan Tabel Transaksi)

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> 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 |
+-----+-----+-----+
| Gula Merah  | 5      | 5000            |
| NULL        | 5      | 5000            |
| Tepung Tapioka | 5      | 6000            |
+-----+-----+-----+
3 rows in set (0.001 sec)

MariaDB [dbwarung]> _
```

71. Store Procedure

➤ Procedure Tanpa Parameter dan Cara Memanggilnya

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> CREATE PROCEDURE namapelanggan()
-> SELECT * FROM tblpelanggan;
Query OK, 0 rows affected (0.043 sec)

MariaDB [dbwarung]> CALL namapelanggan();
+-----+-----+-----+
| idpelanggan | nama   | alamat          |
+-----+-----+-----+
| 1           | KOSONG | KOSONG          |
| 2           | Tiara  | Gedangan        |
| 3           | Rani   | Sidoarjo        |
+-----+-----+-----+
3 rows in set (0.003 sec)

Query OK, 0 rows affected (0.006 sec)

MariaDB [dbwarung]>
```

➤ Procedure Dengan Parameter dan Cara Memanggilnya

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> CREATE PROCEDURE caribarang (barang VARCHAR(100))
-> SELECT * FROM tblbarang
-> WHERE tblbarang.barang LIKE barang;
Query OK, 0 rows affected (0.006 sec)

MariaDB [dbwarung]> CALL caribarang ('%t%');
+-----+-----+-----+-----+-----+-----+
| idbarang | idkelompok | barang          | stokbarang | hargabeli | hargajual |
+-----+-----+-----+-----+-----+-----+
| 5        | 7           | Gula Putih      | 20         | 12000    | 14000     |
| 7        | 7           | Gula Batu       | 40         | 2000     | 3000      |
| 9        | 8           | Tepung Terigu    | 50         | 4000     | 6000      |
| 10       | 8           | Tepung Tapioka   | 10         | 2000     | 3500      |
| 11       | 8           | Tepung Kanji     | 25         | 3500     | 5000      |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.002 sec)

Query OK, 0 rows affected (0.036 sec)

MariaDB [dbwarung]> _
```



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Absen : 33  
Tugas : Database

## 72. Menampilkan Semua Procedure

```
C:\Windows\System32\cmd.exe - mysql -u root -p
MariaDB [dbwarung]> SHOW PROCEDURE STATUS;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| Db | Name | Type | Definer | Modified | Created | Security_type | Comment | character_set_client | collation_connection |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| dbwarung | caribarang | PROCEDURE | root@localhost | 2022-09-10 14:20:39 | 2022-09-10 14:20:39 | DEFINER | | cp850 | cp850_general_ci |
| dbwarung | namapelanggan | PROCEDURE | root@localhost | 2022-09-10 14:14:46 | 2022-09-10 14:14:46 | DEFINER | | cp850 | cp850_general_ci |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
2 rows in set (0.018 sec)

MariaDB [dbwarung]>
```

## 73. Menghapus Store Procedure

```
C:\Windows\System32\cmd.exe - mysql -u root -p
MariaDB [dbwarung]> DROP PROCEDURE caribarang;
Query OK, 0 rows affected (0.016 sec)

MariaDB [dbwarung]> SHOW PROCEDURE STATUS;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| Db | Name | Type | Definer | Modified | Created | Security_type | Comment | character_set_client | collation_connection |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| dbwarung | namapelanggan | PROCEDURE | root@localhost | 2022-09-10 14:14:46 | 2022-09-10 14:14:46 | DEFINER | | cp850 | cp850_general_ci |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
1 row in set (0.017 sec)

MariaDB [dbwarung]>
```

## 74. Function

- Tampilan tblbarang sebelum dan sesudah ditambah kolom untuk sebagai selisih dari [hargajual] dan [hargabeli]

```
C:\Windows\System32\cmd.exe - mysql -u root -p
MariaDB [dbwarung]> SELECT * FROM tblbarang;
+-----+-----+-----+-----+-----+-----+
| idbarang | idkelompok | barang | stokbarang | hargabeli | hargajual |
+-----+-----+-----+-----+-----+-----+
| 1 | 6 | Beras Rojo Lele | 30 | 1000 | 12000 |
| 2 | 6 | Beras Cianjur | 50 | 11000 | 14000 |
| 3 | 6 | Beras Cianjur | 70 | 8000 | 10000 |
| 4 | 6 | Beras Cianjur | 30 | 23000 | 30000 |
| 5 | 7 | Gula Putih | 20 | 12000 | 14000 |
| 6 | 7 | Gula Merah | 5 | 3000 | 5000 |
| 7 | 7 | Gula Batu | 40 | 2000 | 3000 |
| 8 | 7 | Gula Aren | 60 | 7000 | 9000 |
| 9 | 8 | Tepung Terigu | 50 | 4000 | 6000 |
| 10 | 8 | Tepung Tapioka | 10 | 2000 | 3500 |
| 11 | 8 | Tepung Kanji | 25 | 3500 | 5000 |
+-----+-----+-----+-----+-----+-----+
11 rows in set (0.036 sec)

MariaDB [dbwarung]> SELECT *, hargajual - hargabeli AS selisih FROM tblbarang;
+-----+-----+-----+-----+-----+-----+-----+
| idbarang | idkelompok | barang | stokbarang | hargabeli | hargajual | selisih |
+-----+-----+-----+-----+-----+-----+-----+
| 1 | 6 | Beras Rojo Lele | 30 | 1000 | 12000 | 11000 |
| 2 | 6 | Beras Cianjur | 50 | 11000 | 14000 | 3000 |
| 3 | 6 | Beras Cianjur | 70 | 8000 | 10000 | 2000 |
| 4 | 6 | Beras Cianjur | 30 | 23000 | 30000 | 7000 |
| 5 | 7 | Gula Putih | 20 | 12000 | 14000 | 2000 |
| 6 | 7 | Gula Merah | 5 | 3000 | 5000 | 2000 |
| 7 | 7 | Gula Batu | 40 | 2000 | 3000 | 1000 |
| 8 | 7 | Gula Aren | 60 | 7000 | 9000 | 2000 |
| 9 | 8 | Tepung Terigu | 50 | 4000 | 6000 | 2000 |
| 10 | 8 | Tepung Tapioka | 10 | 2000 | 3500 | 1500 |
| 11 | 8 | Tepung Kanji | 25 | 3500 | 5000 | 1500 |
+-----+-----+-----+-----+-----+-----+-----+
11 rows in set (0.004 sec)

MariaDB [dbwarung]> SELECT hargajual - hargabeli AS laba
-> FROM tblbarang WHERE idbarang = 1;
+-----+
| laba |
+-----+
| 11000 |
+-----+
```

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**Absen : 33**  
**Tugas : Database**

#### 75. Cara Membuat Function

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> CREATE FUNCTION laba (id INT) RETURNS FLOAT
-> RETURN
-> (
-> SELECT hargajual - hargabeli as laba
-> FROM tblbarang
-> WHERE idbarang = id
-> );
Query OK, 0 rows affected (0.009 sec)

MariaDB [dbwarung]>
```

#### 76. Memanggil Function

```
MariaDB [dbwarung]> SELECT laba(1);
+-----+
| laba(1) |
+-----+
|    11000 |
+-----+
1 row in set (0.001 sec)

MariaDB [dbwarung]>
```

#### 77. Penggunaan Function

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> ALTER TABLE tblorderdetail ADD laba FLOAT;
Query OK, 0 rows affected (0.032 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [dbwarung]> 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 (0.015 sec)

MariaDB [dbwarung]> _
```

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Tugas : Database

#### 78. Proses Order

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> INSERT INTO tblorder
-> (idpelanggan, faktur, tanggalorder)
-> VALUES (3, '003', NOW());
Query OK, 1 row affected, 1 warning (0.012 sec)

MariaDB [dbwarung]> SELECT * FROM tblorder;
+-----+-----+-----+-----+-----+-----+-----+
| idorder | idpelanggan | faktur | tanggalorder | total | bayar | kembali |
+-----+-----+-----+-----+-----+-----+-----+
| 1 | 2 | 001 | 2022-09-10 | 50000 | NULL | NULL |
| 2 | 1 | 002 | 2022-09-10 | 30000 | NULL | NULL |
| 3 | 3 | 003 | 2022-09-11 | 0 | NULL | NULL |
+-----+-----+-----+-----+-----+-----+-----+
3 rows in set (0.000 sec)

MariaDB [dbwarung]> _
```

#### 79. Insert pada tblorderdetail

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> INSERT INTO tblorderdetail
-> (idorder, idbarang, jumlah, hargapenjualan, laba)
-> VALUES (3, 8, 5, 9000, (SELECT laba(8)));
Query OK, 1 row affected (0.010 sec)

MariaDB [dbwarung]> SELECT * FROM tblorderdetail ORDER BY laba DESC;
+-----+-----+-----+-----+-----+-----+
| idorderdetail | idorder | idbarang | jumlah | hargapenjualan | laba |
+-----+-----+-----+-----+-----+-----+
| 5 | 3 | 8 | 5 | 9000 | 2000 |
| 2 | 1 | 6 | 5 | 5000 | NULL |
| 3 | 1 | 12 | 5 | 5000 | NULL |
| 4 | 2 | 10 | 5 | 6000 | NULL |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.002 sec)

MariaDB [dbwarung]> _
```

```
MariaDB [dbwarung]> SELECT * FROM tblbarang WHERE idbarang = 8;
+-----+-----+-----+-----+-----+-----+
| idbarang | idkelompok | barang | stokbarang | hargabeli | hargajual |
+-----+-----+-----+-----+-----+-----+
| 8 | 7 | Gula Aren | 55 | 7000 | 9000 |
+-----+-----+-----+-----+-----+-----+
1 row in set (0.001 sec)

MariaDB [dbwarung]>
```

#### 80. Menampilkan Semua Function

```
MariaDB [dbwarung]> SHOW FUNCTION STATUS;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| Db | Name | Type | Definer | Modified | Created | Security_type | Comment | character_set_client | collation_connection | Data |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| dbwarung | laba | FUNCTION | root@localhost | 2022-09-11 11:09:30 | 2022-09-11 11:09:30 | DEFINER | | cp850 | cp850_general_ci | utf8 |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
1 row in set (0.013 sec)

MariaDB [dbwarung]>
```

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**Absen** : 33  
**Tugas** : Database

## 81. Menghapus Function

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> DROP FUNCTION laba;
Query OK, 0 rows affected (0.008 sec)

MariaDB [dbwarung]> SHOW FUNCTION STATUS;
Empty set (0.009 sec)

MariaDB [dbwarung]> _
```

## 82. Select Aggregate

### ➤ Select MIN

```
MariaDB [dbwarung]> SELECT MIN(hargajual) FROM tblbarang;
+-----+
| MIN(hargajual) |
+-----+
|          3000 |
+-----+
1 row in set (0.002 sec)
```

### ➤ Select MAX

```
MariaDB [dbwarung]> SELECT MAX(hargajual) FROM tblbarang;
+-----+
| MAX(hargajual) |
+-----+
|         30000 |
+-----+
1 row in set (0.000 sec)
```

### ➤ Select SUM

```
MariaDB [dbwarung]> SELECT SUM(hargajual) FROM tblbarang;
+-----+
| SUM(hargajual) |
+-----+
|         111500 |
+-----+
1 row in set (0.001 sec)
```

### ➤ Select AVG

```
MariaDB [dbwarung]> SELECT AVG(hargajual) FROM tblbarang;
+-----+
| AVG(hargajual) |
+-----+
| 10136.3636363636 |
+-----+
1 row in set (0.001 sec)
```

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Absen : 33  
Tugas : Database

➤ Select COUNT

```
MariaDB [dbwarung]> SELECT COUNT(hargajual) FROM tblbarang;
+-----+
| COUNT(hargajual) |
+-----+
|          11      |
+-----+
1 row in set (0.000 sec)
```

➤ Select COUNT(\*)

```
MariaDB [dbwarung]> SELECT COUNT(*) FROM tblbarang;
+-----+
| COUNT(*) |
+-----+
|        11 |
+-----+
1 row in set (0.001 sec)

MariaDB [dbwarung]> _
```

83. Select Between (Select Antara Dua Nilai)

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> SELECT * FROM tblbarang
-> WHERE hargajual BETWEEN 5000 AND 15000;
+-----+-----+-----+-----+-----+-----+
| idbarang | idkelompok | barang          | stokbarang | hargabeli | hargajual |
+-----+-----+-----+-----+-----+-----+
| 1        | 6           | Beras Rojo Lele | 30         | 1000      | 12000     |
| 2        | 6           | Beras Cianjur   | 50         | 11000     | 14000     |
| 3        | 6           | Beras Cianjur   | 70         | 8000      | 10000     |
| 5        | 7           | Gula Putih      | 20         | 12000     | 14000     |
| 6        | 7           | Gula Merah      | 5          | 3000      | 5000      |
| 8        | 7           | Gula Aren       | 55         | 7000      | 9000      |
| 9        | 8           | Tepung Terigu    | 50         | 4000      | 6000      |
| 11       | 8           | Tepung Kanji     | 25         | 3500      | 5000      |
+-----+-----+-----+-----+-----+-----+
8 rows in set (0.003 sec)

MariaDB [dbwarung]>
```

84. Select Distinct (menampilkan data yang sama hanya satu kali)

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> SELECT DISTINCT kelompok FROM view_barang;
+-----+
| kelompok |
+-----+
| snack    |
| Gula     |
| Makanan  |
+-----+
3 rows in set (0.019 sec)

MariaDB [dbwarung]>
```

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**Absen : 33**  
**Tugas : Database**

#### 85. Start Transaction

```
C:\Windows\System32\cmd.exe - mysql -u root -p

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

MariaDB [dbwarung]> INSERT INTO tblkelompok VALUES ('', 'Minuman');
Query OK, 1 row affected, 1 warning (0.003 sec)

MariaDB [dbwarung]> SELECT * FROM tblkelompok;
+-----+-----+
| idkelompok | kelompok |
+-----+-----+
|          6 | snack    |
|          7 | Gula     |
|          8 | Makanan  |
|         11 | Minyak   |
|         12 | Jajan    |
|         13 | Roti Basah |
|         14 | Minuman  |
+-----+-----+
7 rows in set (0.000 sec)

MariaDB [dbwarung]>
```

#### 86. ROLLBACK

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> ROLLBACK;
Query OK, 0 rows affected (0.003 sec)

MariaDB [dbwarung]> SELECT * FROM tblkelompok;
+-----+-----+
| idkelompok | kelompok |
+-----+-----+
|          6 | snack    |
|          7 | Gula     |
|          8 | Makanan  |
|         11 | Minyak   |
|         12 | Jajan    |
|         13 | Roti Basah |
+-----+-----+
6 rows in set (0.000 sec)

MariaDB [dbwarung]> _
```

```
C:\Windows\System32\cmd.exe - mysql -u root -p

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

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

MariaDB [dbwarung]> SELECT * FROM tblkelompok;
+-----+-----+
| idkelompok | kelompok |
+-----+-----+
|          6 | snack    |
|          7 | Gula     |
|          8 | Makanan  |
|         11 | Minyak   |
|         12 | Jajan    |
|         13 | Roti Basah |
+-----+-----+
6 rows in set (0.000 sec)

MariaDB [dbwarung]>
```

**Nama : Tiara Rani Lukkensari**  
**Absen : 33**  
**Tugas : Database**

- Transaksi yang sudah di COMMIT tidak bisa di rollback

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> ROLLBACK;
Query OK, 0 rows affected (0.000 sec)

MariaDB [dbwarung]> SELECT * FROM tblkelompok;
+-----+-----+
| idkelompok | kelompok |
+-----+-----+
|          6 | snack    |
|          7 | Gula      |
|          8 | Makanan  |
|         11 | Minyak   |
|         12 | Jajan     |
|         13 | Roti Basah |
+-----+-----+
6 rows in set (0.000 sec)

MariaDB [dbwarung]> _
```

## 87. Menampilkan Semua User

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [dbwarung]> 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 (0.014 sec)

MariaDB [dbwarung]> _
```

## 88. Menambah User

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [(none)]> CREATE USER 'tiara'@'localhost';
Query OK, 0 rows affected (0.004 sec)

MariaDB [(none)]> SELECT user, host, password FROM mysql.user;
+-----+-----+-----+
| User | Host      | Password |
+-----+-----+-----+
| root | localhost |          |
| rani | localhost | *5CB67D4AE80F56A6EF54E85AE277F00524CD84E8 |
| root | 127.0.0.1 |          |
| root | ::1       |          |
| pma  | localhost |          |
| tiara | localhost |          |
+-----+-----+-----+
6 rows in set (0.002 sec)

MariaDB [(none)]>
```

**Nama : Tiara Rani Lukkensari**  
**Absen : 33**  
**Tugas : Database**

#### 89. Memberikan Password Pada User

```
MariaDB [(none)]> SET PASSWORD FOR 'tiara'@'localhost' = PASSWORD ('tiara');  
Query OK, 0 rows affected (0.001 sec)
```

```
C:\xampp\mysql\bin>mysql -u tiara -p  
Enter password: *****  
Welcome to the MariaDB monitor. Commands end with ; or \g.  
Your MariaDB connection id is 13  
Server version: 10.4.20-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:\Windows\System32\cmd.exe - mysql -u tiara -p
```

```
MariaDB [(none)]> SHOW DATABASES;  
+-----+  
| Database |  
+-----+  
| information_schema |  
+-----+  
1 row in set (0.001 sec)  
  
MariaDB [(none)]> _
```

#### 90. Memberikan Hak Akses Pada Database

```
MariaDB [(none)]> GRANT ALL PRIVILEGES ON dbwarung.* TO 'tiara'@'localhost' IDENTIFIED BY 'tiara';  
Query OK, 0 rows affected (0.003 sec)  
  
MariaDB [(none)]> _
```

#### 91. Menampilkan Database

```
MariaDB [(none)]> SHOW DATABASES;  
+-----+  
| Database |  
+-----+  
| dbwarung |  
| information_schema |  
+-----+  
2 rows in set (0.001 sec)  
  
MariaDB [(none)]> _
```

#### 92. Menampilkan User Yang Sedang Login

```
C:\Windows\System32\cmd.exe - mysql -u tiara -p  
  
MariaDB [(none)]> SELECT USER(),CURRENT_USER();  
+-----+  
| USER() | CURRENT_USER() |  
+-----+  
| tiara@localhost | tiara@localhost |  
+-----+  
1 row in set (0.002 sec)  
  
MariaDB [(none)]> _
```



Nama : Tiara Rani Lukkensari  
Absen : 33  
Tugas : Database

### 93. Menampilkan Hak Akses Yang Diberikan

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [(none)]> SHOW GRANTS FOR 'tiara'@'localhost';
+-----+
| Grants for tiara@localhost |
+-----+
| GRANT USAGE ON *.* TO `tiara`@`localhost` IDENTIFIED BY PASSWORD '*FEECE8CC85EB78F1E3F310A54A296D16E03D6905' |
| GRANT ALL PRIVILEGES ON `dbwarung`.* TO `tiara`@`localhost` |
+-----+
2 rows in set (0.002 sec)

MariaDB [(none)]>
```

### 94. Menghapus Hak Akses

```
MariaDB [(none)]> REVOKE ALL PRIVILEGES ON dbwarung.* FROM 'tiara'@'localhost';
Query OK, 0 rows affected (0.002 sec)

MariaDB [(none)]> SHOW GRANTS FOR 'tiara'@'localhost';
+-----+
| Grants for tiara@localhost |
+-----+
| GRANT USAGE ON *.* TO `tiara`@`localhost` IDENTIFIED BY PASSWORD '*FEECE8CC85EB78F1E3F310A54A296D16E03D6905' |
+-----+
1 row in set (0.000 sec)
```

### 95. Memberikan Hak Akses Pada Database Dengan Tabel

```
MariaDB [(none)]> _

MariaDB [(none)]> GRANT ALL ON dbwarung.tblkelompok TO 'tiara'@'localhost' IDENTIFIED BY 'tiara';
Query OK, 0 rows affected (0.003 sec)

MariaDB [(none)]> SHOW GRANTS FOR 'tiara'@'localhost';
+-----+
| Grants for tiara@localhost |
+-----+
| GRANT USAGE ON *.* TO `tiara`@`localhost` IDENTIFIED BY PASSWORD '*FEECE8CC85EB78F1E3F310A54A296D16E03D6905' |
| GRANT ALL PRIVILEGES ON `dbwarung`.`tblkelompok` TO `tiara`@`localhost` |
+-----+
2 rows in set (0.000 sec)

MariaDB [(none)]>
```

### 96. Menambahkan Tabel Yang Diberikan Hak Akses

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [(none)]> GRANT ALL ON dbwarung.tblbarang TO 'tiara'@'localhost' IDENTIFIED BY 'tiara';
Query OK, 0 rows affected (0.002 sec)

MariaDB [(none)]> SHOW GRANTS FOR 'tiara'@'localhost';
+-----+
| Grants for tiara@localhost |
+-----+
| GRANT USAGE ON *.* TO `tiara`@`localhost` IDENTIFIED BY PASSWORD '*FEECE8CC85EB78F1E3F310A54A296D16E03D6905' |
| GRANT ALL PRIVILEGES ON `dbwarung`.`tblkelompok` TO `tiara`@`localhost` |
| GRANT ALL PRIVILEGES ON `dbwarung`.`tblbarang` TO `tiara`@`localhost` |
+-----+
3 rows in set (0.000 sec)

MariaDB [(none)]>
```

Nama : Tiara Rani Lukkensari  
Absen : 33  
Tugas : Database

97. Memberikan hak akses SELECT DAN INSERT pada tabel [tblpelanggan].

```
MariaDB [(none)]> GRANT SELECT, INSERT ON  
-> dbwarung.tblpelanggan TO 'tiara'@'localhost';  
Query OK, 0 rows affected (0.012 sec)
```

```
C:\Windows\System32\cmd.exe - mysql -u tiara -p  
  
MariaDB [dbwarung]> INSERT INTO tblpelanggan  
-> VALUES('', 'JONI', 'Sidoarjo');  
Query OK, 1 row affected, 1 warning (0.005 sec)  
  
MariaDB [dbwarung]> SELECT * FROM tblpelanggan;  
+-----+-----+-----+  
| idpelanggan | nama   | alamat |  
+-----+-----+-----+  
|          1 | KOSONG | KOSONG |  
|          2 | Tiara  | Gedangan |  
|          3 | Rani   | Sidoarjo |  
|          4 | JONI   | Sidoarjo |  
+-----+-----+-----+  
4 rows in set (0.000 sec)
```

98. Delete

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

99. Update Update

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

100. Ubah Password User

```
MariaDB [(none)]> SET PASSWORD FOR 'tiara'@'localhost' = PASSWORD('12345678');  
Query OK, 0 rows affected (0.002 sec)  
  
MariaDB [(none)]>
```

**Nama : Tiara Rani Lukkensari**  
**Absen : 33**  
**Tugas : Database**

#### 101. Menghapus User

```
C:\Windows\System32\cmd.exe - mysql -u root -p

MariaDB [(none)]> DROP USER 'rani'@'localhost';
Query OK, 0 rows affected (0.001 sec)

MariaDB [(none)]> SELECT user, password, host FROM mysql.user;
+-----+-----+-----+
| User | Password | Host |
+-----+-----+-----+
| root |          | localhost |
| root |          | 127.0.0.1 |
| root |          | ::1 |
| pma |          | localhost |
| tiara | *84AAC12F54AB666ECFC2A83C676908C8BBC381B1 | localhost |
+-----+-----+-----+
5 rows in set (0.002 sec)

MariaDB [(none)]> _
```

#### 102. Merubah Password User (ROOT)

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

C:\xampp\mysql\bin>mysqladmin -u root -p
mysqladmin Ver 9.1 Distrib 10.4.20-MariaDB, for Win64 on AMD64
Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.
```

#### 103. Login user (ROOT)

```
C:\Windows\System32\cmd.exe - mysql -u root -p

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 24
Server version: 10.4.20-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)]> _
```

#### 104. Merubah Pasword Baru

```
C:\xampp\mysql\bin>mysqladmin -u root -p123456 password
New password: *****
Confirm new password: *****
mysqladmin: Passwords don't match

C:\xampp\mysql\bin>
```