Nama   : **Tiara Rani Lukkensari**

Absen   : **33**

Tugas   : **Database**

1. Membuka CMD dan menjalankan MySQL

2. Keluar dari MySQL

3. Memeriksa MySQL jalan atau tidak

4. Mengecek Versi MySQL

5. Menampilkan help MySQL

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 (sisa 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)]>
```

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

9. Menampilkan Database

10. Membuat Database dan Menampilkan database yang baru dibuat

11. Menghapus Database

12. Mengaktifkan Database

13. Membuat Tabel

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)
```

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

19. Merubah Tipe Data

20. Menghapus Kolom dan Menampilkan Tabelnya

21. Merubah Nama Kolom dan Menampilkan Tabelnya

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

22. Membuat Tabel **tblpelanggan**

23. Menambahkan PRIMARY KEY dan Memeriksa Struktur Tabel

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

24. Menampilkan Engine Yang Digunakan

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

26. Menambahkan Kolom

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

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   |      | 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)
```

```
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]> _
```

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]>
```

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    |                |
| hargabeli | float        | YES  |     | NULL    |                |
| hargajual | 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    |                |
| hargabeli | float        | YES  |     | NULL    |                |
| hargajual | float        | YES  |     | NULL    |                |
+-----------+--------------+------+-----+---------+----------------+
6 rows in set (0.016 sec)

MariaDB [dbwarung]>
```

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]>
```

```
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 | 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 |
+----------+-----------+----------------+------------+-----------+-----------+
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 | 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)
```

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`) REFE
RENCES `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]>
```

```
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]> _
```

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]>
```

```
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


```
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]> _
```

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]>
```

```
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)

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

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

59. Membuat Relasi Antar Tabel

60. Relasi 2 Tabel Master Dan 1 Tabel Transaksi
   ➢ **Relasi Antara Tabel (tblorderdetail) dan tabel (tblorder)**

   ➢ **Relasi Antara Tabel (tblorderdetail) dan Tabel (tblbarang)**

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

➢ **Hasil Pembuatan Relasi**

61. Dummy Data
➢ **Struktur Tabel**

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

➢ **Isikan Nama Pelanggan Dengan Dummy Data Dan Periksa Hasil Insert Datanya**

62. Konsep Triger
   ➢ **Menampilkan Semua Tabel**

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**

➢ **Peintah ALTER pada tbl barang**

➢ **Perintah ALTER pada tblorder**

63. Pembuatan Trigger

64. Menampilkan TRIGGER

65. Pengujian TRIGGER
   ➢ Persiapan
   ➢ Tambahkan 2 Pelanggan Untuk Pengujian

   ➢ Pengujian Insert Pada Tabel (tblorderdetail)

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

- **INSERT DATA pada tabel [tblorderdetail]**

- Hasil Pada Tiap Tabel

- Pengujian Delete Pada Tabel (tblorderdetail)

66. Hapus TRIGGER

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


```
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]>
```

```
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

➤ INNER JOIN Banyak Tabel

69. Left Join (Menampilkan Tabel Master)

70. Right Join (Memanpilkan Tabel Tranksaksi)

```
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]> _
```

72. Menampilkan Semua Procedure

73. Menghapus Store Procedure

74. Function

   ➤ Tampilan tblbarang sebelum dan sesudah ditambah kolom untuk sebagi selisih dari [hargajual] dan [hargabeli]

Nama   : **Tiara Rani Lukkensari**
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]>
```

78. Proses Order

79. Insert pada tblorderdetail

80. Menampilkan Semua Function

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)    |
+-------------------+
| 10136.363636363636 |
+-------------------+
1 row in set (0.001 sec)
```

➤ 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]>
```

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]>
```

➢ Transaksi yang sudah di COMMIT tidak bisa di rollback

87. Menampilkan Semua User

88. Menambah User

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)

MariaDB [(none)]>
```

95. Memberikan Hak Akses Pada Database Dengan Tabel

```
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)]>
```

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)]>
```

101. Menghapus User

102. Merubah Password User (ROOT)

103. Login user (ROOT)

104. Merubah Pasword Baru